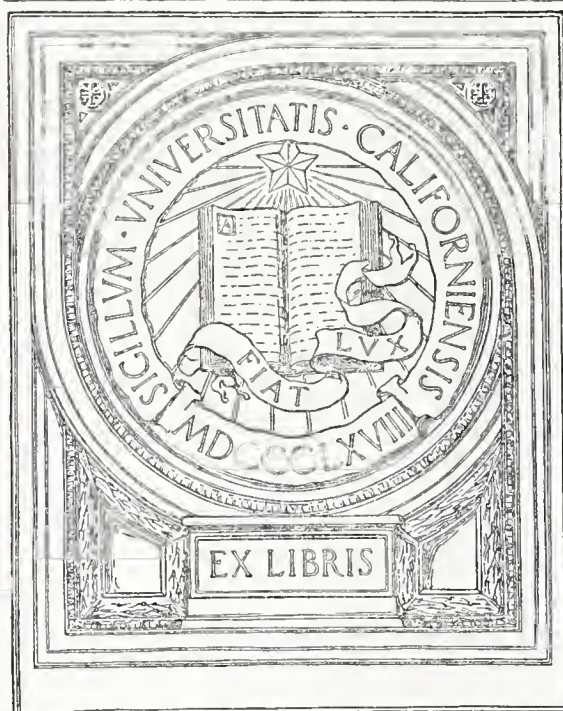



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Contributors to This Issue:

JUDGE PAUL BURKS

SPECIAL ARTICLE

Some Practical Suggestions Regarding Testimony of Medical Experts

J. R. MORRELL, M. D.

President's Address—Utah Medical Association

HARRY E. ALDERSON, M. D.

Rice Workers' Dermatitis

WM. J. KERR, M. D., S. V. LARKEY, A. B., A. E. LARSEN, A. B.

Coronary Occlusion and Myocardial Degenerations

SIMON JESBERG, M. D.

Foreign Bodies in the Respiratory and Upper Digestive Tracts

S. F. STEWART, M. D.

The Treatment of Flexion Deformity of the Hip Joint

HARRY S. FIST, M. D.

Rational Conduct of Labor

ALANSON WEEKS, M. D., AND LEROY BROOKS, M. D.

An Unusual Case of Pyloric Stenosis

Unusual Pertinent Editorials; Medicine in the Public Press; Medical Economics and Public Health; California Board of Medical Examiners; Medical Straws; Activities of the California, Nevada and Utah Medical Associations; Medicine Before the Bench

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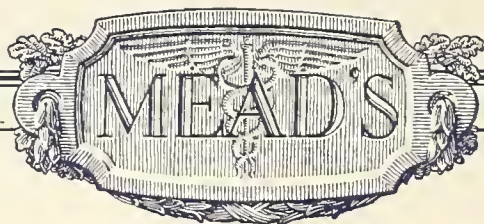
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JANUARY • 1925

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VOLUME XXIII

JANUARY, 1925

NO. 1

Subscription prices, \$4.00 (\$5.00 for foreign countries); single copies, 35 cents.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 10, 1918.

VOLUMES begin with the first of January. Subscriptions may commence at any time.

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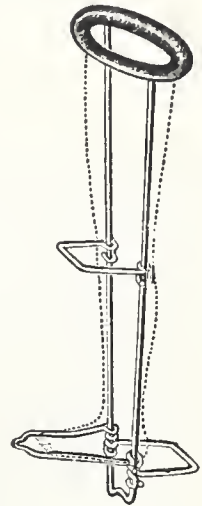
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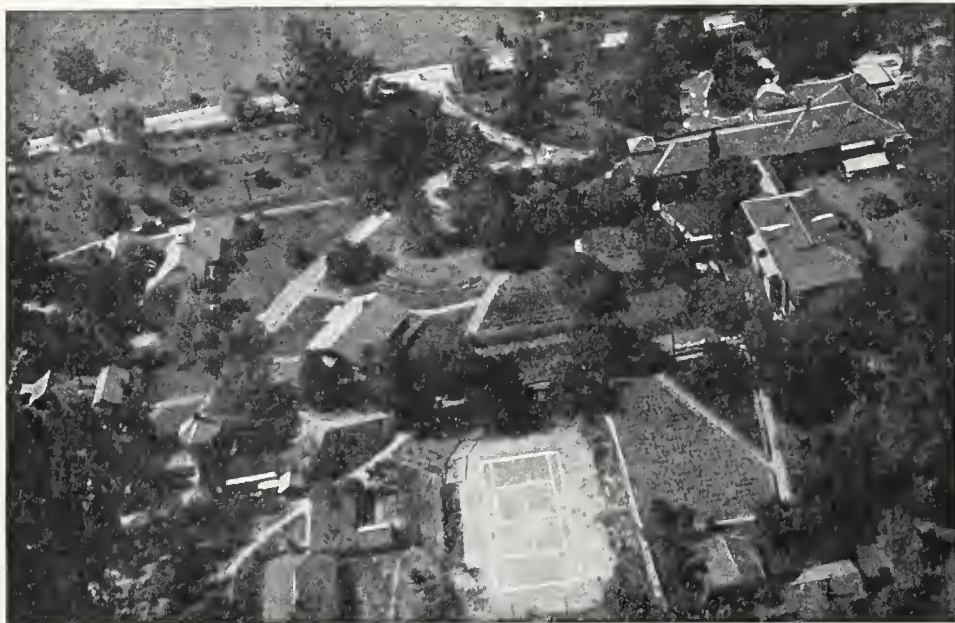
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Philosophy in Medicine—Under this title, Horst Oertel (Scientific Monthly) in a thoughtful and thought-stimulating essay, which should be read and pondered by every physician, considers "the sciences (including medicine) are children of philosophy or of that impulse which, for one or the other reason, forces the human mind to investigate the nature and connection of things. True enough, the immediate impetus of progress was often a very practical or protective one, but the result became at once the basis for generalization, and when the desired result was defeated, it became the source of speculation. . . . "There have been introduced by obliging bacteriologists and pathologists, in order to rapidly hitch their sciences to clinical medicine, all sorts of indefinite, largely hypothetical conceptions, such as 'virulence,' 'attenuated forms,' 'variability,' 'resistance,' 'strains' (which are distinguished by equally uncertain reactions), 'individual susceptibility,' 'carriers.' All these cover up deficient knowledge of causal relations, and are, at the best, heuristic. The calamity however, is that these words are construed by some as scientifically established connections of circumstances which may be regarded as finished entities and thus may be drawn upon to *explain* natural phenomena. . . . The bacteriological and especially immunological so-called explanations. What are they? Expression of causal relations or causal explanations? Not at all! Entirely metaphysical ideas! The definitions of 'immunity' itself, 'resistance,' 'defense,' 'purpose,' 'effort,' 'agglutinins,' 'precipitans,' 'lysins,' 'antibodies,' 'complement,' 'opsonins,' and so on, permeate in the shape of real entities, like a pre-Virchowian nightmare, the whole scientific texture of the infectious diseases. Now it might be urged, once more, that these are simply names or heuristic principles which are employed to cover defects, and as that they would demand a certain temporary standing. But actually that is not the case, for they are used to *explain* other unknown natural phenomena. . . . Can any one think of anything less scientific and more confused and muddling in reasoning? . . . What is worse, however, is that these purely personally assumed metaphysical attributes are now employed—it is really terrible to

acknowledge it in the twentieth century—to *explain* natural phenomena. Thus, we read that a 'toxin stimulates to the formation of an antibody,' and in one modern text-book on pathology I find 'inflammation' compared to the activities of a fire-brigade! Consider what all this means. An unknown assumed quality is employed to furnish us with scientific understanding of other unknown qualities; that is, one unknown explains or is intended to convey to our understanding another unknown, like Baron Munchhausen, who, having got stuck in a swamp, lifted himself by his own hair out of it. . . . This conception and acceptance of pathological entities, not as convenient names of categories, but as an expression of the independent nature of things which are dictated by teleological demands, still control in too large a measure the minds of the medical profession. Thus, through a deplorable lack of philosophical training, medical science stands at present a monstrous anomaly of causal, etiological, symptomatic and transcendent ideas. And thus it has been plunged into a hopeless muddle of definitions and classifications. . . . The science of pathology and medicine today are in bad shape, for the reason that their followers are still largely unscientific and not philosophically trained. Witness the grotesque modern attempts to trace complex *psychic phenomena* directly to the influence of *individual internal secretions* and thus to control them! Sciences atrophy and degenerate when they lose contact with philosophy. . . . The practitioner of medicine must be clear in his mind what is meant by logical cause and sequence, and what is an auxiliary conception which simply summarizes or interprets but can never explain. . . . What every practitioner of medicine really needs today more than anything else is sound critical judgment of values. . . . How is he to get judgment of values? There is only one answer. At present, as in the past, not by stuffing him with pseudo-science, or feeding him on practical dishes, cooked out of specially prepared scientific food, but through a philosophical consideration and understanding of *all* things which prepare him to follow and understand independently his own experience and that of others."

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To Know When We Do Not Know—The increasing frequency of doubtful clinical diagnoses and exploratory operations is not a detrimental reflection upon our ability as diagnosticians; it is, on the contrary, a sign of our diagnostic honesty and desire to put medicine upon an exact basis. We are beginning to know when we do not know. We refuse to guess and deceive ourselves.—William C. MacCarty, M. D. (Jr. Lab. and Clin. Med.).



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Twisted Colons and Inverted Commas—Described by "Volvulus" (Colorado Medicine) as follows: Symptomatology—The symptoms of this painful disease consist principally of attacks of abdominal colic of sudden onset. The syndrome may be encountered daily in any editorial office, Sundays and holidays included. Etiology—The cause of the disease can be unerringly traced to noxious material carelessly left in manuscripts by heedless authors. Such material is usually found in the following forms: (1) Ill-prepared copy marked "Dictated, but not read." (This noxious material frequently induces emesis.) (2) Sketchy notes used for a spoken address and not rewritten in manuscript form. (Emesis is often projectile in type.) (3) Twenty-page articles containing two pages of information. (Dyspnea and cyanosis.) (4) Crude abbreviations: Soda-bicarb, the Dr., P.S.P. test, R kidney, L.K., Sec'y., Ass'n., %, etc. (Vertigo and diplopia.) (5) Common names in capitals: Measles, Breakfast, Digitalis. (Opisthotonus and nystagmus.) (6) Profuse underlining, calling for italics, "black caps," and loud speakers. (Aphonia and laryngismus.) (7) Footnotes that should appear in the body of the manuscript. (Perspiration, chills.) (8) Left-hand spelling: Rockafellow Institute, edema, volumn, ilio-cecal, posteriorally, etc. (Tracheal edema.) (9) Illustrations not furnished with titles. (Petit mal.) (10) Single-spaced typewriting, which precludes correction of any of the aforementioned errors. (Visceroptosis and grand mal.) Treatment—The treatment of this grave and painful condition is chiefly prophylactic. There is need of more careful and considerate authorship. Fatal cases of this type of poisoning would occur less frequently if authors would seek and remove noxious material before releasing their manuscript for public consumption. In connection with such prophylaxis, a few "Suggestions to Authors" suggest themselves: (a) Send in your top

copy; not a smeary carbon. (b) Write on whole sheets, not half-sheets of paper. (c) Write your name on every page. (d) Furnish a title for each illustration, but do not write it across the face of the picture. (e) Make your references clear. Do not quote "Dr. Smith," but quote "Dr. Iota Magnus Smith." In giving references, do not conclude them with a penciled question mark. Do a little more work on the job. (f) In submitting a manuscript based on a paper read at a meeting, state in a footnote where and when the address was given. Thus: Read at the Annual Meeting of the Colorado State Medical Society, October 7, 8, 9, 1924. This footnote should appear at the bottom of the first page of the manuscript. (g) Conclude all manuscripts with a brief summary. (h) Do not plan to make the final draft of your paper on the printer's proof. Use the proof only to show printer's errors.

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Faulty Food Factors and Atonic Constipation—The complete and proper nourishment of the body is gradually assuming a more important aspect. Food in the stomach is thought of as nourishment in the body, without the realization that it is merely in the alimentary canal.—Journal A. M. A.



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Anastomosis of the Recurrent Laryngeal Nerve With the Descendens Noni—C. H. Frazier, Philadelphia (Journal A. M. A., November 22, 1924), reports further on the effect of suturing the descendens hypoglossi to the recurrent laryngeal nerve. Twelve patients have been under his observation. In nine of these the paralysis of one or both vocal cords followed a thyroidectomy, in one a gunshot wound, and in one an attempt at suicide. One case was not of traumatic origin. Of this number, six patients have been operated on, two of them on both right and left nerves. Thus there were nine operations in all; once the recurrent nerve could not be found; in the remaining seven, a satisfactory suture was effected. The ninth was a neurolysis. In three cases already function is returning. The others have been operated on too recently to warrant a report. The indications for the operation up to the present time have been twofold: (1) To enable the patient to dispense with a tracheotomy tube, and (2) to restore normal phonation. The operation proposed for the relief of paralysis of the recurrent laryngeal nerve is comparable in principle to that designed to relieve paralysis of the facial nerve. In the latter instance, innervation is supplied by transfer of the central segment of an adjacent motor nerve, be it the spinal accessory, the hypoglossal or, as Frazier has recently employed, the descendens hypoglossi, to the peripheral segment of the facial nerve. The appropriate nerve for recurrent laryngeal paralysis is the descendens hypoglossi; first, because of its accessibility; secondly, because it is a purely motor nerve; thirdly, because in the physiologic sense the muscles supplied by the recurrent nerve and the ramus descendens hypoglossi are a part of the same apparatus, and lastly, because the descendens hypoglossi could be sacrificed without any material ill effect. A summary is given of the cases seen and subjected to operation. Five cases are reported in greater detail.

Unrest in College of Surgeons—The Journal of the Indiana State Medical Association opens a long editorial under the above heading: "There has been a growing unrest and a spirit of dissatisfaction within the ranks of the American College of Surgeons which finally ended in two petitions to the Board of Regents, signed by prominent surgeons from various parts of the country, asking for certain changes in policy and management. Among the principal complaints are the following: That too many men are admitted to Fellowship that do not meet the requirements as originally laid down by the College, and that the College should adopt more rigid tests as to character, training, and intelligence of candidates; that the membership includes men who have not the highest ideals because they are either fee-splitters or generally reputed to be paying commissions under one guise or another, and that the College has made no effort to clean house; that men who have been reported unfavorably by a State Committee on Credentials have been admitted, and that these men do not measure up to the original standard, and many of them are immature; that there has been too much proselytizing of members and that there is too much of a tendency to build up a large organization without enough attention to the character of the men composing it; that the members of the college are not sufficiently conversant with the financial affairs of the organization and are entitled to know more in detail concerning the receipts and expenditures; that there has been undue and distasteful publicity in connection with the clinical congress held each year."

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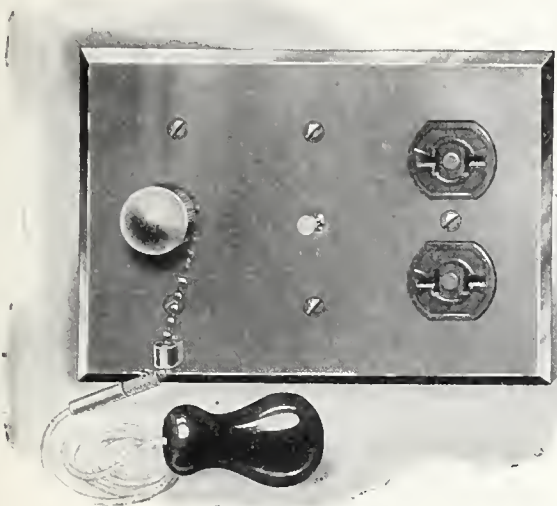
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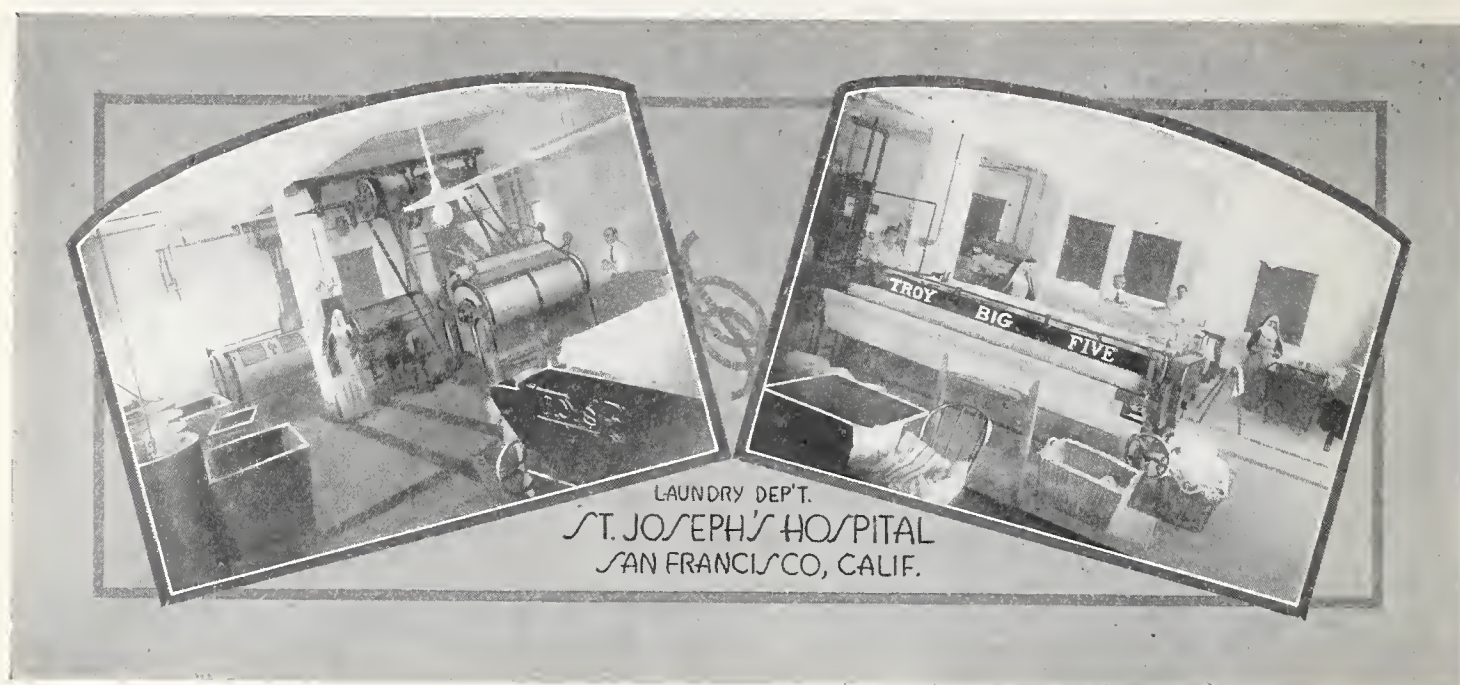
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A low estimate of the number of men employed in the United States in manufacturing industries alone today is placed by Everett at 10,000,000. Based on Army figures, the yearly time lost through venereal disease in this group of industries would be 6,893,800 days. Of course, the actual financial losses are not represented by these numbers, for time is lost through complications, such as gonorrheal rheumatism and various syphilitic conditions, decreasing the working activity and increasing the liability to accidents.—Venereal Disease Information, U. S. P. H. S.

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Does the Georgia Doctor Need a Broker to Sell His Services to the Public?—"Briefly, and in business parlance," says the Journal of the Medical Association of Georgia, editorially, "the question is: Shall the medical profession vend its products directly to the consumer, or shall it sell them to a middleman or third party?" This question has assumed increasing importance since the endorsement of periodic examinations of the apparently healthy by the American Medical Association at the San Francisco meeting. Commercial organizations and institutions have used this endorsement to urge the public to apply to them for these examinations. These companies acting as jobbers buy the physician's services at one price and sell them to the public at another. Should the physician deal with the jobber, or should he sell his services directly to the consumer? and what is going to be the ultimate effect on the independence and the welfare of the physician as a result of thus dealing through a jobber or middleman? When a physician signs a contract with a commercial organization to make physical examinations of all persons sent to him by the organization for a price set by the organization, and allows that organization to make its own charge to the individuals examined for the services rendered by the physician, the physician is selling his independence to the jobber. These institutions have further invaded the field of the practice of medicine by the examination of policy-holders in life insurance companies. One of them now claims to make such examinations of policy-holders in thirty-nine companies. They pay the examining physician—skill and knowledge make the examination worth while—\$2.50, but sell the result of the examination to the insurance company for \$5. Furthermore, they contract to make examinations of groups of employees for industrial organizations at so much per head, sending examiners from the home office. We are long suffering and loathe to take any stand which is not for the best interest of the public. But is such practice for the public's best interest? Some of them claim to be altruistic and carry the names of many of our most prominent citizens on their literature, but how much has any one of them given for altruistic purposes

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All books received are promptly acknowledged in this column. Such acknowledgment is the only return California and Western Medicine feels obligated to render in return for the courtesy of the sender. Selected books believed to be deserving of comment will be reviewed solely in the interests of our readers. Our advertising columns are open to publishers of acceptable books for such further statements as they care to make.

Abt's Pediatrics. By 150 specialists. Edited by Isaac A. Abt, M. D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. Set complete in eight octavo volumes totaling 8000 pages with 1500 illustrations, and separate Index Volume free. Now ready, Volume V containing 865 pages, with 373 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$10 per volume. Sold by subscription.

A Laboratory Guide in Histology. By Leslie B. Arey, Ph. D., Professor of Anatomy in the Northwestern University Medical School, Chicago. Second edition, revised. 12mo of 96 pages. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$1.25 net.

Manual of Obstetrics. By John Cooke Hirst, M. D., Associate in Gynecology and Obstetrics Graduate School of Medicine, University of Pennsylvania; Associate in Obstetrics, School of Medicine, University of Pennsylvania. Second edition. Entirely reset. 12mo of 551 pages, with 229 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$4.50 net.

A Text-book of Pathology. By William G. MacCallum, M. D., Professor of Pathology and Bacteriology. Johns Hopkins University. Third edition. Thoroughly revised. Octavo volume of 1162 pages, with 575 original illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$10 net.

Physical Diagnosis. By W. D. Rose, M. D., Lecturer on Physical Diagnosis and Associate Professor of Medicine in the University of Arkansas. Fourth edition. 319 illustrations. St. Louis: The C. V. Mosby Company, 1924.

The Practice of Pediatrics. By Charles G. Kerley, M. D. Formerly Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, and Gaylord W. Graves, M. D., Associate in Diseases of Children in the

College of Physicians and Surgeons, New York City. Third edition. Revised and reset. Octavo of 922 pages, 150 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$9 net.

Manual of Psychiatry. For the medical student and general practitioner. By Paul E. Bowers, M. D., Examiner in Lunacy, State of California; Lecturer in Neuropsychiatry, Post-Graduate Medical School of the University of California, Los Angeles. Octavo volume of 365 pages. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$3.50 net.

Diseases of the Heart. By Dr. Henri Vaquez, Professor of the Faculty of Medicine of Paris. Translated and edited by George F. Laidlaw, M. D., Associate Physician to the Fifth Avenue Hospital, New York City; Introduction by William S. Thayer, M. D., Johns Hopkins Hospital, Baltimore, Md. Octavo volume of 743 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$8.50 net.

Recent Advances in Medicine, Clinical Laboratory, Therapeutic. By G. E. Beaumont, Assistant Physician to the Middlesex Hospital, and to the Hospital for Consumption and Diseases of the Chest, Brompton; Sometime Radcliffe Traveling Fellow, University of Oxford, and E. C. Dodds, Chemical Pathologist to the Middlesex Hospital, Bland-Sutton Institute of Pathology, and Lecturer in Biochemistry in the Medical School. With 37 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut street.

Chemistry in Industry. A co-operative work intended to give examples of the contributions made to industry by chemistry. Edited by H. E. Howe, Chairman, American Chemical Society Committee on Prize Essays; Editor, Industrial and Engineering Chemistry. The Chemical Foundation, Inc., New York.

The Child Health Library. A series of ten books by practicing specialists. Edited by John C. Gebhart; introduction by Haven Emerson, M. D. Robert K. Haas, Inc., publishers (formerly Little Leather Library Corporation), 218 West Fortieth street, New York. I. Pre-Natal Care and the Baby's Birth, by Harbeck Halsted, M. D. II. Babies—Their Feeding and Care, by Louis C. Schroeder, M. D. III. The Neglected Age—The Child from Two to Six, by Bernard S. Denver, M. D. IV. Dangers of the School Age, by M. Alice Apperson, M. D. V. Communicable Diseases of Childhood, by Stafford McLean, M. D. VI. Hygiene of the Mouth and Teeth, by Thaddeus P. Hyatt, D. D. S. VII. What Children of Various Ages Should Eat, by Lucy H. Gillett, M. A. VIII. How Children

(Continued on Page 31)



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BOOKS RECEIVED

(Continued from Page 28)

Ought to Grow, by John C. Gebhart. IX. Psychology of the Child, by David Mitchell, Ph. D. X. Educational Problems, by David Mitchell, Ph. D.

Lectures on Pathology (delivered in the United States, 1924). By Ludwig Aschoff, M. D., Professor of Pathologic Anatomy, University of Freiburg, Germany. With 35 illustrations. Paul B. Hoeber, Inc., New York, 1924.

Anesthesia for Nurses. By Colonel William Webster, M. D., Professor of Anesthesiology, University of Manitoba Medical School. Illustrated. St. Louis: The C. V. Mosby Company, 1924.

"There are today about 125,000 hotels and eating places in the United States—an increase of at least 40 per cent in ten or fifteen years," says Mrs. Christine Frederick in discussing New Standards of Living in The Annals. "Our expenditures for *what we put into our mouths*, including tobacco, are today more than our expenditures for all else that we buy in retail stores."

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4. The climate of Colfax enables the patient to take the cure without discomfort twelve months in the year. We believe climate is secondary to medical supervision and rest, but the fact remains that it is easier to "cure" under good climatic conditions than where these climatic conditions are absent.
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* ————— *

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CALIFORNIA AND WESTERN MEDICINE

VOL. XXIII

JANUARY, 1925

No. 1

SPECIAL ARTICLE

SOME PRACTICAL SUGGESTIONS REGARDING TESTIMONY OF MEDICAL EXPERTS *

By JUDGE PAUL BURKS, Los Angeles**

THIS SUBJECT IS ONE OF GROWING IMPORTANCE TO COURTS, PHYSICIANS, ATTORNEYS, AND PARTICULARLY TO THE PUBLIC, IN THE INTERESTS OF THE INTELLIGENT AND HUMANE ADMINISTRATION OF JUSTICE.

THE PRESENT INEFFICIENT LAWS AND CUSTOMS UNDER WHICH MEDICO-LEGAL PROCEDURE IS CARRIED ON IS ABLY AND INTERESTINGLY ANALYZED BY THE LATE JUDGE BURKS OF LOS ANGELES. THE AUTHOR'S PAPER IS ABLY DISCUSSED BY DOCTORS ANDREW STEWART LOBINGIER OF LOS ANGELES AND WILLIAM C. WOODWARD, EXECUTIVE SECRETARY OF THE BUREAU OF LEGAL MEDICINE AND LEGISLATION OF THE A. M. A.

WE HAVE NO HESITANCY IN URGING NOT ONLY PHYSICIANS, BUT ATTORNEYS TO READ AND PONDER THESE DISCUSSIONS IN THE INTEREST OF THE GOOD NAMES OF TWO GREAT PROFESSIONS AND OF INDIVIDUAL ATTORNEYS AND PHYSICIANS WHOSE REPUTATIONS, AND THE GENERAL WELFARE OF AN IMPORTANT AND NECESSARY SERVICE, NOW SUFFER BY UNFORTUNATE PROCEDURES.

WE COMMEND A CAREFUL STUDY OF THESE DISCUSSIONS TO THE JUDGES OF OUR COURTS, WITH THE HOPE THAT INTEREST MAY BE AROUSED THAT WILL LEAD TO IMPROVED LAWS AND IMPROVED SERVICE TO SOCIETY.

JUDGE BURKS SAYS THAT: "ANOTHER DESIRABLE METHOD OF OBTAINING EXPERT TESTIMONY WOULD BE TO HAVE THE TRIAL JUDGE APPOINT THREE WELL-QUALIFIED EXPERTS. ONE MIGHT BE APPOINTED AT THE SUGGESTION OF EACH PARTY, AND THE THIRD AT HIS OWN DIRECTION OR BY THE TWO THUS APPOINTED, AND THEN THESE THREE COULD BE REQUIRED TO HEAR ALL OF THE TESTIMONY AND PRIVATELY EXAMINE SUCH WITNESSES OR PARTIES, AND PRESENT TO THE COURT, IN WRITING, A REPORT WHICH, AS TO THE FACTS FOUND, WOULD BE BINDING UPON THE JURY. REMUNERATION FOR THIS SERVICE COULD BE DIVIDED BETWEEN THE PARTIES TO THE ACTION, OR TAXED AS COSTS AS ARE JURY FEES."

WHY NOT ARRANGE A CONFERENCE BETWEEN REPRESENTATIVES OF THE MEDICAL ASSOCIATION, BAR ASSOCIATION; THE JUDGES AND A FEW OTHER LEADING ORGANIZATIONS, AND MAKE A SERIOUS EFFORT TO BETTER A SITUATION THAT NOW REFLECTS UPON MANY ELEMENTS OF SOCIETY AND, THEREFORE, UPON CIVILIZATION AS A WHOLE?—EDITOR.

SUBJECT defined and elucidated.

Distinction between advocacy of a cause and establishment of facts clarified.

Dangers and troubles of present method discussed.

Methods for improvement suggested.

DISCUSSION by Andrew Stewart Lobingier, M.D., Los Angeles, and William C. Woodward, Chicago.

EXPERIENCES with which some of your members are familiar are, primarily, responsible for my having been requested to make some "practical suggestions" respecting testimony of medical experts in judicial proceedings. Nothing which may be said is to be construed as a criticism of your profession, or of any of its members. The honor which you have bestowed upon me is appreciated, and evokes in me a sincere desire to be of service to you.

This is the day of specialists. Experts of all kinds are called upon, with constantly increasing frequency, as witnesses in both civil and criminal cases to assist courts and juries in investigating and determining questions of fact relating to subjects with which men, ordinarily, are not familiar. In many cases which are now presented to courts and juries, the evidence of one or more expert witnesses becomes a factor of determining importance in efforts to reach just conclusions.

In the play of King Henry VI (Act IV, Scene II), Shakespeare puts into the mouth of Dick, the butcher, an expression which is so short and so pointed as to render pardonable its reproduction in its

* Read before General Session of the Fifty-third Annual Session of California Medical Association, Los Angeles, May 15, 1924.

** We regret to announce the death of Judge Burks on October 9, 1924.

completeness. It reads: "The first thing we do, let's kill all the lawyers." The circumstance under which those of your profession are likely to re-echo this sentiment is when you leave the witness-stand, after having served as a medical expert.

Efforts to confound you which, too frequently, are put forth by lawyers inexperienced in trial work are amusing, and usually serve only to make the confusion of your ready terminology worse confounded. On those rare cases, however, when you are subjected to what our newspaper friends term "a gruelling cross-examination" by one skilled and experienced in the well-nigh-lost art of cross-examination and able to pierce your armor of technical expressions, then, friends, oh! then someone is apt to emerge from the fray resembling the proverbial "two-bits plus carfare."

HISTORY OF MEDICAL JURISPRUDENCE

One of the best definitions of "medical jurisprudence" to be found is that of Dr. T. R. Breck, one of its early and most eminent cultivators. He refers to it as:

"That *science* which applies the principles and practice of the different branches of medicine to the elucidation of doubtful questions in courts of justice."

The different branches alluded to in this old definition, doubtless, are chemistry, anatomy, physiology, pathology, etiology, hygiene and the practice of medicine, surgery and midwifery. To these there must, of course, now be added toxicology, psychology, roentgenology, and other specialties as they develop.

Not until the fifteenth century did the actual, practical study of analytical chemistry and of human anatomy progress far enough to impart to each of these departments of knowledge the character or dignity of a distinct branch of medical science.

In the history of the Jews, the Egyptians and the early Romans, are found items that may with fairness be said to belong to the domain of medical jurisprudence. Not, however, until the Code of Laws promulgated by George, Bishop of Bamberg, in 1507 and, more fully, in the "Caroline" Code by Emperor Charles V of Germany in 1552, do we find any real recognition by the law of the value of medical facts in legal proceedings. This code contained the first provision requiring medical men to appear in court as witnesses, and directed that their opinion should be taken in cases where death was alleged to have occurred by violence and suspicion of a criminal agency existed.

The nucleus from which sprang the French system of medical jurisprudence was the order of King Henry in 1606, requiring his chief surgeon to designate, in each large city or town, two surgeons who were required to examine and report on all wounded or murdered persons. At about the same time we begin to find in England recorded instances of the employment of medical witnesses in criminal trials.

In the trial for the murder of Jane Norkett in 1628, a body was disinterred for a second inquest thirty days after the first inquest had been held. The Coroner's jury at the first inquest returned a verdict of suicide. It was shown upon the trial that, when Jane Norkett's body was disinterred for the

second inquest, one of the persons accused of her murder touched the body, "whereupon the brow of the dead, which before was of a livid and carrion color, began to have a dew or gentle sweat arise on it which increased by degrees until the sweat ran down in drops on the face, the brow turned to a lively and fresh color and the deceased opened one of her eyes and shut it again; and this opening of the eye was done several times; she likewise thrust out the ring or marriage finger several times and pulled it in again, and the finger dropped blood on the grave."

The earliest works on medical jurisprudence worthy of special mention are those of Fidelis of Italy in 1598; Zaechus in 1621; Ambrose Paré, 1630; Deveaux, 1693; Bohn, 1702; and Fodere in 1796. During the seventeenth and eighteenth centuries a limited amount of instruction in medical jurisprudence seems to have been given in the Medical School of Edinburgh and in some of those on the continent of Europe.

The medical department of Columbia College of New York is entitled to the credit of establishing, in 1804, the first full professorship of medical jurisprudence in America, which was filled with much ability for many years by Dr. J. S. Stringham. Similar chairs were established in Louisville Medical College in 1812, occupied by Dr. Charles Caldwell; in the College of Physicians and Surgeons for the Western District of New York in 1815, filled by Dr. T. Romeyne Beck, and in Harvard Medical School in 1816, filled by Dr. Walter Channing; since then this branch has become recognized as a necessary part of the curriculum of all the more important medical schools, both in this country and in Europe.

Few, if any, state boards of medical examiners will now recognize as in good standing any institution which omits full instruction in this important branch. This is eminently proper when we consider that every practitioner of medicine is liable at any time to be hailed into court to give strictly medical testimony necessary, not only for the detection of crimes and the decision of questions of mental capacity, but also bearing on the public health of the various activities and industries of society and concerning the nature, extent and probable consequences of constantly recurring personal injuries which, in spite of all laws enacted and devices invented and rules of conduct promulgated, increase in frequency with the development of modern methods of travel, trade, and industry.

VALUE OF MEDICAL JURISPRUDENCE

The value of the application of chemical processes in detecting and determining the nature of poisons in cases of homicide and suicide, and in detecting adulterations and impurities in air, water, food products and drinks, for the prevention of frauds and for the protection of public health; the application of a thorough knowledge of anatomy and physiology as an aid in determining the nature, extent and probable consequences of wounds and personal injuries, whether homicidal, suicidal, or accidental; the application of the facts and principles constituting the physiology and pathology of the brain in the determination of questions regarding

mental competency, idiocy, and insanity are all so frequent and so generally acknowledged as to render unnecessary any illustrations of their incalculable worth and frequent use.

All concede the great value to men of your profession of a thorough knowledge of medical jurisprudence because upon *you* devolves the responsibility of occupying the witness-stand and imparting such facts and opinions as may enlighten courts and juries and facilitate the administration of justice. The equal importance, however, of the study of medical jurisprudence by lawyers and students of the law has been too long overlooked.

The lawyer does not find it necessary to go upon the stand in an effort to impart valuable medical knowledge to the court and jury. For that reason, he is apt to feel it unnecessary to master all the details of chemical analysis, causes of mental and physical diseases, and the probable consequences of acts of personal injury. He forgets that the important responsibility of deciding when, and what kind of, medical evidence is required in a given case rests upon him and that upon him devolves the work of eliciting such evidence from medical expert witnesses in such a manner as to insure its being understood by the court and by the jury. If he has not at least as much medical knowledge as is contained in our best works on medical jurisprudence, it is utterly impossible for a lawyer accurately to know the kind of medical expert testimony essential to proper enlightenment as to how so to frame his questions as to elicit from them those facts and opinions which are necessary to attain the ends of substantial justice and to avoid subjecting both himself and his witness to humiliation and embarrassment.

The average lawyer is poorly equipped to cope with the medical expert in his own field of inquiry because his research of medical authorities is rarely such as to fit him to undertake a task always delicate and often dangerous. Few attorneys are capable of examining medical experts. Fewer still are there who, should it become necessary, are capable of discrediting, with a jury, a well-informed witness of this kind. Any extended cross-examination along the line of such expert's theory, unless conducted with the utmost skill and assurance, is apt to prove disastrous by affording an opportunity for enlargement upon testimony already given and explanation of that which may have been overlooked or misunderstood by the jurors.

CAUSES OF DISSATISFACTION

As soon as the testimony of medical experts was recognized by the law, doctors commenced to disagree. As far back as the early part of the eighteenth century, we find reflections upon the merits of this kind of evidence equally as frank and outspoken as those frequently made by the bench, bar, and newspapers of today. An example of the contempt for expert testimony so often expressed by modern judges is found in the charge to the jury in the trial of Spencer Cowper, an Englishman of high position charged with the murder of Sarah Stout, a Quakeress, whose body was found one morning in a millstream. The evidence showed that Cowper was last seen with her the night before. The medical questions involved were most emphatically contro-

verted by physicians on both sides, and Baron Hattell, presiding, said:

"You have also heard what the doctors and surgeons said on the one side and the other concerning the swimming and sinking of dead bodies in the water; but I can find no certainty in it, and I leave it to your consideration. The doctors and surgeons have talked a great deal to this purpose and of the water going into the lungs or thorax; but unless you have more skill in anatomy than I you will not be much edified by it."

Some years later we find in the records of another criminal trial what must have been an early case of the now all-too-common defense of "brainstorm." In this case the curious result of the denial to the prisoner of the assistance of counsel in trials for felony was that Lord Ferrers, who was being tried, set up insanity as a defense and was obliged himself to examine the witnesses called in support of his plea.

There is probably no class of expert witness who is so prone to overindulge in a pedantic use of technicalities as is the physician or surgeon. This doubtless is due to the nature of his science. It is particularly true of the younger members of your profession. In an early report of a case of assault, a house surgeon testified:

"I discovered considerable ecchymosis under the left orbit, caused by extravasation of blood beneath the cuticle."

Baron Bramwell—"I suppose you mean the man had a black eye."

Scientific Witness—"Precisely, my lord."

Baron Bramwell—"Perhaps if you had said so in plain English these gentlemen would better understand you."

"Precisely, my lord," answered the learned surgeon, evidently delighted that the judge understood his meaning.

The foregoing would have been worthy of the young practitioner who described a suppression of perspiration as "an agglutination of the sebaceous follicles."

Tendencies thus indicated have shown some improvement. Instances, however, are still frequent where a medical expert—particularly if he is testifying before a jury—indulges in the use of technical and other expressions which the lay mind cannot possibly comprehend. The result is that court, counsel, and jury not only lose interest and fail utterly to comprehend what is being said, but also at times are made positively weary. The use of plain and equally effective words would have an opposite effect, would command interest and respect and promote the ends of justice.

In a recent case it became important to determine the length of plaintiff's leg as bearing upon the extent of personal injuries for which damages were sought. Defendant's counsel, upon cross-examination, asked plaintiff's medical expert from what point he had made the measurement to which he had previously testified. In the language of his calling, the expert replied: "From the anterior superior spinal process of the ilium." "A-h-h! My God!" exclaimed the attorney, overpowered by a jargon more mysterious than his own. After further ex-

amination, he succeeded in eliciting the fact that the place with the name "of learned strength and thundering sound" was the small point of bone on the side of the hip that can be felt with the fingers.

Experts of every kind have pet systems and theories by which they are prone to solve knotty questions presented to their art or science. They often do this in perfect innocence unless restrained by the watchfulness of court and counsel. Medical experts, unfortunately, are not exempt from this temptation and, under the prevailing custom, "with medical questions more doubtful, perplexing and complicated than the legal issue on trial, with masses of testimony confused and contradictory, a number of medical men in a cloud as to what has been proved and what has not, two or more lawyers who do not understand the physicians, it is not reasonable to expect that a jury, however sensible, could evolve order out of such chaos." It is not surprising that there should exist a growing desire not only among doctors and surgeons, but also among lawyers and judges to reform an altogether unsatisfactory condition.

After an experience of a lifetime at the bar and on the bench, the final judgment of Judge Campbell was that:

"Skilled witnesses come with such a bias on their minds to support the course on which they are embarked that hardly any weight should be given to their evidence."

Taylor, in his treatise on the "Law of Evidence," emphatically declares:

"Expert witnesses become so warped in their judgment by regarding the subject in one point of view, that, even when conscientiously disposed, *they are incapable* of expressing a candid opinion."

The unfortunate fact is that these opinions are so generally entertained and so often justified. Important cases frequently arise, however, in which the testimony of such witnesses must be reckoned with. It is now quite generally understood among lawyers that it is only by an ability properly to examine expert witnesses that jurors can be enlightened and enabled to arrive at a just estimate of the value of such testimony.

Much of the dissatisfaction with expert testimony, more especially that of medical experts, is due not so much to lack of honesty or candor in men of your profession as to the utter inability of lawyers properly to examine such witnesses or to appreciate the merits or demerits of statements which are honestly made, but clothed in words not easily understood by untrained ears.

We all know that honest opinions of different experts can be obtained upon opposite sides of the same question and that dishonest opinions may be obtained upon different sides of the same question. There is, however, a clear and clean-cut distinction between matters of scientific fact and mere matters of opinion.

When medical experts are called upon to establish certain facts which are not matters of opinion, it should be practically impossible for them to disagree.

When it comes to the province of mere opinion

we know too well that these same experts differ among themselves to an extent which causes but little credit to be given to mere expert opinions as such, whereas under any proper system they should be received with the utmost confidence.

The "medical expert" should, and generally does, go upon the stand in a fairly judicial frame of mind. The lawyer by his manner of propounding questions or by the exercise of many little persuasive arts incident to his calling, frequently, if not inevitably, leads him into "taking sides." He is surrounded by conditions which, to him, are entirely new, is confronted with verbiage that is strange, even if it be intelligible, and is more or less annoyed and flurried by his surroundings. Under these adverse circumstances he is confronted with the necessity of making a categorical answer to questions that are put to him, more especially in his cross-examination, which cannot be answered categorically. Too few lawyers realize that in a profession like yours—a science or an art like yours, if you prefer—it is often absolutely impossible to answer a question categorically without the risk of conveying to the court or jury, as the case may be, an absolutely erroneous impression. Then, at the close of a more or less lengthy examination, you are often subjected to further imposition in the shape of what lawyers are pleased to term a "hypothetical question."

THE HYPOTHETICAL QUESTION

One of the most glaring evils of medical expert testimony is the hypothetical question which has come to play so important a part in our trials of today. This is the most abominable form of evidence that was ever permitted to choke the mind or throttle the intelligence of a juror. The theory of such questions is that they embrace or express in a few words (sometimes a few thousand) *all* of the main features of the case under consideration—an accurate synopsis, if you please, of all the preceding testimony. They are supposed to be predicated upon *all* of the facts, or assumed facts, bearing upon the question, and no others, and the doctor or surgeon is asked to assume the truth of every fact incorporated in the question, and express to the jury his unqualified opinion and conclusions as an expert from the supposed facts.

In many (probably most) instances, the witness has not seen, much less examined, the patient concerning whose condition he is called upon to give sworn testimony, and the jury often take the answers of the witness as direct evidence of the existence of the fact itself. The hypothetical question itself does not afford as much cause for complaint as does the fact that such questions are too often so loosely framed as to present an aspect of the case entirely different from any which is justified by the testimony. In too many cases an expert who makes a direct and unqualified answer to such questions leaves an absolutely erroneous impression. This explains why so many experts have made answers to such questions which have elicited adverse criticism and affected their professional standing.

It is difficult for a lawyer to overcome the injurious effect of such a question. A method sometimes indulged in is abruptly to demand that the witness repeat in substance the question that he is about to

answer, and his efforts to recall and repeat the various stages of the usually long question which he is about to answer sometimes makes the dangers of such questions immediately apparent to the jurors.

Successfully to combat the effect of a skillfully prepared hypothetical question requires *knowledge*, *experience*, and *astuteness*, which the average lawyer does not possess. At times it is possible to determine what are those parts of the question upon which the witness places particular stress or to narrow the witness down to some particular factor, the truth of which may have been left in doubt by the previous testimony. It is for the unexpected examination of this kind, as well as for the sentence or *twist* in the question which serves as the foundation for the answer, that the medical expert should be prepared.

Many, perhaps all, of you have been obliged to listen to hypothetical questions so imperfectly constructed that they could not be answered negatively or affirmatively without liability of inculcating errors or necessitating lengthy and qualified explanations, and yet you have seen many such questions answered by "yes" or "no" without the slightest hesitation by one whose conscience is less elastic than is yours.

FALLACIES OF PROGNOSIS

There was a time when the manufacture or exaggeration of injuries in damage cases against corporation had assumed the proportion of a trade among certain lawyers and doctors with distorted ideas of ethics. Fortunately, this practice is now very rare. The fallacy of prognosis is apparent to lawyers and doctors whose duty it is to defend such actions. It is often interesting to watch the history of such a case after a substantial verdict has been awarded and paid over to the suffering and "permanently incapacitated" plaintiff.

You have all heard patients doomed to early dissolution solely on the strength of physical signs, and yet you have seen them live in a most contumacious and scientifically unexplainable manner apparently as long as they desired. The captain of a ship was dying of scurvy, but the crew mutinied and he postponed his dying, put down the mutiny, and is still living. An old lady was near her end after an injury. The doctors agreed that she could not possibly recover, but she became vexed because of a suggested change in her will; made up her mind not to die just then; ordered her carriage and was driven to the home of a relative twenty-five miles in the country, where she lived four years longer. Forty-three years ago it was my misfortune to be seriously injured by the carelessness of a coachman. Had my parents brought suit against the employer of the reckless driver, it would have been an easy matter to find a hundred of the most reputable physicians (had there been so many in Los Angeles at that early date) who would have testified conscientiously that the injured child could not possibly live to attain his majority; that if he did he would be permanently crippled.

With so much fallacy in honest prognostication it is not strange that there is considerable "faking" resorted to by those desiring to pick up some easy money. The honorable member of your profession

must be continually on his guard to avoid being imposed upon.

SUGGESTED REFORMS

Much of the dissatisfaction with medical expert testimony is due to the shortcomings of attorneys either in failing to understand the requirements of their case or, if they do understand, in being utterly unable to bring out, by well-directed examination, those facts and only those which have a direct bearing upon the particular question under consideration.

Effectively to examine a witness requires that a lawyer should possess at least an outline knowledge of the subject of his examination. It is certain that to construct a question (especially of a hypothetical character) with sufficient skill to elicit a direct and intelligible answer from a medical expert requires more knowledge than the average practitioner of law will take time to acquire. Lawyers possessing the necessary medical knowledge are too apt to want to "show off" before the expert and the jury. My view, therefore, is that, until some way can be devised of avoiding the present method of eliciting expert testimony, thorough knowledge of medical jurisprudence should constitute a most important part of the required education of every lawyer, and that this branch of study should constitute an important part of the curriculum of every school or college of law, as well as of medicine and surgery. It cannot be doubted that a large part of the confusion and lack of proper methods in introducing and eliciting medical evidence is due to the too general omission of this study as an essential qualification for admission to practice law. In direct line with the suggestion there appeared in the press, a few years since, a dispatch following:

"Medical Courses for Lawyers—An educational innovation has just been put into effect by the Medical College of Loyola University, a Jesuit institution, which offers a course in medicine to law students and attorneys. Recent sensational murder trials have shown the importance, it is alleged, of a knowledge of medicine to the lawyer.

"The course will deal solely with medical and surgical subjects which commonly come up in court trials. Special emphasis will be laid upon the various forms of insanity, but the lectures will also take up anatomy, histology, pathology, neurology, and toxicology.

"The course is offered with the aim in view of preparing attorneys for intelligently questioning medical men on the witness-stand when they are called as experts."

Even in the direct examination of witnesses concerning the nature, extent and probable consequences of personal injuries in both civil and criminal cases, an attorney who has omitted medical jurisprudence from his curriculum of study fails to ask the very questions which would elicit answers of the utmost importance. On the other hand, he frequently wastes much time in pressing questions which are utterly irrelevant or useless. The truth of this observation is borne out by the fact that one of your profession frequently sits beside the attorney in important medico-legal cases, evidently acting as assistant counsel by suggesting the necessary medical questions and references. If the service of the phy-

sician is confined to this it can be countenanced, even though it is not complimentary to the actual attorney. If, as often happens, he finally takes the stand to give expert testimony in the same case, he inflicts an injury on the character of his profession. The sole duty of a medical witness should be to state such facts and opinions as he believes to be true without fear or partiality, which is difficult, if not impossible, for him to do and at the same time act the part of assistant attorney.

STATUTORY REFORMS

In England and the United States the contesting parties select their own experts and pay them. Equally qualified experts thus appear on both sides and flatly contradict each other.

In France the court may order an investigation and report by experts whenever it deems it advisable. If the parties cannot agree upon at least three experts, the court appoints them.

In Germany, since 1870, after the issues are framed upon which expert testimony is sought, the parties may agree upon the experts, and the court appoints those agreed upon, but it may confine the parties to a given number of experts. Sometimes the court submits to the parties the names of a number of experts, and allows each side to strike off a certain number of them, and then appoints those remaining.

In Prussia it is said to have been the custom to appoint as experts a physician and surgeon for every county. In addition there is a medical college in each province to which an appeal lies if the experts disagree or the parties desire it.

A plan suggested in England and tested at Leeds was for medical men to refuse to testify unless before doing so they could meet in conference with the experts from the other side, and have an interchange of views; and it is stated that the result at Leeds was that medical witnesses were hardly ever cross-examined at all, and it was by no means uncommon to have them called on one side only. The plan is, of course, dependent upon a high standard of moral character and professional honor. The American physician and surgeon, as known to us, is generally qualified to satisfy these requirements.

The American Medical Association some years ago appointed a special committee to consider this question and report some plan. It is my understanding that such committee considered the advisability of having a board of experts of three or more chosen by the respective State Medical Associations, rather than elected by the people in the first instance or appointed by the Governor, who would be available to parties as expert witnesses upon the payment of a fee to the state, as we pay jury and trial fees, and who would act in conjunction with a medico-legal institute, such, for instance, as the State Laboratory of Hygiene is in chemistry today.

Another desirable method of obtaining reliable expert testimony would be to have the trial judge appoint three well-qualified experts. One might be appointed at the suggestion of each party, and the third at his own direction or by the two thus appointed; and then these three could be required to hear all of the testimony and privately examine such

witnesses or parties, and present to the court in writing a report which, as to the facts found, would be binding upon the jury. Remuneration for this service could be divided between the parties to the action, or taxed as costs as are jury fees.

It is only by the adoption of some such course that medical expert testimony can escape the adverse criticism to which it is now subjected.

The adoption in this country and in the various states of some plan such as above outlined, and the enactment thereof into proper laws, would do much to improve the means available to the medical expert of exercising the high prerogative of his science and assist in insuring righteousness and justice to all.

That a custom has become well established affords no sufficient excuse for its continuance, and if a new custom or method better fitted to present-day needs can be substituted with good results, it is your duty to assist in bringing this to pass.

The study of Medical Jurisprudence should form the most important link between the domain of law and that of medicine; it is the application of the facts and principles established in the more scientific departments of medicine in aid of legal processes for the support and protection of the highest interests of society, the detection of crimes, the preservation of public health, and the more exact administration of justice for all classes of society; it is the common ground upon which the members of the two professions meet for the common purpose of aiding each other in eliciting truth and in applying truth for the protection of the innocent, punishing the guilty, and in preventing or alleviating human suffering under the forms of the law.

The more thoroughly the members of both professions study this branch of human knowledge, the more harmonious will be their intercourse, each with the other, and the more successful will be their efforts to speed up the processes of the law and to promote the administration of substantial remedial justice.

DISCUSSION

Andrew Stewart Lobingier (Merritt Building, Los Angeles)—I listened to the reading of this scholarly address by Judge Burks with singular interest.

Fifteen years ago the Los Angeles Bar Association asked me to address them on this subject at a banquet given by the association to the Supreme Court of California. That was October 15, 1909. During the fifteen years following, under the authorization of the Councils of the Los Angeles County and the California Medical Associations and in collaboration with Mr. Oscar Mueller and Judge Frank Oster of the Los Angeles Bar Association, we have at various times prepared three bills governing expert testimony which were presented to the California legislature for passage. The first bill drafted was rejected by the legislature because it governed the giving of medical expert testimony only, and was considered to be class legislation. At the next meeting of the legislature the bill presented covered the giving of all expert testimony whether medical or from various other professions, as engineers, architects, chemists, etc. This bill passed the Upper House, but failed in the Lower. It was again presented in slightly modified form at the next meeting of the legislature, and was passed by both Houses, but vetoed by Governor Johnson. Not discouraged, Mr. Mueller and myself visited various cities and towns in the state—of course, at our own expense—making addresses before joint meetings of medical and bar associations, or wherever we could get an audience of physicians and lawyers to listen to us, in advocacy of this bill, which authorized the court to appoint its own expert, who by this appointment became an

officer of the court and hence was, as far as could be, divested of bias. The bill provided that counsel for the plaintiff or defendant could still have their own experts whose compensation and appearance they provided for; but the court's expert should examine the plaintiff and testify under direction of the court, though the witness was subject to cross-examination by counsel for either side. The compensation of the court's expert was provided for in the bill. The war came on, and after it one of us was absent from California for several years and nothing more has been done by us toward securing the passage of this legislation. I have learned from Governor Stephens that someone presented a bill governing the giving of expert testimony while he was the executive, and that at the request of several lawyers adverse to it, he had vetoed it, thinking it undesirable.

Whether this was a different bill from the one we have worked so long to have enacted, I am not prepared to say. At the next meeting of the legislature Mr. Mueller and I propose to present our bill again, in the hope it may have favorable consideration by the legislature and the executive. For at least ten or twelve years a number of our Los Angeles Judges of the Superior Court—conspicuously Judge Charles Monroe—have put in practice the calling of the court's expert in cases of doubt and difficulty and with apparently most satisfactory results. We have been privileged to contribute considerable time and assistance in getting the idea of the court's expert popularized in the local courts, and there is a very obvious increase here in the favor in which this method of giving expert evidence is being received.

I have faith that this exceptional address of Judge Burks will stimulate a genuine and widespread interest in this important subject. Since the vast increase in motor car accidents, the number of personal injury cases in our courts would in themselves demand some such assistance to expedite their adjudication.

William C. Woodward, M. D., Executive Secretary Bureau of Legal Medicine and Legislation of the American Medical Association, Chicago, Ill.—The judge, counsel, and an expert must come to an agreement in any case before an expert can get on the witness-stand. For such shortcomings as may appear thereafter, each must bear his part of the blame. For the correction of such defects as now exist in expert testimony generally, judges, lawyers, and the several groups from which expert witnesses are ordinarily drawn should co-operate. But before seeking correction through the enactment of new statutes, it should be definitely determined that existing laws are inadequate, and this seems to be peculiarly the function of bench and bar.

The primary responsibility of the judge is to determine whether expert testimony is needed, and if so, whether each particular witness offered as an expert witness is so qualified. In determining these questions the judge is guided by arguments of counsel, supplemented it may be, in the case of the qualifications of the proposed expert witness, by a preliminary examination in open court. Such examination is limited, however, to an inquiry into technical fitness and does not cover moral suitability. In arriving at his decision, the judge is bound by well-established principles of law. As between judge, counsel, and expert, it may be fairly said, I think, that the judge is the least responsible for such objectionable conditions as are now complained of.

The second collaborator in bringing about the appearance of the expert on the witness-stand is the lawyer. It is on his initiative that expert testimony is admitted. He selects the experts who are to testify for his side and induces the court to permit them to do so. He examines the experts offered by the opposite side, to disqualify them if unfit. He is free to determine whom he will, and whom he will not, present to the court as an expert witness, and in doing so he may take into consideration, not only the technical fitness of the prospective witness, but his moral fitness as well. If he will only refuse to bring into the court witnesses whom he knows, or might easily know, are willing and ready to quibble, to skim along the borders of truth, to evade, to conceal, and even to prevaricate, we shall hear less ridicule of expert witnesses, and expert testimony will be given its normal value. This much the lawyer can do without the enactment of any new law.

The third actor is the expert; but no expert can ever

get on the witness-stand unless some lawyer, with the judge's consent, puts him there. So much has been said concerning the expert himself that it is hardly necessary to add anything. That there are occasional experts willing to bear false witness to meet their employer's ends is probably true. Certainly, some witnesses are offered as experts by lawyers, and approved by judges, who could not so qualify among associates in their own professions. And there is a third class made up of men who may have the necessary technical qualifications and necessary integrity, but whose emotional reactions on the witness-stand lead them to unintentional, and it may be unconscious, exaggeration, or concealment. All three of these groups do harm, not only to their professions, but also to the cause of justice. Their conduct attracts public notice and brings condemnation on all, while the vast bulk of honest, competent expert testimony goes unnoticed.

As may be inferred on what has already been said, the problem of ridding the courts of dishonest and incompetent witnesses goes beyond a consideration of the witness himself, and involves counsel, and it may be the judge. The remedy most frequently suggested is, authorizing the appointment by the court of expert witnesses to represent, not the parties, but the court itself. Ordinarily, it is proposed that the testimony of such court experts supplement that of the witnesses testifying on behalf of the parties. A statute undertaking to regulate expert testimony in such manner was passed by the Michigan legislature some time ago, but has already been declared unconstitutional by the Supreme Court of the state (*People vs. Dickinson*, 164 Mich. 148, 129 N. W. 199). One of the strongest objections raised against it was that the testimony of witnesses acting on behalf of the judge would be given greater weight by the jury than the testimony of the witnesses offered by the parties, and that the parties might be thus deprived of a fair hearing.

But waiving any question as to the constitutionality of such legislation, it may be seriously questioned, I think, whether the situation would be materially improved simply by multiplying the number of experts, and arranging them in three groups, instead of two. If legislation is necessary, and if, in the hope of improving the situation, the court is to be vested by law with additional authority, possibly it should be authorized to appoint a competent expert to act on behalf of the judge, as a friend of the court, to cross-examine in open court the witnesses offered by both sides. The knowledge that an expert witness might be subjected to such cross-examination by an expert in his own line, equally or possibly even more competent than the witness himself, would be likely to go a long way toward deterring incompetent persons from assuming the role of expert witnesses, and would lead even the competent expert to a more thorough preparation of his testimony. Whether it would be practicable to procure men qualified to conduct such examinations, and particularly whether the ethics and clannishness of the particular professional group involved would not hamper such an expert examiner to an extent that might make the entire plan impracticable, are questions that can be answered only by experience.

The Trend Toward Federal Centralization is explained by Walter Thompson, Ph. D., in *The Annals Amer. Acad. Pol. and Soc. Science*, thus: "Reformers failing to realize their pet reforms through state action are prone to demand federal regulation. It is easier to convince Congress than to persuade forty-eight state legislatures, and the result is more far-reaching. Often reformers fail to realize that the reason state action has not been satisfactory is because the problem is a difficult one to cope with, and to try to realize the reform on a wider scale may increase this difficulty."

The oak tree produces a thousand acorns, from one of which a new tree may grow. We must have a thousand workers in the realm of the arts that one may rise to the plane of greatness. As to why we should foster art—there is but one answer and so obvious a reason that it is hardly worth the stating. Through beauty man's spirit is uplifted; to neglect it is to sink again to the depths from which mankind has risen.—Huger Elliott (*The Annals of American Academy of Political and Social Science*).

PRESIDENT'S ADDRESS—UTAH STATE MEDICAL SOCIETY, 1924

By J. R. MORRELL, M. D., Ogden, Utah

We cannot legislate ourselves into public esteem. We must each one perform a definite individual service, submerging any selfish interest for the common good, and establish a successful co-operative plan of action on the part of the profession in our state if we are to grow in public favor and confidence.

The cure for quackery in medicine lies in our rendering conscientious service with a desire only to do our full duty.

The average man is interested in the health of his farm animals and poultry, but in the family health often only after disease appears.

As long as we attempt to hinder each other in the work of popular health education, just so long will the confidence of the people be withheld from us.

Birth and death reports have been fairly well made, after years of effort, but our hearts are not in the work of vital statistics as they ought to be, and we alone can make a success of this important work.

Expert medical testimony is frequently asked of us and it is a common thing to find a number of men of good standing opposing each other on a case. Many of the most prominent men in our profession have found themselves in this position, and the public has come to regard expert medical testimony as a joke.

We cannot afford to be less efficient than we ought to be. We cannot do less than is expected of us in public service.

THERE are many tempting subjects inviting discussion in a paper of this kind, but I have tried to limit myself to a brief mention of a very few that I feel are of practical interest to our association. Through connection with a few of the official and volunteer health agencies in the state, and through participation in committee work within our organization and in association with outside committees, I have been rather strongly impressed with what I think are real problems that we have yet to solve before we take the place in public confidence that our profession is entitled to hold. These problems concern each individual vitally, and demand that he take a personal interest. The solution cannot be left to the officers of our society, because we cannot legislate ourselves into public esteem. We must each one perform a definite individual service, submerging any selfish interest for the common good, and establish a successful co-operative plan of action on the part of the profession in our state if we are to grow in public favor and confidence.

It is becoming more and more necessary that we have a broader outlook upon our profession than merely to use it as a means of making a living or the accumulation of money. A medical education is a broad, general training that should qualify a man for a much more useful life than he could have by the routine treatment of patients with no higher objective than the average practitioner has. It is a misfortune that a physician should be dependent for his living on fees derived from the treatment of the afflicted, because the temptation to commercialize, which is so strong, often leads one to do things that are not necessary, the results of which may not only be unfortunate, but disastrous. Failure in dealing with the health or life of an individual means much more than failure in commercial lines, and the responsibility is correspondingly greater, and one should not assume it unless he is prepared to jus-

tify the trust reposed in him by those who seek his help. A medical education automatically places a man on a pedestal and he becomes something more than a mere man, and if he proves unworthy of that position, not he alone suffers, but the profession of which he is a part is lowered in public esteem and favor because he has failed in his trust. The cure for quackery in medicine lies in our rendering conscientious service with a desire only to do our full duty. We have not only been negligent in our duty to the public, but we have been untrue to each other and have discredited each other in the eyes of the public. Insinuations that lead to suspicion or doubt of the integrity of another are so easy to leave, and praise or commendation is often so difficult that we fail to render a service that would mean much to our cause.

Medical education is expensive and a great part of the expense is borne by the public. Fees collected from students do not pay half the cost of their education, and the balance is paid by the public as taxes or comes from gratuities or endowments of various kinds. Because of the fact that the public has shared in the cost of our education, it is entitled to part of the benefit. We have learned something about preventive medicine, and it is our duty to see that that information reaches the people in order that it may be effective. We can in that way interest people who have confidence in us and at the same time render a co-operative service to the health agencies who are struggling to popularize health education. But we don't often interest ourselves in this work. We have numerous opportunities to instruct, and the majority of people are eager for the information, but we pass up the chance to render a service and they turn to the charlatans and the cults, who are all talkers, trained to teach their theories, and who never lose an opportunity to bring them before the people. We have always had the first chance and our indifference has resulted in a partial withdrawal of public confidence from our entire profession, and this in turn has made the work of health agencies difficult, as people feel that we are attempting to help our own cause and having nothing but a selfish interest in our health activities. If we were united and sincere in our efforts to teach health to the people; if we took the time to impress our patients with our personal interest in them; if we backed up the efforts of public health agencies in their educational work, instead of doing as we often do, ridiculing it, we would establish confidence and might go to any extent in public health education and legislation. The trend toward quackery, and the cults, is because of the sympathetic welcome they extend, with a personal appeal to each one. The large class of working people, whose help and co-operation we need most in public health work, we have to a great extent lost to the sympathetic cults, and our results will always be indifferent until we have re-established their confidence in us by better work on our part. We have scientific truth to offer, with the means of preventing serious illness, and many deaths, and yet because of jealousies, indifference and commercialism abnormally developed, we not only lose the opportunity to render a public service, but create a lack of con-

fidence in our motives. We teach public health in two ways, first, to the child through the school where he is taught health habits. This is the method that will be productive of the best results. But some physicians criticize this work or even antagonize it as a fad, or ridicule it as a useless procedure. The second method is by the teaching of adults, a much more difficult task, as many people are not interested in it. The average man is interested in the health of his farm animals and poultry, but in the family health often only after disease appears. During the recent goiter survey in this state, the only communication to the board of health asking for advice, was from a raiser of hogs who wanted to know how he might administer iodine to stamp out goiter in his herd. We can take a very active part in the education of the adult if we choose to do so, not only by our interest in teaching our patients, lecturing and writing on health subjects, but by giving our support to the work of the health agencies in the state. In the recent goiter survey, examinations of school children were refused by the board of education in one large district, on the advice of local physicians, who ridiculed the work and were able to influence the members of the board against the survey. From various other sources attacks were made on the survey, and doubt engendered in many communities as to the real purpose and intent of the work. As long as we attempt to hinder each other in the work of popular health education, just so long will the confidence of the people be withheld from us. Misunderstandings are often at the bottom of the troubles arising between health agencies, and between health agencies and the general profession. I would like to suggest that our committee on health and public instruction assume the role of intermediary and attempt to bring about co-operative work in all lines of public health activity in this state.

The public is willing and anxious to listen to the medical man whenever he is willing to talk, and he is usually received with enthusiasm by clubs, schools, parent-teachers' organizations and others before whom he might appear. The trouble is in getting him to do it, and while he is coming out of his trance the chiropractor, the traveling "fakir," and the itinerant specialist in diseases of men, women and children, have talked themselves into the confidence of the people and he cannot dislodge them.

The physician is not only the keeper of the health and therein of much of the happiness of his patients, but from an economic point of view he is one of the country's most valuable assets. When we realize this responsibility and organize for good, there is practically nothing that we cannot achieve in the highest interest of our art.

The erroneous belief held by many men that the practices of individual doctors will be interfered with by problems of health betterment which are promoted by lay and semi-medical welfare organizations or by the state, is responsible for much of the opposition of members of our profession. That this is a mistaken position, there can be no doubt, and the greater enlightenment that comes to the public, the better will be their ability to discriminate

in their choice of medical help which will ultimately react to our advantage.

We can support and uphold the laws and ordinances of our cities, state and nation, many of which have been enacted after careful study and consideration and have been more or less ineffective because of our indifference. We are expected to report cases of contagion to our local health authorities, to make reports of venereal diseases and of cases of tuberculosis, in order that the communities may be spared needless expense and perhaps many lives be saved. Public health workers checking up our interest in these activities find that we almost entirely ignore the reporting of tuberculosis and venereal cases and whole neighborhoods are exposed and often infected as a result of lack of supervision. Not 50 per cent of the reported deaths from tuberculosis for the last year had ever been called to the attention of the health boards prior to the signing of the death certificate.

Birth and death reports have been fairly well made, after years of effort, but our hearts are not in the work of vital statistics as they ought to be, and we alone can make a success of this important work. Let us not be the factor responsible for failure along this line, but make out our reports of contagious and infectious diseases, especially tuberculosis, as carefully and promptly as we do our reports of industrial accidents, from which we expect to collect a fee.

We have far to go still in the matter of co-operation with each other. As so strikingly told us last year by Doctor Landenberger, we are largely responsible for the troubles we have in the way of damage suits, by our insinuations of poor work or improper practice by another physician. This does not alone hold for personal damage suits, but also for suits against corporations, which are largely dependent for success upon adverse testimony rendered by men of our own profession. Those people with a grievance feel their way around until they find a physician of influence who is sympathetic to their desires, and soon a case is under way. The same attorneys handle most of these cases, and the poor deluded patient is the one who usually suffers, as in the end his compensation is usually less, the doctor is frequently discredited in the eyes of his profession, and the lawyers are the ones who have benefited financially. We should be extremely careful in our testimony in these cases, and professional co-operation and discussion of the merits of the case by the doctors concerned on each side would frequently result in a definite understanding and the testimony of all could be given according to the facts in the case, and we would not see the spectacle now so often enacted, of men violently opposing each other's testimony on the witness-stand and frequently making themselves ridiculous. These cases should be treated as private patients of another doctor, and instead of giving credence at once to any complaint they might have to make against the physician who treated them, make an effort to learn the facts, and talk the matter over with the doctor concerned in an effort to learn the true condition. Usually, if a conscientious effort is made, there is no case developed, and the results are better for all concerned,

as the outcome of a damage suit for personal injury is usually unsatisfactory for those engaging in it.

Expert medical testimony is frequently asked of us, and it is a common thing to find a number of men of good standing opposing each other on a case. Many of the most prominent men in our profession have found themselves in this position, and the public has come to regard expert medical testimony as a joke. They feel that it is just a matter of money and that the desired testimony can always be obtained if the price is right. The remedy for this condition is possible within our ranks if we are willing to co-operate with each other and work only for that which is right. Experts can discuss the merits of a case together, and if they do it with a desire to learn the facts, there is seldom any disagreement. If we do not remedy the condition ourselves, it is only a matter of time until courts will appoint medical experts and withdraw the privilege of employing experts at will.

The University of Utah is giving the first two years of the course in medicine, and is in need of the help of our association to make a success of that work. Last year, President Thomas appealed to us for help, asking that we develop a sympathy for the school and help to popularize it, instead of talking adversely of it. Many of us have not realized that we have a real medical school at the university, with capable men in charge of the departments, and I would advise every member of the association to visit the school and give it a careful inspection. You will find well-equipped laboratories and an abundance of material with which to work, and capable, well-trained men in charge of the work, most of them on full time. The school is a credit to our state, and we should give it our hearty support. Learn exactly what the school is, and then encourage men who are going into medicine to do their first two years' work there. Let us send our boys there as well, as we will then have a personal interest in it and will help to make it what it ought to be. Let us not lose the school to the state. President Thomas is determined to develop a real medical school or to abandon it. Let us co-operate with him and make a school of which we can all be proud.

These suggestions covering a number of fields of activity have appealed to me as our definite problems. We cannot afford to be less efficient than we ought to be. We cannot do less than is expected of us in public service. We owe certain obligations to our profession that we must assume. Lastly, we are indebted to ourselves most of all to play the part in our professional life that will make each one indispensable to our organization.

Eccles Building.

The Year's Record Estimated—Based upon past records and the probable degree of industrial activity, the United States Department of Labor has estimated that the 1924 accident record will show 21,232 deaths, 1728 workmen permanently and totally disabled, 105,629 permanent partial disabilities, and 2,324,829 disabled temporarily, a probable total of 2,543,418 accidents for the year. The actual and potential loss in work-days was estimated as totaling 227,169,970, while the wage loss, using an assumed wage of \$4.50 per day, reached the enormous figure of \$1,022,264,866.—California Safety News.

RICE WORKERS' DERMATITIS

By HARRY E. ALDERSON, M. D., AND AUBREY G. RAWLINS, A. B.

(From the Skin Clinic, Stanford University Medical School)

During the past few years there have appeared increasing numbers of cases of dermatitis known by those in the industry as "rice poisoning."

The dermatitis should be classed as occupational, whether due to dirt, fertilizers, water, mosquitoes, or other irritants to which men are exposed in their work.

DISCUSSION by Kendal P. Frost, Los Angeles; Charles E. Schoff, Sacramento; Charles E. von Geldern, Sacramento.

CALIFORNIA produced 5,469,600 bushels of rice during 1923 from an area of 106,000 acres in Butte, Colusa, Glenn, Sutter, and Yolo Counties, in the Sacramento Valley. Rice-farming, while comparatively new, has developed rapidly until it now constitutes one of the many well-established industries of the State. During the past few years there have appeared increasing numbers of cases of dermatitis known by those in the industry as "rice poisoning." Several cases have come before the State Industrial Accident Commission, and the matter has been referred by them to one of us (Alderson) for investigation. Several cases were studied and it was found that they were produced by lack of proper hygiene at work or at home, and that some of them were cases of seborrheic dermatitis with secondary pyogenic infection. Infected scratch-marks, resulting from bites of mosquitoes which were quite numerous in the rice fields, accounted for some cases. Of course, the dermatitis should be classed as occupational, whether due to dirt, fertilizers, water, mosquitoes, or other irritants to which the men are exposed in their work. Likewise, cases of eczema that develop under these same conditions in workers whose skins are more vulnerable as a result of seborrhea, anatomical defects, or constitutional conditions are certainly to be considered occupational.

A questionnaire was sent to the 130 odd physicians in the rice districts, asking for information regarding cases of rice dermatitis that they had observed. The following are typical of the replies received:

A. has had no cases. B. has had cases which he thinks were due to a dye or an oil in the sacks ("as some have appeared where the men have only handled sacks without being exposed to the rice"). C. has seen many cases. The patients usually had seborrheal skin, and hands, forearms, and legs were involved. D. thinks the disease due to local infection (staphylococcus) which enters through mosquito bites or abrasions in the skin. He states that he has had about three hundred cases. E. has had several cases. F. says that nearly always there are several cases in the rice-mill in his locality. G. (an eye specialist) reports many cases of conjunctivitis among rice workers. H. has seen several cases, but none this year. I. reports that, in his opinion, there is no such thing as a specific rice dermatitis, and that the workers are inclined to call every skin irritation "rice poisoning." He believes that dermatitis often results from handling sacks in the warehouse.

Judging from the replies, it seems that the so-called "rice poisoning" is decreasing in prevalence in

California. This might be due to the fact that there was less rice farming in 1923. The responses to our questionnaire would seem to indicate that a specific rice worker's dermatitis does not exist here, and this opinion for awhile was held by one of us. However, further investigation has convinced us that the reverse is true.

There is very little in the literature on the subject. Mantegazza describes a papulo-pustular dermatitis which involves the feet, legs, hands, and arms of large numbers of the workers in certain rice fields. It affects all ages and conditions more or less alike. Intense itching is a constant feature. The dermatosis subsides soon after removing the patient

1. Barley dust - Low power.



from his work. The author suggests the following possible etiological factors:

1. Predisposing causes: warmth of water, maceration, thinning of skin, alkalies, fertilizer, or other substances dissolved in the water.
2. Determining causes: thorns of a water plant ("najas minor").
3. Complicating causes: ordinary pyogenic organisms.

Sangiorgi describes a persistent itchy erythematous eruption which becomes oedematous papular and then pustular, involving the arms and legs only. He believes that constant immersion in water containing weeds, grasses, and also irritants in solution are the main etiological factors, and does not blame the rice plant itself.

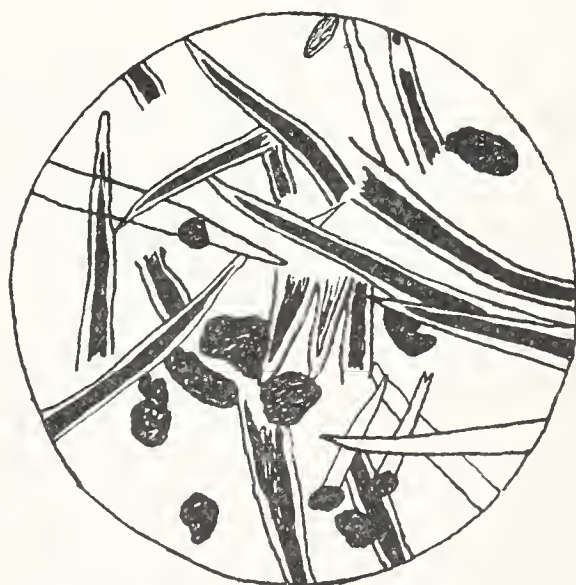
In considering whether or not any given dermatitis is occupational, one should always bear in mind that there are many underlying factors that may increase the vulnerability of the skin. For instance, gastro-intestinal disturbances, indiscretions in diet, alcoholism disturbances of the endocrine gland system, idiosyncrasies for chemicals, food substances, unfavorable home environment, and focal infections. Also there are various local etiological factors, such as anatomical defects of the skin, seborrhea, hyperidrosis, diminished secretions of the skin, circulatory disturbances, irritating clothing, overzealous bathing, insufficient bathing, irritating soap, uncleanness, and hard water.

One of us (Rawlins) had considerable personal experience in this work while a student. From seeing a few cases, working in a rice warehouse, visiting the camps and talking with a large number of the workers, the impression was gained that the dermatitis is produced mainly by the irritating effects of the rice dust. Not a single case was observed (during the investigations carried through the summer) where water appeared to be the cause. All workers (including Rawlins) agreed that the rice dust itself was very irritating and caused severe itching. Barley dust has a similar effect, but the rice dust is more irritating.

In many of the rice workers' camps it was found that sanitary conditions were bad, the bathing facilities being quite deficient. Even where the conditions were good, however, often the workers failed to keep properly clean. It was noted that, even where the men kept very clean, there were numbers of cases of rice dermatitis. An important factor contributing to the general skin irritation is the constant presence of large numbers of mosquitoes in the rice fields. Another observation was that most of the soil in the rice districts is alkaline. This would tend to produce dryness of the skin, thus rendering it more susceptible to the effects of some irritants.

This dermatitis assumes different forms, varying with the individual. It appears to begin usually as

2. = Rice Dust - Low power.



an erythema accompanied by folliculitis with severe itching. Many of the lesions soon become pustular. Numerous excoriations from scratching appear. These often become secondarily infected. The sides of the fingers, flexor aspect of the wrists (thin epidermis), ankles, face, scalp, neck, and upper chest are the regions usually involved. Often there is conjunctivitis, which at times is quite severe. These are the areas, of course, on which most of the rice dust would be deposited. The wrist lesions are usually most aggravated, for here the rubbing of the sleeves or rubbing against the rice sacks are important factors. There are often cases where infected mosquito bites on exposed parts constitute the clinical picture.

For experimental purposes we obtained samples

of rice and rice dust from the various threshers, mills, and warehouses. We have tried to get patients with rice dermatitis for testing with these substances (offering them free hospital beds at Stanford), but so far none have appeared. This is greatly regretted, for such material would have produced valuable evidence, particularly on the subject of specific sensitization to rice. Protein skin tests will be applied as soon as proper material is available. We found one case among the workers who always had dermatitis and asthma when exposed to the grain dust. However, we tried out the materials on our own skins and on several of our clinic patients, utilizing regions where the epidermis was

3. Barley - High power of plant hair-



thin. We used the dry powder, aqueous and alcoholic emulsions of the same. They were rubbed into the skin and then gauze saturated with the material (dry and moist) was applied under adhesive plaster and left on for twenty-four hours. We did not test for protein sensitization. The usual result was a mild, slightly itchy erythema, which subsided in a day or so. It must be remembered, of course, that these conditions were different from those observed in the rice districts. The substance is on the skin of the rice workers constantly for many hours every day. The men, as a rule, are dirty and often irritated by swarms of mosquitoes. Clinical observations made in the rice districts, then, furnish the best, and we believe conclusive evidence that there is a specific "rice workers' dermatitis."

Microscopic examination of the dust shows, largely, a mass of plant hairs. Comparing the microscopic picture of rice dust and barley dust, using uniform preparations in cedar oil, there are about five times as many of these barbs in the rice as in the barley dust. (Note drawings.) This fact might help to explain why the rice dust is more irritating than the dust from other grains in the same vicinity.

Regarding the composition of rice, it was found that, unlike other grains, it contains a high percentage of silicon (about 16 per cent). This may account for the dust particles being more needle-like, and consequently irritating.

As far as we can learn, the *najas minor* plant (mentioned in Mantegazza's article) is not found in California. From the foregoing observations we feel justified in concluding that:

1. There is a specific rice workers' dermatitis, due

to the peculiarly irritating qualities of the rice grain. It has not yet been determined if protein sensitization is a factor in some cases.

2. There are also occupational dermatoses appearing on the skin of rice workers, as a result of scratched, infected mosquito bites, and dirt or both.

3. Unhygienic conditions in some of the camps and homes of the workers, as well as lack of personal cleanliness, account for some cases.

240 Stockton Street, San Francisco.

DISCUSSION

DR. KENDAL P. FROST (831 Pacific Mutual Building, Los Angeles)—Dr. Alderson's paper is a very stimulating one. There being no cultivation of rice in my section of the state, I have not had an opportunity to observe any of these cases. From the description I should be inclined to feel that the condition is not due to rice protein sensitivity, but rather to the mechanical irritation plus infection. Of course, there may be cases of rice sensitivity. In these one would anticipate a more eczematous syndrome.

CHARLES E. SCHOFF, M.D. (Farmers and Mechanics Bank Building, Sacramento)—I am pleased to have the opportunity of saying a few words relative to Dr. Alderson's paper, and it shows that he and Rawlins have spent considerable time upon this subject, which at one time was a much debated point, particularly with the State Industrial Accident Commission.

My experience with rice worker's dermatitis has been limited to five cases, three of which were definite dermatitis and two which proved, on investigation, to be a trichophyton in sack handlers of rice.

The cases were all referred to me after having been in progress some length of time, and were in individuals who were employed in the handling of "paddy rice" in the warehouse.

The skin manifestations varied from lesions confined to the hands, lower forearms and lower legs to a gen-

4. Rice - High power of plant hair



Rawlins

eralized involvement. There was nothing particularly peculiar to this type of skin irritation in its specific self, it being a papular, vesicular, traumatically excoriated, secondarily infected, diffuse, oedematous type of dermatitis, appearing first on the exposed surfaces and being confined there or spreading mechanically to the covered parts of the body.

The hygienic conditions surrounding these cases were good, two of them being men of families and homes, and the other housed in a hotel with facilities for body cleanliness and bed changes. Nor did I think that any of the cases presented a seborrheic type of a skin.

I merely mention these two facts to bring out the point that these cases developed in an atmosphere peculiar to

themselves; they persisted in that atmosphere and cleared up in due course of time when removed from the producing environment. It is of interest to note that one of the cases returned to work in the mill, and in a short time had a slight recurrence which necessitated his giving up that type of work, as he had been advised.

Another point of interest is that these cases do not develop in any other department of the mill other than in those who are handling paddy rice. I am informed from the mill management that clean rice workers, i. e., those employed in the polishing department, are free from such discomforts.

The trichophyton cases were peculiar, in that their lesion appeared practically at the same site although on opposite forearms about two inches above the flexure fold of the wrist, in truckmen who were handling rice—one employed in the field and the other in the warehouse.

The lesions were annular, about one and one-half inches in diameter, papular pustular, discrete folliculitis, the hairs showing a small spored ectothrix in both cases, with very few mycelium present.

Some work was attempted without results in an effort to determine if the animal habitue (cats and rodents) of the warehouse might have been the source, or if the mould on the sacks might have been responsible.

I quite agree with Dr. Alderson that there is a definite dermatitis produced in workers in rice. Whether this is due to a mechanical irritation from the dust, a chemical irritation or a protein sensitization still leaves a field for further investigation.

I question the protein sensitization, on the ground that if it were so it seems to me that we would see some of the cases originate in the polishing department of the rice mills, where the clean grain is handled entirely.

CHARLES E. VON GELDERN, M. D. (Forum Building, Sacramento, Calif.)—That the so-called rice workers' dermatitis is comparatively rare is shown by the scarcity of the literature and the fact that so few of these cases come under the care of industrial surgeons.

I fully agree with Dr. Alderson and Rawlins that the so-called rice workers' dermatitis is due to the irritating qualities of the rice grain which appear in the dust during the harvesting and in the milling. I saw, a number of years ago, a patient who had caulked a leaking feeder in one of the mills, and was subjected to dust and rice-hulls for a number of hours. His face, especially on the left side, was red, swollen and tender, with numerous small discrete papules. The itching was intense. The forearms were not affected to quite the same extent. The parts covered by clothing were not involved, which showed that the effect was a direct one.

A comparatively large number of rice workers have been sent to me for treatment for dermatoses. In most of these, the history did not show any relationship between their occupation and the disease. The most common affection was impetigo contagiosa. Two workers came from the same mill, at the same time, with a trichophyton infection. One of these men was employed in cutting out mouldy portions in sacks of rice which had been subjected to moisture. The other employee worked in the mill and did not come in contact with the first one, yet the lesions were similar in nature and location. At the time I made an investigation of the mill, but was unable to establish any definite relationship between the disease and the occupation. The manager of the mills had heard rumors regarding the cats which were said to be infected, but on investigation no disease was found among them.

On investigation, the various rumors and lay opinions were not substantiated, and at best the belief that the rice dust was the causative factor was merely suggestive.

It is, however, fairly certain, as shown by Alderson and Rawlins, that rice dust does produce a dermatitis in certain susceptible individuals, due to its abrasive action. It has not been shown, however, that such a dermatitis is specific, for, unless a clear history is obtained and the cases observed at an early stage, it is not possible to assert with any degree of certainty the cause of the skin manifestations.

Many of the dermatoses should be classed as industrial diseases, unless it can be definitely proved that the factors producing them are not connected with the occu-

pation. This is manifestly difficult, but it is only fair to the worker that he be given the benefit of the doubt.

DOCTOR ALDERSON (closing)—I wish to thank those discussing our paper for their valuable suggestions.

All available evidence is against there being specific sensitization to rice in these cases. Observers agree that the dermatitis is due rather to factors producing trauma or infection or both. As noted by Schoff and Von Geldern (who practice in the rice territory) cases are seen only among those exposed to rice before it is cleaned. If specific sensitization were a factor, cases would appear among those handling only the polished rice. Furthermore, as observed by Frost, the eruption would be more eczematous in character.

What One Health "Officer" Thinks of Baby Shows —"These baby shows make me sick. Think of hauling around a number of babies in the heat, dust and dirt that obtains at the usual county fair. Supposedly, this is done for the benefit of the babies. Actually, it is done because someone is making some money out of it, and so far as the poor babies are concerned it amounts to nothing. A fellow came in a few months ago. He said he was going to put on a baby show for one of the papers. I bluntly asked him where he would get his compensation, and he said he was an expert baby photographer. I told him, so far as the health department was concerned, there would be no sanction of his campaign, and so far as I was concerned, personally I was opposed to any such commercializing of child welfare. This fellow proved an expert liar. He went around and told other doctors and the visiting nurses I was in perfect agreement with his plans and he had everything set. I heard of this. I saw the editor of the paper and had a friendly talk with him, and gave him some ideas about baby contests he did not have. When the fellow returned to put on his campaign he found there was not a doctor in our city who would have anything to do with him. Of course, the nurses were ready, but the editor of the paper refused to go on with the thing, because he had become convinced that it was not really a child welfare proposition at all. So, we headed this one off. But later the — got mixed up with a combined beauty, better-baby-popularity contest. Those of us who are interested in pediatrics refused to have anything to do with it, but some of the other men spent some time at the county fair looking over the babies. What possible good can come to the babies in such hastily conducted examinations? I am off these things for life."—Indiana Medical Journal.

Wagner-Jauregg Treatment of Paresis—Doctor Jossmann, in reporting 100 patients treated by this method (Medical Standard), says that all stages of paralysis were treated by the method, and the result was that twenty-one patients were enabled to begin working again, although slight traces of paralysis were still present. Twenty-eight patients were able to resume work to a limited extent, the paralytic symptoms having undergone a considerable amelioration. In thirty-nine patients no improvement worth mentioning was noticeable, and twelve patients died during or in consequence of the treatment. Even in the improved cases slight disturbances of speech and irregularity of the pupils remained. The intellect did not entirely return to normal, and a lack of insight into the state of illness remained. Jossmann comes to the conclusion that, although it is still too soon for a final judgment to be passed, it has nevertheless been ascertained that, during the eighteen months in which the Wagner-Jauregg method has been available, improvement has taken place in about 50 per cent of the patients, especially in the early stages of the disease.

"For of Such"—The three realms of Fairyland, of Art, and of Nature constitute our being. The re-entry to fairyland, that land of wonder in which we never grow up out of that heaven which lies about us in our infancy, can be won by cultivating the friendship of children and by the study of the beauty of life in the land of dreams, out of which we may achieve when awake the realization of life's duty.—British Medical Journal.

CORONARY OCCLUSION AND MYOCARDIAL DEGENERATIONS

SOME CLINICAL AND PATHOLOGICAL CONSIDERATIONS

By WM. J. KERR, M. D., AND S. V. LARKEY, A. B.,
A. E. LARSEN, A. B.

(From the Department of Medicine, University of
California Medical School, San Francisco)

Disease should be more frequently recognized than it is.

Any male individual past 50 years of age (all fifteen of our patients were males) who, with or without previous history of cardiac symptoms presents a history of severe, agonizing, persisting pain in the chest or upper abdomen, accompanied by dyspnoea, unrelieved by rest, should be considered a probable sufferer from coronary disease.

Brief monographic consideration of all features of the disease.

CAREFULLY CONSIDERED DISCUSSION by James F. Churchill, San Diego; F. F. Gundrum, Sacramento; Thomas H. Kelly, San Francisco.

THERE is a striking increase in the number of deaths from the so-called degenerative diseases, due probably to the fact that more people are living into the age when these maladies tend to occur. With this increase, more emphasis is being placed on the early recognition and treatment of disorders of the cardiovascular system, associated with degenerative changes in the arteries. Coronary artery disease, with the resulting myocardial degeneration, is, therefore, of special interest. It is more common than earlier writers would have us believe.

The diagnosis of coronary occlusion, by thrombus, can be made in a considerable number of cases during life and suspected in a large number of cases where sudden death has occurred in individuals past 50 years of age. The condition should be more generally understood because, in its symptomatology, confusion with acute processes in the chest or abdomen may result. Needless and harmful abdominal operations are sometimes performed on patients with abdominal symptoms when the provocative disease process is in the heart or pericardium. A sufficiently large number of patients survive the first attacks of coronary artery occlusion to demand its recognition so that treatment may be adequate to promote the establishment of collateral circulation or the fibrosis of an infarcted area.

Our knowledge of the subject dates from the time of William Harvey, who described the symptoms and necropsy findings in a case where a large rupture of the left ventricle occurred. From then until the latter part of the nineteenth century a few case reports appeared in the literature, and many of the important points in regard to the condition were emphasized. In a monograph Robin and Nicolle, in 1895, gave an excellent review of rupture of the heart. More recently Dock, Huchard, Osler, Herrick and his co-workers, Gorham, and particularly Wearn, have clarified the clinical and pathological picture. Levine and Tranter reported two cases of infarction of the heart stimulating acute surgical abdominal conditions with necropsy findings. Crohn presented six cases of coronary disease where the abdominal symptoms and findings masked the true condition.

In two of these cases a previous history of peptic ulcer had been made. The electrocardiographic study of three patients with coronary artery disease with infarction by Kahn suggested the possibility of diagnosis by variations in the ventricular complex during the progress of the case. Reznikoff described a case with rupture of the left ventricular wall where stethoscopic evidence was obtained when the rupture took place. The sound was described as a "muffled, low-pitched, rushing rumble, louder in the expiratory phase."

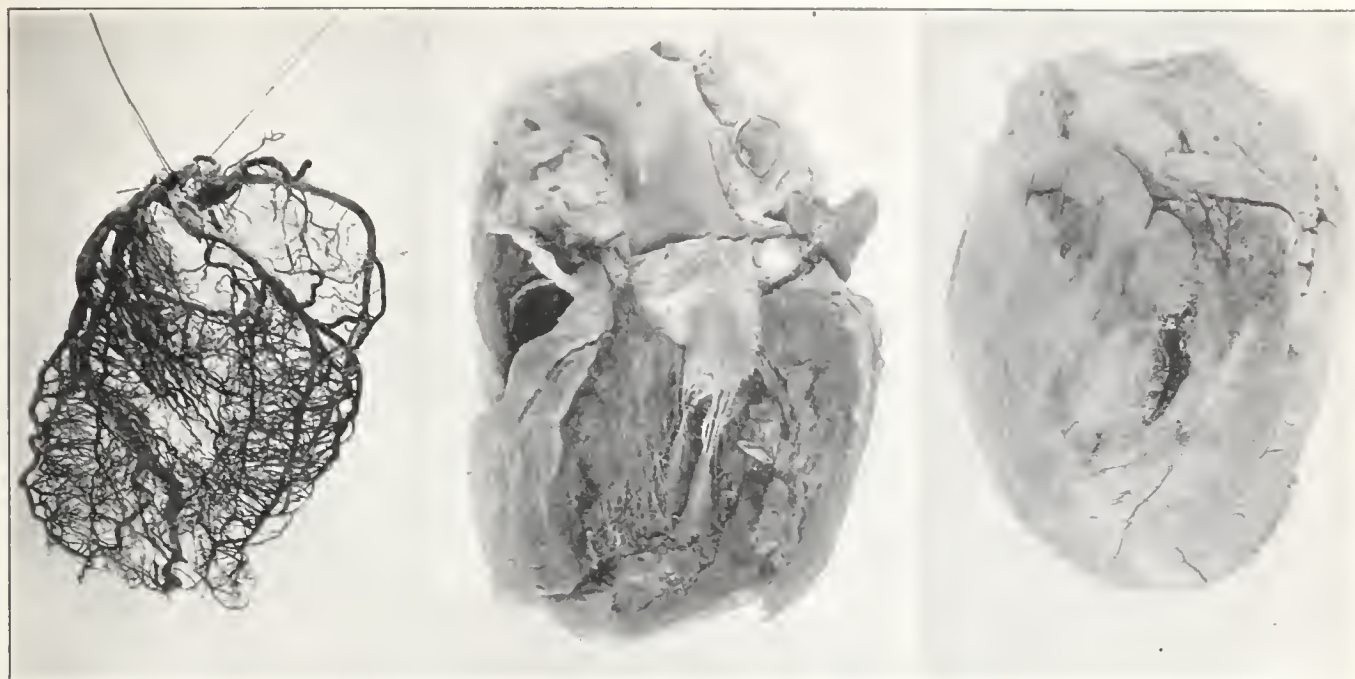
Oberhelman, using a mercury injection method, showed a variation in the size, position and anastomosis of the coronary arteries in normal hearts and suggested that the time element was important in cases where occlusion occurred. This study confirmed the previous work of Herrick and Gross. Our studies with celloidin injection and corrosion preparations and bismuth sulphate injection preparations, which will be reported later, are in accord with previous observations on the coronary circulation.

Our study is based on fifteen cases observed during the past three years where both clinical and pathological data are available. An equal number of cases where the clinical histories were inadequate, or where necropsy findings were not obtained, are not included in this report. In a study of the data (Chart I) certain deductions may be drawn which, in the main, agree with previous work and are of importance in dealing with the condition.

ETIOLOGY

No outstanding etiological factors were noted. Eleven of the fifteen cases were in individuals after the fourth decade. Of those under 40 years of age, two showed subacute bacterial endocarditis which probably was responsible for infarction by embolism. In two patients, only 32 and 38 years of age, respectively, no etiological factors could be ascertained. Both individuals showed very extensive generalized arteriosclerosis. There was wide variation in occupation which is in agreement with the observations of Wearn. The preponderance of coronary disease among the male sex is shown by our series, all fifteen being observed in men. Heredity did not seem to play a role in our cases. In only one case was there a definite family history of heart disease. Infectious diseases were rarely observed in the previous histories. In four cases there was a history of rheumatism. Two of these showed subacute bacterial endocarditis with probable embolism to the coronary arteries with myocardial changes. In the other two no evidence of valvular heart disease was found at necropsy, although in one case pericardial adhesions were observed.

A history of lues, twenty-nine years before death, was obtained in one case and a positive blood Wassermann was recorded. Necropsy showed fibrosis of the interventricular septum and aneurysm of the left ventricular wall. In another case a weakly positive Wassermann was obtained, and necropsy showed a luetic aortitis in addition to a chronic fibrosis of the myocardium and mural thrombosis of the apices of both ventricles. Lues is not, therefore, a constant etiological factor, if our present methods



NO. 1

Injection-corrosion preparation of the coronary circulation of a human heart with coronary sclerosis.

NO. 2

Left ventricle of a human heart, showing extensive infarction with mural thrombi and an older process at the apex with thinning of the apical wall.

NO. 3

Human heart with occlusion of the left coronary and extensive infarction. Necrosis of the wall of the left ventricle is shown with a large irregular rupture of the myocardium. Sudden death after severe precordial pain and dyspnoea for four hours.

of clinical and pathological study are adequate to reveal end stages of this disease.

SYMPTOMATOLOGY

While there is considerable variation in the clinical picture of coronary disease, most of the features become intelligible when we consider the pathological changes in the heart and pericardium. We omit from our discussion the controversial points in regard to the causation of the attacks of pain in angina pectoris. In general the changes in the myocardium, in coronary disease, vary with the site and degree of the occlusion by atheroma, thrombosis, embolism, gummata or tumors; with the size of the occluded vessel; with the extent of the anastomosis in the area affected, which may vary normally and with advancing age of the individual; and with the time element in the process of occlusion. Small areas of the myocardium may become infarcted without any history or symptoms to indicate when the lesions were produced. Subjects with such lesions may show nothing on physical examination but enlargement of the heart. Occlusion of the descending branch of the left coronary artery, which is the most common lesion described, may lead to sudden death if the interruption of the circulation is abrupt, whereas if the obstruction is gradual, the infarcted area is usually smaller and the subject may survive. The process in the heart muscle may become necrotic with rupture of the wall, or organization may take place with resulting fibrosis or aneurysm of the left ventricular wall at or near the apex. Lesions of the septal branch, when acute or chronic, commonly result in serious disturbances of the conduction system. Occlusion above the septal branch lead to widespread pathology in the heart with a high immediate mortality. Other branches of the left coronary artery are less commonly involved, but may be

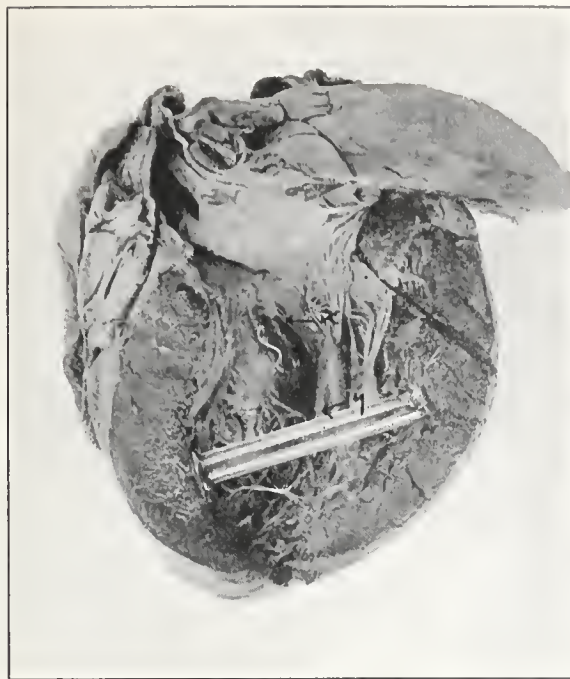
affected above or in association with those previously mentioned and produce less obvious symptomatology. The right coronary artery is occluded less often than the left except in luetic involvement of the base of the aorta, where there apparently is a preponderance of infarction of the right ventricular wall. Infarctions of the heart, if extensive enough to involve the endocardium, frequently lead to mural thrombi which, by embolism to the greater or lesser circulation, complicate the clinical picture accordingly. Similarly, processes in the myocardium, extending to the epicardium, frequently present the symptomatology of pericardial disease.

SUBJECTIVE SYMPTOMS

Pain is probably the most constant symptom which is met with in coronary disease. If it occurs after a history of angina pectoris the pain is described by the patient as entirely different in nature from that previously noted. It may occur without previous symptoms suggesting cardiac trouble. Its persistence and agonizing character are striking features and may be unrelieved by rest and large doses of morphine. The location of the pain varies widely, but is most commonly described as under the lower sternum or in the epigastrium. The pain may be referred to the left side of the neck, down the left arm, to the left sub-scapular region or to the upper part of the abdomen. In some cases there is a widespread distribution of the pain. Sensory disturbances of the skin may be noted over the precordium or over the painful areas. Dyspnoea persisting, in spite of rest, is a fairly constant feature. Gastro-intestinal symptoms, including upper abdominal pain, nausea, vomiting, pyrosis and flatulence, frequently direct the attention of the patient and physician to the abdomen. Mistaken diagnoses of perforated ulcer, gall-bladder disease, acute pancreatitis, and other

CHART I

Hosp. No.	Sex	Age	Etiological Factors	Dyspnea	Symptoms, Pain	Oedema	Cyanosis	Enlarged Heart	Heart Sounds	Signs Murmurs	Leukocytosis	Peripheral Vessels	B. P.	Coronary Sclerosis & Myocardial Change & Myomalacia
A-21-188	M	38	None	0	Region Xiphoid 4 years.	0	0	0	0	0	0	0	140/80	Marked coronary sclerosis & obliteration of lumen; extensive myocardial degeneration.
#21	M	58	Family history +. All members died of heart trouble.	—	Precordial pain 1 week.	—	—	—	Faint	Late, rough systolic.	—	—	—	Marked coronary sclerosis & thrombosis and myomalacia resulting in rupture of left ventricle.
A-21-123	M	50	Bad tonsils	+ 3 wks.	Severe pain over heart and down left arm.	—	—	+	Distant	None	—	—	175/125	Stenosis left coronary & thrombosis. Extensive myomalacia left ventricle & mural thrombi and pericarditis.
A-22-54	M	55	Father, heart trouble. Hard worker.	+ 5 yrs.	Pain under the right rib margin over heart, down left arm for 1½ years.	—	—	++	Faint	Systolic apex.	19,600	Slightly thickened.	100/84	Coronary sclerosis & occlusion marked fibrosis left vent. and interventricular septum & mural thrombi. Apex completely fibrosed & pocketing infarcts. lungs — C. P. C. terminal septicaemia.
#A-22-85	M	58	Negative	+	Precordial and arms on exertion, 1 month.	+	—	+	Distant	Systolic apex faint.	—	Slight thickening.	118/52	Mural thrombosis left ventricle & degeneration of anterior wall. Atheroma aortic, mitral, valves.
A-22-10	M	67	Syphilis	0	Severe pain epigastrium.	—	—	+	Distant	Soft apical systolic murmur.	—	Tortuous hard.	108/65	Ca. of stomach & liver metastasis. Fibrosis interventricular septum. Aneurysm left ventricle, syphilis.
A-23-78	M	63	None	++	(Was in coma)	—	—	++	Distant	—	20,000	Slightly thickened.	140/78	Infarct, brain general arteriosclerosis, coronary sclerosis, infarct, myocardium.
A-23-82	M	58	Heavy drinker	+ 7 yrs.	Attacks 7 years. Epigastric precord. radiating down left arm.	—	+	+	Distant	Loud systolic apex.	14,500	Gangrene leg.	118/70	Coronary sclerosis; infarct. left ventricle, myomalacia & aneurysmal dilatation left ventricle; fibrosis myocardium; pericardial adhesions multiple throughout body.
A-23-166	M	67	None	+ 4 yrs.	Precordial left forearm runs up chest; 4 years.	—	+	+	—	Systolic apex.	25,000	—	110/80	Arteriosclerosis, myomalacia left vent. mural thrombi, fibrinous adhesions pericardium.
A-24-16	M	32	None	+++	Epigastric lower chest 1 day.	—	++	+	—	—	14,000	—	90/78	Marked coronary sclerosis & diffuse fibrosis both ventricles. Hemorrhage in brain & mural thrombi.
A-22-93	M	68	Scarlet fever, rheumatism, malaria.	+ 6 yrs.	Attacks 2 years. Precord. to left arm and shoulder.	8 yrs. +	—	++	Faint	Harsh systolic apex.	9,200	Tortuous hard.	132/52	Narrow coronaries; fibrosis heart; pericardial adhesions; carcinoma rectum.
A-22-73	M	71	Rheumatism, influenza.	+ 3 yrs.	—	+	—	+	Faint	Aortic systolic. Mitral systolic.	—	—	130/90	Extensive acute thrombosis left ventricle and right ventricle. Fibrosis intervent. septum.
A-22-198	M	25	Three attacks rheumatism.	+ 1 yr.	Precordial	Late	+	+	Good quality.	Rough syst. & thrill.	6,000	—	120/70	Subacute bacterial endocarditis. Acute and subacute myocarditis; thinning fibrosis myocard. left ventricle. Infarct, spleen C. P. C.
A-23-165	M	35	Rheumatism, influenza.	Late	—	—	+	+	Accentuated.	All valves	14,000	Water hammer.	138/0	Subacute verrucose endocarditic mitral, aortic, pulmonic occlusion left coronary.
A-20-1	M	57	—	+ 4 yrs.	—	Late	++	++	Gallop rhythm.	—	—	Thickened.	180/120	Marked cardiac hypert. & dilatation mod. fibrous myocarditis. Thrombosis apices both ventricles luetic aortitis.



NO. 4
Same as Fig. 3. Left ventricle opened to show the rupture of the wall adjacent to the septum. Extent of rupture from x to y.



NO. 5
Human heart, showing old area of infarction at the apex of the left ventricle with resulting fibrosis and aneurysmal dilatation.

diagnoses may result in needless and dangerous surgical procedures. (One of our patients was operated on for a suspected gall-bladder disease, and at necropsy was found to have coronary occlusion, with extensive infarction of the heart.) Vertigo and syncope associated with a failing myocardium or cardiac irregularities may be presenting symptoms. Emboli, lodging in the peripheral or pulmonary vessels, may be the first indication of coronary disease. Any or all of the above symptoms may be noted. However, many patients die suddenly without previous symptoms, and as such constitute a large percentage of sudden deaths. A small number of patients may give no history of cardiac disease, and at necropsy show fibrosis or aneurysm of the heart wall, indicating an old healed area of a previous infarction.

OBJECTIVE SYMPTOMS

There is a wide variation in the objective findings of patients suffering from coronary disease. In the more severe types the appearance of extreme suffering, prostration, ashen-gray appearance, feeble pulse, weak heart action, increased respiratory rate, passive congestion of the lungs, slight fever and leucocytosis make up the picture. The frequent accompaniment of tenderness and rigidity of the upper abdomen and distention complicate the picture and often mask the true nature of the disorder above the diaphragm. The enlargement of the liver, commonly of the left lobe, may simulate an abdominal mass or tumor of another nature. Libman describes sudden enlargement of the liver and cyanosis in association with right coronary occlusion. The roentgen ray findings in the stomach may give a constant but false picture of neoplasm or chronic ulcer such as occurred in one of our cases. Cardiac murmurs are common, but not characteristic. Previous rheumatic affections of the valves and luetic or sclerotic processes may present complicating diagnostic features. Subacute bacterial endocarditis may be the underlying process leading to embolism and infarc-

tion. Pericardial rubs are occasionally observed, and if noted are usually indicative of rather extensive infarction. Patients who survive one or more attacks of coronary occlusion may present the signs of congestive heart failure which often obscure the true nature of the underlying pathology. Cardiac irregularities, varying from extrasystoles, partial to complete heart block and ventricular tachycardia, are observed. Auricular fibrillation, auricular flutter are less often observed except with a failing myocardium. Electrocardiographic tracings show wide variations in the degree of block, shape of the Q-R-S complex and the T wave deviations, depending on the location of the lesion and its extent. Changes in the curves are noted with the varying clinical course. The blood pressure varies, but is usually lower than the readings for the respective age periods.

DIAGNOSIS

The diagnosis is made on a consideration of the above symptomatology. Few mistakes would be made if we keep in mind the possibility of coronary artery disease and myocardial degenerations in patients past 50 years of age who present upper abdominal symptoms.

CLINICAL COURSE

Sudden death is commonly observed. The usual duration is a few hours to a few days. Recurrent attacks may be noted over a period of weeks to years. Patients may rarely survive one or more attacks with fair or apparently normal cardiac function. Usually, however, the reserve force of the heart muscle is seriously impaired. Such patients must, therefore, lead a restricted physical and mental life. The outlook is gloomy, with the ever-present danger of subsequent extension of the process with sudden death. The prognosis should be guarded.

TREATMENT

The treatment is of greatest importance in the

group of patients who survive the first attack. A long period of complete rest is absolutely essential, free from physical and mental strain, to allow for fibrosis and anastomosis. Signs of myocardial insufficiency should be properly treated by depletion, limitation of fluids, diet with frequent, small feedings of easily digested, non-gas-producing food. Paracenteses may be necessary to remove embarrassing accumulations of fluid. Digitalis should be pushed to full effects during the stage of congestive heart failure, and small doses should be continued for a long time thereafter. A combination of digitalis, squill, and calomel is useful. Nitrites may be of value in controlling anginal pain, but morphine is usually required for the more persistent pain. Even large doses of morphine may fail to relieve the pain. Pyrosis and flatulence may be reduced by diet, free, regular, daily bowel movements, soda, prevention of air-swallowing, and other measures. This may be the most troublesome symptom to control and tax the ingenuity of the physician. Those patients who have outstanding abdominal complaints are difficult to convince that the diseased organ is the heart.

The acute fulminating cases present some different problems in therapy. Usually there is the picture simulating surgical shock. Rest is voluntarily accepted by the patient. There may, however, be great unrest and moving about in bed because of the severe pain. If nitrites give no relief—and usually they do not—opiates are indicated. Morphine may be given in increasing doses, and in many cases will promote rest and sleep. Caffein should be given in two to five grain doses intravenously or in larger doses subcutaneously. Distention should be relieved by stupes, gas enemata, a soft catheter in the rectum, and aromatic spirits of ammonia by mouth. Acute pulmonary edema, if present, should be treated by morphine and atropine. Venesection should be done if there is marked cyanosis, with enlargement of the liver, and the blood pressure is not too low.

PATHOLOGY

Almost without exception there is enlargement of the heart, the weight averaging from 400 to 500 grams. Atheroma of the coronary tree is a constant finding as an underlying factor responsible for changes in the myocardium. Occlusion takes place by gradual narrowing of the lumen at one or more places. Thrombus generally is found at the site of atheromatous processes and usually has caused a more sudden obstruction. However, calcareous plaques may be carried from the base of the aorta or portions of mural or valve thrombi may be dislodged from the left heart and lodge in the vessels, stopping the circulation to a portion of the ventricles. Gummata and tumors may rarely be the causative agents in restricting the coronary circulation. The resulting changes in the myocardium go through the various stages, leading eventually, if the patient lives, to fibrosis. At first there is local ischemia, which is smaller in area than the past supplied by the involved coronary, depending on the degree of anastomosis. Microscopic sections show an accumulation of fibrin and leucocytes and extravasation of erythrocytes. In some instances small miliary abscesses are noted and the infarcted area is soft and friable.

These features probably account for the fever and leucocytosis so frequently found. The presence of the leucocytes in such numbers indicates an older process than the duration of symptoms would indicate in many cases. The muscle fibers appear pale and swollen and the nuclei are piknotic. Fragmentation and further degeneration of muscle fibers may occur. As the process continues, granulation tissue forms, and the dead tissue is gradually replaced by firm fibrous tissue. A few muscle fibers may remain scattered through the scar tissue, but if the area involved is large the degenerated muscle tissue may be entirely replaced. The adherence of the parietal pericardium over the affected area may support the weakened ventricular wall or the diseased area may bulge outward, producing an aneurysm. Rupture of the ventricular wall with hemorrhage into the pericardial sac and death may take place during the stage of necrosis, but rarely later when fibrosis has occurred. Reinvolvements in adjacent or remote coronary branches reduplicate the original pathological picture.

Involvement of the pericardium accounts for the pericardial rub and pain in some cases. The severe constant pain over a wide distribution is not as yet fully explained, but much of the symptomatology can be interpreted as referred pain and spasm. The embolic phenomena are readily understood. The occurrence of irregularities and heart-block can be correlated with the pathological findings in many cases. The pathological findings, aside from those in the heart, are in general those of arterial degenerative disease in various organs, such as brain, kidneys and intestines, and the group of changes classified under the head of myocardial insufficiency.

SUMMARY

In a group of fifteen cases of coronary disease the clinical and pathological features have been studied. Our findings bear out the contentions of previous authors that coronary disease should be more generally recognized than it is. The symptomatology is confusing unless the underlying pathology is understood. Any male individual past 50 years of age (all fifteen of our patients were males) who with or without previous history of cardiac symptoms presents a history of severe, agonizing, persisting pain in the chest or upper abdomen, accompanied by dyspnoea, unrelieved by rest, should be considered a probable sufferer from coronary disease. The surgeon should be particularly on his guard in such patients with upper abdominal symptoms and signs. Extreme pallor and prostration, feeble pulse and heart action, low blood pressure, enlargement of the heart, passive congestion at the bases of the lungs, enlargement of the liver, slight fever and leucocytosis confirm the diagnosis. Such findings of murmurs, irregularities, embolic phenomena may help to locate the site of the process in the heart. The roentgen-ray examination may show a heart of unusual size or shape.

The course is variable, depending on many factors: namely, the causative agent, site of lesion, richness of anastomosis, and the time during which the occlusion takes place. The prognosis is poor and

death is frequently sudden. The treatment depends on the stage of the process.

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DISCUSSION

JAMES F. CHURCHILL, M. D. (Electric Building, San Diego, Calif.)—The group of cases in which there is an occlusion of a small branch of a coronary vessel and in which the patient frequently survives the attack is the one of chief clinical interest and importance. These cases are probably far more common than is suspected. Clinicians are making an increasing number of presumptive diagnoses of coronary occlusion to the great benefit of many of these patients. A careful pathological study of clinical material as presented in this paper is of great value to internists and general practitioners alike.

In this relatively mild group of cases the chief difficulty in differentiation is between obstruction and angina. In this differentiation I have come to rely chiefly on two points: first, the pain of angina is ordinarily relieved, at least temporarily, by vasodilators, while that of coronary occlusion is not; second, in coronary occlusion there is usually an immediate and marked fall in blood pressure, while in angina it is usually unchanged. It is true that there is often noted a fall in blood pressure some hours after repeated and severe anginal attacks, but it is not so abrupt nor so marked as in the other case. Therefore, it has become my habit, on seeing a patient with severe pain of anginal type, who obtains no relief from vasodilators and who shows a distinct drop in blood pressure, to make a presumptive diagnosis of coronary obstruction and to treat him accordingly. I believe the patient's chances of surviving the attack are increased by this policy.

The other cases for which we should ever be on the alert are those simulating upper abdominal lesions. The essayist has brought out this point and I only wish to emphasize it.

It is my observation that the majority of general practitioners are quite unfamiliar with coronary occlusion and, therefore, do not have in mind the possibility of that lesion in differential diagnosis. For that reason I would urge the presentation of papers on the subject before the County Societies.

F. F. GUNDRUM, M. D. (Capital National Bank Building, Sacramento, Calif.)—I find this excellent paper very timely. Our text-books say relatively little about coronary occlusion, and I believe most of us have usually considered it merely as a pathologic curiosity in some of the cases of sudden death. The clinical picture of sudden occlusion of a large coronary branch; the ashen-gray pallor; blue-purple lips; extreme prostration, sweating; weakness of voice and almost unbearable pain would be difficult to forget or confuse with any other condition. The picture, however, is not always so extreme. Whenever any patient, particularly if he be middle-aged, suddenly experiences a severe pain, cardiac, upper abdominal or brachial, after slight infection, overexercise or a large meal, and this pain is accompanied by great physical weakness, aggravated by exercise and unrelieved by vasodilator drug, such as whisky, nitroglycerin or amyl nitrite, coronary occlusion must be thought of as one of the first probabilities. It is of first consequence to the patient that this contingency be not overlooked. For any unnecessary manipulation, such as laparotomy or even passage of stomach tube for gastric juice examination or duodenal tube for investigation of the gall-bladder by the so-called Lyon technique, with its attendant retching, may be productive of a fatal mischief. Diagnosis is difficult, and physical signs much less helpful than careful history. These patients do not always die immediately after a blood vessel has been plugged, but occasionally live on, under a much reduced activity, for some months or even years. The treatment has already been outlined: it consists of morphine, small meals of food calculated to produce as little flatulence as possible, moderate limitation of fluid intake, attention to bowel evacuation and, most of all, sufficiently long bed

rest and stringent reduction of physical activity after leaving bed.

THOMAS HENSHAW KELLY, M. D. (240 Stockton Street, San Francisco)—I will not attempt to add anything to the excellent presentation of the pathology and symptomatology of coronary occlusion given in the present paper. I would, however, like to speak briefly of the importance of diagnosis and prognosis in this condition and to emphasize the importance of its early recognition.

We, as physicians, serve two purposes, the first that of curators of the sick, and the second that of prophets as to the outcome of nature's and our own efforts in behalf of our patients. It is in the exercise of this second function that we can often do great good, even though our first purpose is foredoomed to an unsuccessful issue.

Coronary occlusion is always a cataclysmic event, and we have not only an exceedingly ill patient upon our hands, but also a family stunned by the sudden terrible affliction of one of its members, and enormously distressed and perturbed by the possible or probable outcome of the attack. I do not need to picture for you the confusion, sorrow, and uncertainty existing in a home after one of its inmates has been visited by such a sudden and violent illness.

In a practice not to be qualified by the adjective "large," two patients have died of coronary occlusion within a year—one four, and the other five days after the onset of the disease. Both cases were recognized early, the suspicious finding being the persistence of the pain after the use of nitrites and ordinary doses of morphine. The patients were not informed of the probabilities, but their families were, and it was remarkable to note the calming effect upon them when certainty was substituted for doubt and they were warned of the inevitable end. We can bring a certain quiet and comfort to troubled hearts and minds when we can speak with certainty of the future, even though that future be fraught with grief. False hopes built upon false opinions lead only to greater stress and sorrow.

Thus it is that I wish to emphasize the need for us to know this lesion in all its phases, that we may not only safeguard our patients, but that we may be of real use to those so near to them and who at such times depend so much upon us and our opinions and advice.

DOCTOR KERR (closing)—The discussion by Doctors Churchill, Gundrum, and Kelly, emphasizes the frequency and importance of coronary disease in practice. If more thorough post-mortem examinations were done, I am sure this condition would be revealed in a great many cases where it is not now suspected, particularly in those cases where individuals die suddenly. In connection with the subject under discussion, it would be advisable to refer to two other papers which have been published since this one was written: Fredrick A. Willis and George E. Brown—Coronary Sclerosis: An Analysis of Eighty-Six Necropsies, *American Journal of Medical Sciences*, August, 1924; Hermon C. Gordinier—Coronary Arterial Occlusion: A Perfectly Definite Symptom-Complex; The Report of Thirteen Cases With One Autopsy, *American Journal of Medical Sciences*, August, 1924. These papers add a considerable number of new cases to the literature which is growing rapidly, and is of great value in such studies.

The Early Diagnosis of Joint Tuberculosis—Errors in diagnosis of joint tuberculosis are discussed by Alan DeForest Smith, New York (*Journal A. M. A.*, November 15, 1924). In the first two years of the disease, it always is difficult to make a positive diagnosis of tuberculosis of a joint. The only laboratory test that establishes the diagnosis is guinea-pig inoculation, and this is inconclusive when negative. The condition is obscured in many cases by immobilization before the diagnosis has been proved. The percentage of error in diagnosis of these conditions is high. The mistake of calling a non-tuberculous condition tuberculosis probably is just as frequent as the reverse. As a result of the large factor of error in diagnosis, much harm is done to the patients, and the statistics about the results of conservative treatment are misleading. Because of the extreme importance of being certain of the diagnosis, exploratory operation is indicated in all doubtful cases.

FOREIGN BODIES IN THE RESPIRATORY AND UPPER DIGESTIVE TRACTS*

By SIMON JESBERG, M. D., Los Angeles

Deliberate, careful study of the patient must be made. Symptoms caused by a foreign body depend on its location, size, shape and composition.

All foreign bodies cause suppuration eventually if they are not removed.

Team work is absolutely essential for successful bronchoscopy.

General anesthetics are rarely necessary.

ONE can hardly take up the discussion of modern bronchoscopy without the feeling that most of his words and ideas are borrowed from the works of Chevalier Jackson.

Many dangers and pitfalls surround the amateur bronchoscopist, as his problems are greater than those of one working in a clinic devoted solely to that work. He is often tempted into original modifications of technique—usually to his sorrow. His judgment is being constantly threatened by doctors and relatives of the patient, who demand hasty and immediate removal of the foreign body. It is often a difficult matter to convince them that there is no urgency and that a careful study of the case is much more essential than haste. It is difficult to maintain a trained team, without which consistently good work is impossible, and last but not least, the occasional case brought to him does not offer enough material to keep him in practice.

It is not intended that this paper shall cover completely the technique and problems of pre-oral endoscopy, but rather to present some of the most salient problems and adventures encountered in a series of forty cases. The distally lighted instruments have many advantages over those that are illuminated from reflected light in the handle, such as Breuning's. Visibility is much better, as the light is always on the field of operation and is not intercepted so much by the inserted forcep, as in handle-lighted instruments. Breuning said that actually seeing the action of the grasping forceps was more fancy than fact, and so it is with his instruments; but with Jackson tubes the forcep jaws are always more easily seen. This permits the development of technique and performance not possible when manipulations are largely guided by the sense of touch, as is necessary in Breuning tubes.

The element of luck is always present, but as one progresses he learns to depend not on that fickle lady for success, but rather upon following, rigidly, certain rules. Certain requirements are absolutely essential for the regularly successful handling of foreign body cases. They are:

Deliberate routine study of the case.

Team work.

Proper equipment.

Operative skill and technique.

Deliberate, careful study of the patient must be made. Doctors must be brought to realize that a foreign body is not an emergency, unless the larynx is obstructed, in which case, if suffocation is impending, a tracheotomy should be performed and then

time taken to study the situation properly. Fatal injury can easily be done by failure to appreciate the exact problems in a given case, such as location of the point of an open safety pin or the presence of sharp projections on an irregular foreign body. Failure to recognize such a situation is endangering a favorable outcome. Fatal perforation or rupture of the tissues can be avoided by proper appreciation and handling of the individual problem of each individual patient.

A definite history of entrance of the foreign body is usually given. Sometimes, however, the symptoms caused at the time the foreign body enters are too slight to attract attention, and it is only after secondary changes occur, such as lung suppuration or esophagitis, that attention is called to the condition.

Many physicians are slow to consider the possibility of a foreign body unless there is a history of its entrance, notwithstanding that symptoms are present which clearly indicate some unusual condition. Suspicion should be aroused in atypical instances of lung infection and an x-ray examination made. Even with a positive history, there are some who are slow to entertain the possibility of the presence of a foreign body.

Case No. 25 (Plates Nos. 1 and 2)—A 6-year-old girl aspirated a steel ball-bearing, which was allowed to remain in the lung nine months before discovery. Four days after aspirating the ball she developed pneumonia, which the physician failed to connect with the accident. He treated the patient, in consultation with other physicians, for nine months, during which time the child was subjected to rib resection and external drainage of the lung.

Case No. 28 (Plates Nos. 3, 4 and 5)—Carried a large nail in his right bronchus four months because his physician failed to associate his symptoms with the accident. The lung condition failing to clear up, he sent the patient to Arizona for climatic treatment, where an x-ray examination showed the nail.

Apparently more missionary work is still necessary to teach physicians that children do occasionally aspirate foreign bodies and that all atypical lung infections should be examined for this possibility.

Symptoms caused by a foreign body depend on its location, size, shape and composition. Thus a wide range of physical signs is possible. A foreign body in the larynx causes more or less aphonia and cough. In the case of a small foreign body, there is but little obstruction to the air passage. Subsequent edema, however, due to irritation by the intruder, may cause marked obstruction. Often cases with a laryngeal foreign body are diagnosed as croup. This is not surprising when we consider the frequent incidence of croup in young children.

Case No. 23—Had a safety pin in the hypopharynx for six weeks, during which time a variety of diagnoses were under consideration by the pediatric service of a large general hospital. It was only after curiosity was aroused to see what was causing the laryngeal edema that a laryngologist was called in and the foreign body located.

Case No. 30—Had a fragment of walnut shell in the hypopharynx for eight weeks. Even with a positive history of swallowing nut shells, he was under

* Presented to the Section on Eye, Ear, Nose, and Throat at the Fifty-third Annual Session of the California Medical Association, Los Angeles, 1924.

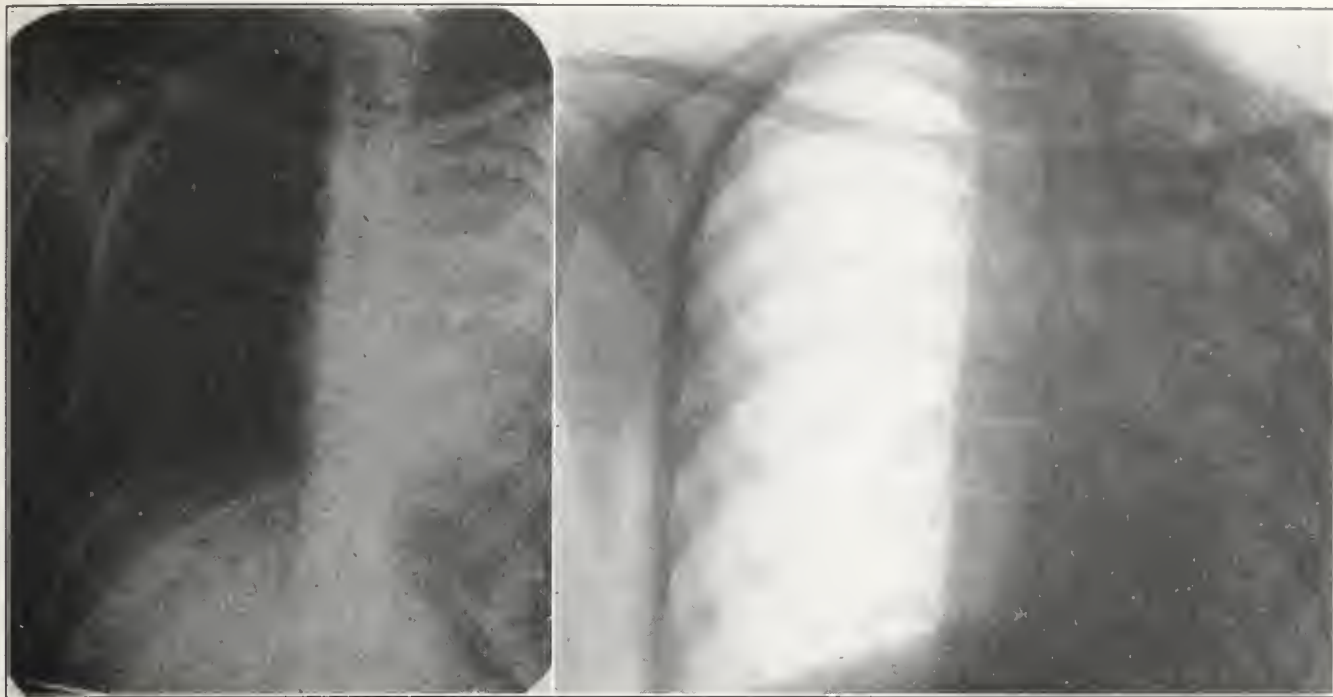


Plate No. 1, Case No. 25—Steel ball-bearing in left bronchus nine months.

Plate No. 2, Case 25—Pathology in lung four years after removal of ball-bearing. Clinically, the child is in good health except for expectoration of thick pus. She requires weekly bronchoscopic aspiration to maintain this condition of health. As soon as lung aspirations are discontinued septic symptoms begin. Postural treatment has been tried with no benefit.

the case of several men before a laryngeal examination was made.

Case No. 5—A 2-year-old baby was practically moribund when first seen by a laryngologist. He had been sick six weeks. A small piece of cancellous bone was found in the larynx. This patient died several hours after removal of the foreign body.

In the trachea, a foreign body causes coughing, particularly when it is moved about by the respiratory air blasts. With a stethoscope over the sternum, the movement of the foreign body can be heard. During forcible expiration, such as coughing, a thud is heard as the foreign body strikes the closed glottis. Tracheal thud was observed in case No. 32, caused by a sunflower seed in the trachea. A foreign body usually does not long remain in the trachea, for, if its size permits, it enters a bronchus and finally travels down as far in the tracheo-bronchial tree as possible. Inflammatory changes in the respiratory tract vary greatly, according to the nature of the foreign body and the degree of obstruction. Certain vegetable substances set up a violent reaction in a few hours. Peanuts and beans are particularly certain to do this. Metallic and wooden bodies usually cause but little reaction for a long time.

All foreign bodies cause suppuration eventually if they are not removed. Swelling of the mucosa about the foreign body aids in obstructing drainage of that part of the lung, which in time results in suppuration. When a bronchus is completely obstructed, atelectasis results. Air trapping occurs as a result of a partially occluded bronchus; i. e., either by a foreign body alone or else by swelling of the mucosa; the lumen is occluded completely during expiration, than during inspiration; the bronchus dilates slightly, permitting air to enter the lung past the obstruction. This results in emphysema of that part of the lung; displaces the neighboring structures; the diaphragm

downward and the mediastinal contents to opposite side. This air-trapping is well shown in a radiograph and is a most valuable aid in the detection of non-opaque foreign bodies.

Case No. 35 (Plates Nos. 6 and 7)—A peanut in the right bronchus. This is clearly shown. Radiographs are taken at the end of inspiration and at the end of expiration. The first shows emphysema of both lungs, the second emphysema of the air-trapped lung only, with the diaphragm depressed on that side and the mediastinal contents dislocated to unaffected side.

As suppuration results below an obstructed bronchus, clinical signs of pneumonia, with fever, rapid pulse, rapid respiration and cough are manifested. The breath has a foetid odor and there is profuse expectoration of foul pus. If drainage is not established by removal of the foreign body, tissue destruction results, forming a lung abscess. It is surprising how nature may heal such an abscess after the foreign body is removed.

In case No. 28 (Plate No. 5)—Four months after removal of the nail, the x-ray shows no remnant of lung suppuration. However, these lung suppurations do not always get well spontaneously. In case No. 25 (Plate No. 2) a ball-bearing in the left lung nine months, immediate improvement began after removal of the foreign body, and apparently complete recovery of the lung suppuration occurred in a few months. However, after one year's time, following a cold, suppuration again became active and the patient is still under treatment requiring weekly bronchoscopic aspiration.

A 2-year-old Mexican boy had a lung abscess drained externally. During course of treatment of his chest wound he coughed up a fragment of a walnut. He was discharged from the hospital as cured three months later. Two years later he was

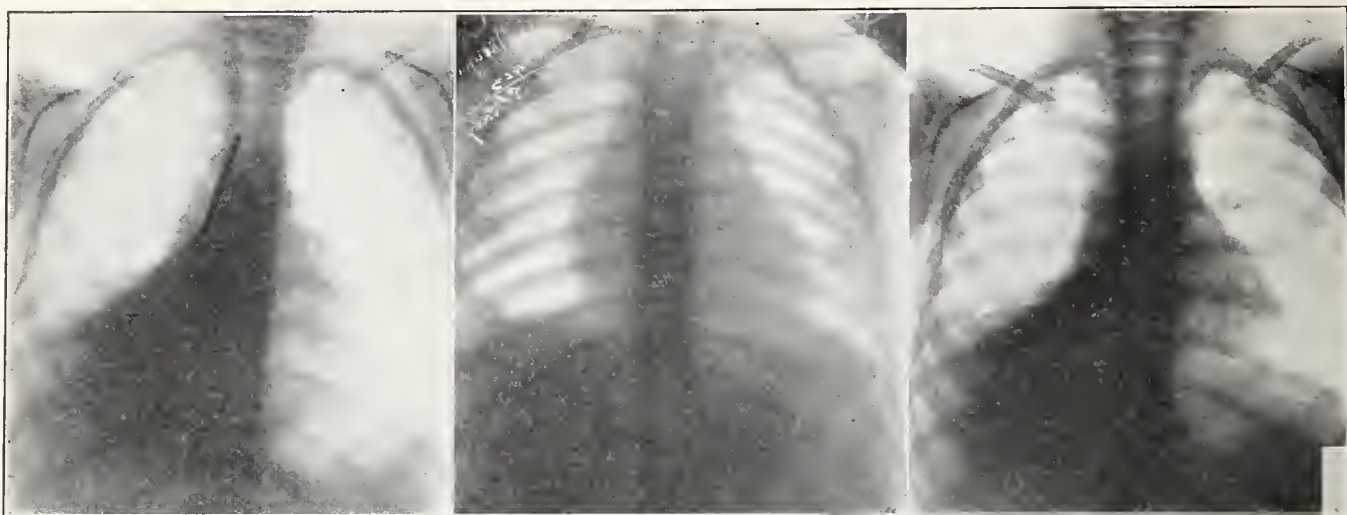


Plate No. 3, Case 28—Nail in right bronchus four months. Note lung suppuration.

Plate No. 4, Case 28—Taken twenty-four hours after removal of nail.

Plate No. 5, Case 28—Taken six months after removal of nail. Note spontaneous recovery of lung suppuration.

under our observation, with extensive lung suppuration, and in spite of repeated bronchoscopic treatments he gradually became worse. The end result of this case is not known for the reason that he passed from my observation and treatments.

Foreign bodies in the esophagus, if they are smooth, and not causing complete obstruction, such as metal discs, may be tolerated for a long period of time with but slight symptoms. Usually there is some difficulty in swallowing solids. If the esophagus is completely occluded, the diagnosis is easily established. Sharp or irregular objects cause injury to the mucosa and inflammation within a short time.

When esophagitis develops, the mucosa is swollen and lumen contains pus which often has a foul odor. Swallowing is very difficult or impossible; pain is extreme; fever and general prostration are marked. Danger of mediastinal infection is impending. Perforation of the esophagus by sharp bodies is not infre-

quent. If perforation occurs in the cervical esophagus, a neck infection results which usually requires external drainage. Mediastinal infection, resulting either from extension of the neck infection or from a perforation in the lower part of the esophagus, has an extremely high mortality. Three cases of this series were suffering with acute esophagitis, each due to a small bone in the esophagus. All of these had swollen, tender necks, temperature about 102 degrees, and a septic appearance. In addition to the removal of the foreign body, the necks of two of these patients were drained externally. One was drained externally without ever finding the foreign body; the third case had only removal of the foreign body, without external drainage. All three recovered. These are cases No. 3, No. 7 and No. 11 respectively.

The x-ray is of the greatest help in the diagnosis of foreign bodies. No patient should be operated upon without first having had proper x-ray study. If the

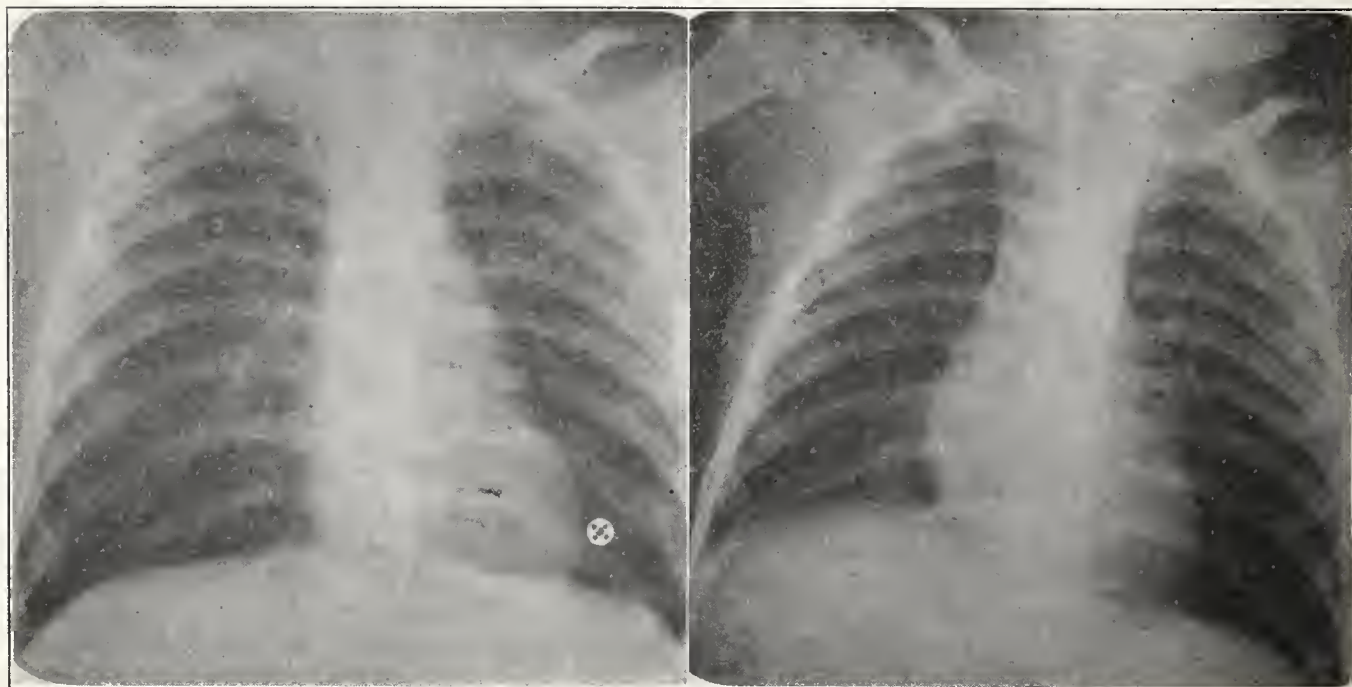


Plate No. 6 and 7, Case No. 35—Peanut in the right bronchus, No. 6 shows air trapping in the right lung, decreased density of the right lung, depression of the right dome of the diaphragm, displacement of the mediastinal contents to the left.

No. 7, taken twenty-four hours after removal of the peanut, shows lung restored to normal.

foreign body is not opaque, the x-ray will be inclined to show a pathological picture indicating the location of the intruder. If the foreign body is opaque, plates taken in different planes show its exact shape and relation to the structures. At least one plate should be taken in a plane showing the longest dimension of the foreign body. Plate No. 8 shows a safety pin in the larynx. The antero-posterior view looks like a closed pin; the lateral plate shows it open, the point below the arytenoids and stuck in the tissue. With this knowledge, it was easy to remove the pin by first freeing the point. Had no x-ray been taken, the situation could not have been recognized, as the keeper end of the pin alone was visible. Traction on the keeper end of the pin could only have succeeded in imbedding the point deeper.

Non-opaque foreign bodies in the esophagus can often be demonstrated with an opaque meal. First: By a filling defect when the esophagus is filled by the opaque meal. Second: Retention of barium about the margins of the foreign body, outlining it after the rest of the barium has passed on.

Team work is absolutely essential for successful bronchoscopy. The most skilled bronchoscopist can not do his work unless he has trained helpers. It is the one who holds the head that has the really important job, and he must perform his work accurately. Failure to recognize this necessity almost always results in failure to introduce the tubes. This is the greatest obstacle encountered by an amateur team, and can be overcome only by development of team work through practice. The person who hands the instruments to the operator must be trained exactly in his duties, as a slight break in his technique may lose a golden moment of opportunity for the operator and turn success into failure.

A third helper is necessary to hold the shoulders down, thereby steadying the patient and permitting the head holder to extend the head properly. Operative skill and technique are acquired by practice only. Cadavers are not good material upon which to gain experience because the greatest difficulties encountered are not anatomical ones, but rather the movements of living tissues. Lung suppuration cases requiring frequent treatments are splendid material to keep one in practice. Case No. 25 (the lung supuration following a ball-bearing in the lung) has been bronchoscoped at almost weekly intervals for three years. Cases of bronchiectasis are not difficult to find and will appreciate bronchoscopic treatment.

When a foreign body is diagnosed it is of great aid to reproduce the object as nearly as possible; insert it in a rubber tube in the same position as it is in the patient and practice its removal with the selected instruments.

General anesthetics are rarely necessary. They are indicated more often by those less certain of their technique and skill, or where adequate assistance is not available. The more team work and technique are perfected, the less general anesthesia is necessary. Jackson uses no anesthetic nor analgesic in young children. I saw him perform forty-two consecutive endoscopic examinations and treatments without using a general anesthetic. In older children and adults he uses cocaine locally. I use butyn in 2 per cent and 5 per cent solutions in all cases. Butyn has

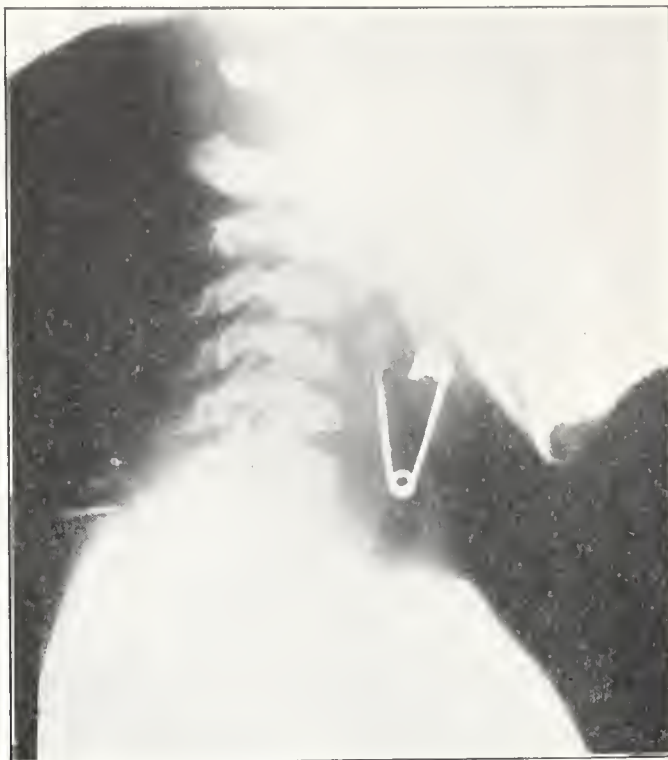


Plate No. 8, Case No. 22—Safety pin in larynx. With endoscopic view the keeper end alone could be seen. The position of the point was concealed. With information obtained from this radiograph the removal was easily and safely accomplished.

been used by me more than 300 times with but one toxic reaction. This occurred in a 4-year-old child that had had the drug used many times before. On this occasion a double dose was given through a misunderstanding. About 4 cc. of 5 per cent butyn was injected into the larynx and trachea. Fifteen minutes later he became cyanotic, frothed at the mouth and lost consciousness; there were several convulsions—the whole phenomenon closely resembling an epileptic fit. Recovery occurred quickly, just as it does in epilepsy. Butyn has been used several times since on this patient without any ill effect.

REPORT OF FORTY CASES OF FOREIGN BODY

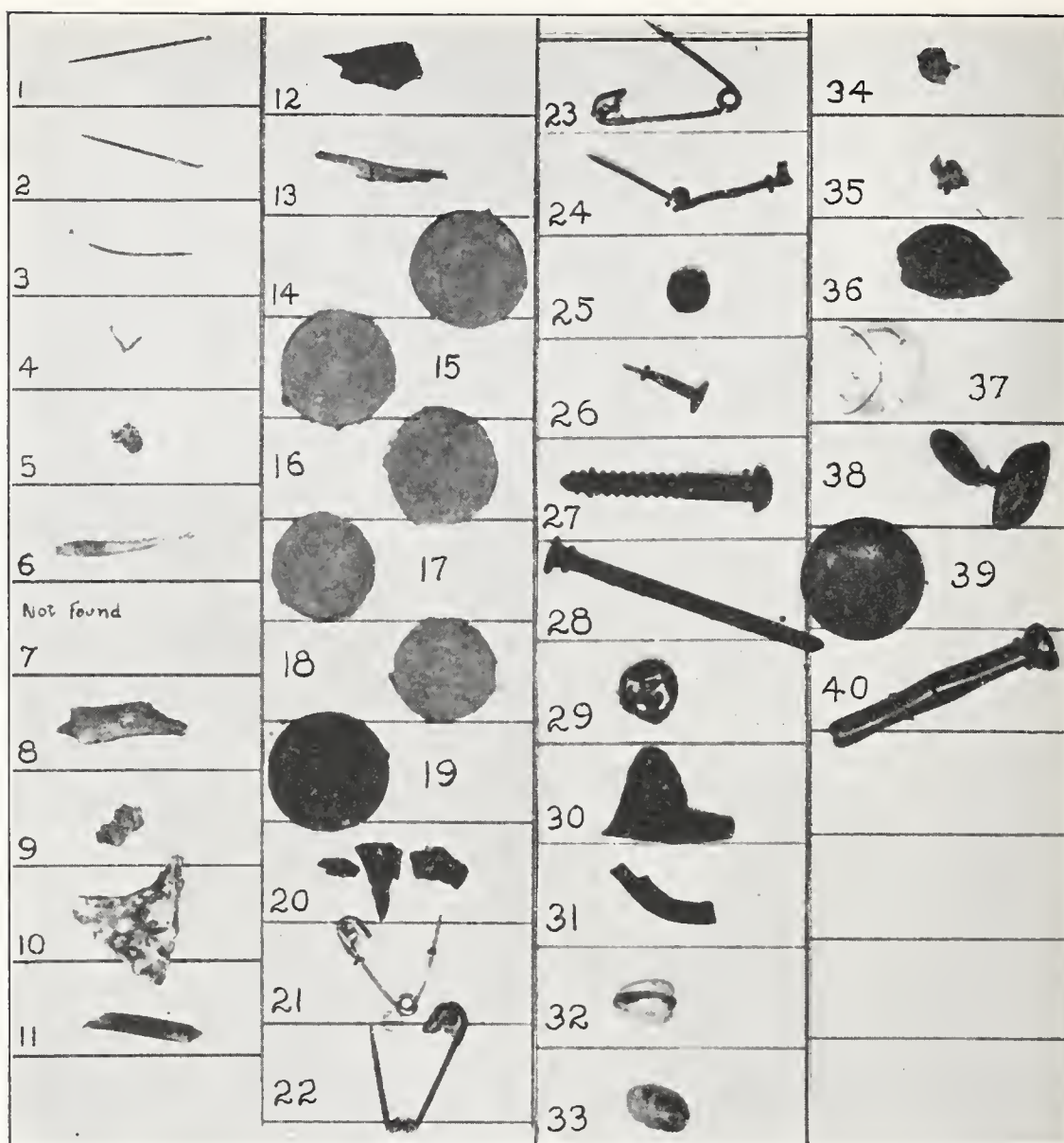
Case 1—William W., male, 24 years. History: Three hours after aspirating pin. Now feels pricking in throat. Indirect inspection shows pin transversely fixed behind epiglottis, point stuck in right side of larynx. Diagnosis: Pin in larynx. Result: Removed with curved forceps, using laryngeal mirror. Indirect method. No anesthetic. August 1, 1922. Recovery.

Case 2—L. L., female, 15 years. History: Five hours before aspirated pin. Indirect inspection shows F. B. in right pyriform sinus. Diagnosis: Pin in larynx. Result: Removed with alligator forceps through Jackson's laryngoscope. No anesthetic, trendelenberg position. Time 10 seconds. June 7, 1923. Recovery.

Case 3—Elizabeth N., female, 11 years. History: Twenty-four hours before swallowed pin. X-ray showed F. B. in left pyriform sinus. Sent to Los Angeles from Calexico; x-ray here shows the pin on right side. Seen by indirect examination. Diagnosis: Pin in right pyriform sinus. Result: Ether anesthetic, Jackson laryngoscope, patient vomited, pin found after prolonged search in epipharynx. Removed. Recovery. June 9, 1920.

Case 4—Betty, female, 15 months, three days ago while playing in fireplace choked; some fragments of wood were removed by the mother from the mouth. Croupy cough and noisy breathing since. No cyanosis. X-ray negative. Diagnosis: Piece of wood in larynx. Course and result: Jackson laryngoscope, no anesthetic. Grasped with alligator forceps, rotated and removed. Kept in hospital twenty-four hours. December 4, 1923. Recovery.

Case 5—Baby F., male, 2 years. Hoarse six weeks, croupy cough with high fever two weeks, marked dyspnea last twenty-four hours. X-ray shows large thymus, otherwise negative, W. B. C. 24,000, temperature 103, respiration 32, pulse 140. Urine shows acetone. Child exhausted. Diagnosis: Bone in larynx. Course and result: Without anesthesia, Jackson laryngoscope and 4 mm. tube, laryngeal edema, small cancellous bone found in



glottis, removed F. B., trachea explored, breathing easier, six hours later collapsed, tracheotomy by intern, died one hour later. December 24, 1922. Died.

Case 6—Mrs. C. H., female, 35 years. Four days before, while eating chicken, felt sharp prick in throat; swallowing painful since; neck swollen twenty-four hours. Unable to swallow. Temperature 102; pulse 112. X-ray shows small shadow below cricoid level. Diagnosis: Chicken bone in esophagus; perforation; neck infection. Course and result: Ether, Breuning tubes and forceps. Intense swelling of esophagus; lumen contains foul pus. Bone two inches below cricoid on posterior wall, transverse, right end penetrates wall. Grasped and removed. Neck opened, external drain inserted to esophagus. Normal in four days. August 20, 1919. Recovery.

Case 7—William B., male 24 years. May 18, 1923. Felt bone swallowed while eating fish. Pricking on swallowing since. Indirect inspection negative. Refuses x-ray May 21. Still feels F. B. X-ray refused. May 22, chill, neck swelling. Painful swallowing. X-rays taken—negative for foreign body. Temperature 100, pulse 104, respiration 22. Neck on left swollen and tender. Diagnosis: Fish bone perforating the esophagus. Neck infection. Course and result: May 22, Butyn 5 per cent. Jackson Ant. Commisure speculum used to explore upper esophagus; also used esophageal speculum. Intense inflammation left side esophagus. F. B. not found. Neck drained externally. May 28 abscess left side esophagus; opened; F. B. not found. 6-2 ether. Almost normal. F. B. not found. May and June, 1923. Recovery.

Case 8—Mrs. A., female, 55 years. History: Painful swallowing twenty-four hours since eating beef stew. X-ray shows shadow level 6 C. V. Diagnosis: Beef bone in esophagus. Course and result: Ether, Jackson 7 mm. tube. Bone found two inches below cricoid level caught in folds of post-wall esophagus, removed. July 1, 1921. Recovery.

Case 9—M. S., male, 11 months. Six hours ago while playing on the floor suddenly choked and coughed, became cyanotic, soon normal. Repeated attacks of coughing and cyanosis, vomiting at times, blood-streaked vomitus. X-ray—No shadow; shows emphysema right lung. Diagnosis: Rabbit bone in right bronchus. Course and result: Ether, Jackson 4 mm. tube, bone found in right bronchus. Grasped and removed. Moderate laryn-

geal edema two days. Kept in hospital four days. September 4, 1920. Recovery.

Case 10—J. C., male 48 years. Last night was eating chicken, felt bone being swallowed, has dull sub-sternal pain since, worse on swallowing. Fluids and solids pass, but he is afraid to swallow. X-ray shows no shadow; after barium, shadow is outlined, 3 inches above diaphragm. Diagnosis: Flat chicken bone in lower esophagus. Course and result: Ether, Jackson 10 mm. Esophagoscope. Bone found 37 cm. from incisor teeth. Sharp projection caught in mucosa, grasped with rotation forceps, freed and removed. Normal after recovery from ether. May 29, 1923. Recovery.

Case 11—J. E., female, 45 years. History: Three days ago, while eating fish, felt sharp prick in throat, painful swallowing since, pain increased past twenty-four hours. Temperature 101, pulse 100, neck slightly swollen and tender. X-ray shows shadow in esophagus. Diagnosis: Fish bone in esophagus. Course and result: Ether, Breuning tube. Bone found in esophagus three inches below cricoid level. Mucosa markedly inflamed and swollen. Bone grasped. On withdrawal of tube and forceps, F. B. slipped from grasp. Further search failed to find it. Patient vomited on return to bed; bone found in vomitus. November 10, 1920. Recovery.

Case 12—Mrs. Q. B., female, 46 years. History: Seventy-two hours ago swallowed piece of bone while eating mutton stew. Painful swallowing since, unable to swallow even fluids forty-eight hours. Temperature 101. X-ray shows shadow level sternal notch. Diagnosis: Mutton bone in esophagus. Esophagitis. Course and result: Ether, Breuning tubes. Mucosa esophagus, red and swollen, pus in lumen. Complete esophagus searched twenty minutes before seeing foreign body. Bone found embedded in swollen mucosa; grasped and removed. Normal in two days. December 12, 1921. Recovery.

Case 13—Mrs. J. L., female, 32 years. History: Two days ago while eating chicken felt prick in throat, painful swallowing since. X-ray shows shadow after barium. Diagnosis: Chicken bone in esophagus. Course and result: Ether. Lynah esophagoscope. Foreign body found just below cricoid fold on post wall of esophagus. Little inflammation. Removed. Time, 90 seconds. December 5, 1922. Recovery.

Case 14—J. E., female, 5 years. History: Nine days

before swallowed nickel. Able to swallow liquids without pain. Four days later family doctor worked one and one-half hours under ether using forceps blindly. Since then painful swallowing. Temperature 100. Case observed four days before removal F. B. X-ray shows opaque shadow level 5th cv. Diagnosis: Nickel in esophagus. Course and result: No anesthetic, Jackson 5 mm. tube. Evidence of trauma, hypo pharynx and esophagus. Coin easily found and removed. Time 2 minutes. October 30, 1922. Recovery.

Case 15—Baby W., male, 22 months. History: Three days ago swallowed coin. Able to take liquids; gags at times. Temperature normal. X-ray shows coin in cervical esophagus. Diagnosis: Nickel in esophagus. Course and result: No anesthetic, Jackson 5 mm. tube. Coin seen and removed. Time 90 seconds. October 24, 1922. Recovery.

Case 16—H. B., female, 2 years. History: Child has been gagging three days, unable to swallow solids. X-ray, round opaque shadow in upper esophagus. Diagnosis: Nickel in esophagus. Course and result: No anesthetic, borrowed equipment, two casual assistants. After one hour's hard work managed to see coin; finally was dislodged, passing down into stomach; passed in stool next day. September 20, 1916. Recovery.

Case 17—L. S., male, 3 years. History: Two days ago swallowed penny; able to swallow only liquids. Temperature normal. X-ray shows coin. Diagnosis: Penny in esophagus. Course and result: No anesthetic, Jackson 5 mm. tube. Removed in less than two minutes. July 20, 1923. Recovery.

Case 18—W. J., male, 14 months. History: Child swallowed coin three days ago, will not swallow past twenty-four hours. Temperature 99 rectum. X-ray shows coin. Diagnosis: Penny in esophagus. Course and result: No anesthetic, Jackson child's esophageal speculum, alligator forceps. Removed in twenty seconds. March 16, 1924. Recovery.

Case 19—L. M., male, 2 years. Four weeks difficulty in swallowing, retches, able to swallow liquids easily. Temperature 100. X-ray shows shadow in cervical esophagus. Diagnosis: Metal disc from electric switch-box in esophagus. Course and result: No anesthetic, Jackson 5 mm. tube. Esophagus mucosa inflamed. F. B. found and grasped and easily removed. Time 3 minutes. July 20, 1923. Recovery.

Case 20—F. A., female, 9 years. History: Today playing in school yard, aspirated piece of metal she carried in mouth; lost voice at once, gagged and coughed. Breathing slightly obstructed. Child has the habit of swallowing metal bits, pins, nails, etc. This is first time any were aspirated. Temperature 102, respiration 24, pulse 120. X-ray shows shadow in larynx. Diagnosis: Metal curl from latheing tool steel in larynx. Course and result: Ether, Breuning laryngoscope inserted through glottis. F. B. seen below cords firmly impacted. With alligator forceps, lateral arms broken off and removed. Laryngeal edema and temperature two days. Normal in four days. November 20, 1920. Recovery.

Case 21—R. G., male, 6 months. History: Child has been gagging three hours. When this began mother missed a safety pin, put finger in baby's mouth, felt pin, unable to remove it. Fluoroscope shows pin, open, point up, to right level xyphoid. Diagnosis: Safety pin in esophagus. Course and result: No anesthetic, Jackson 4 mm. tube. Trachea and bronchi searched, no F. B. Tube passed in esophagus; pin found at lower end, point embedded in mucosa, keeper end grasped and drawn into tube. Removed. Time 30 minutes. February 24, 1922. Recovery.

Case 22—M. H., female, 6 years. History: Six hours ago aspirated safety pin, aphonia since. Diagnosis: Safety pin in larynx. Course and result: No anesthetic, Jackson child's laryngoscope. Keeper alone visible in glottis, grasped and pushed forward and down, freeing point. Removed. Time 30 seconds. April 17, 1924. Recovery.

Case 23—J. A., male, 10 months. History: Entered L. A. C. H. November 3, 1921. History of impaired respiration six weeks. Both parents positive Wasserman, child negative Wass. Culture for diphtheria negative. X-ray shows large thymus. General examination negative. Takes liquids with difficulty, breathing labored, noisy. Weight 11 pounds 11 ounces. Direct laryngoscope shows safety pin in hypo pharynx. X-ray of neck shows open pin, point up and to right. Diagnosis: Safety pin in hypo pharynx. Course and result: No anesthetic, Jackson infant's laryngoscope. Pin found in hypo pharynx, grasped with alligator forceps, point liberated. Removed. November 23, 1921. Recovery.

Case 24—A. P., female, 11 months. History: Three days ago began to cough and gag, constant cough since, fever two days. Roentgenologist examined under fluoroscope, reports pin in esophagus, level 5-7-D.V. Plate not taken. Pin found in right bronchus. Diagnosis: Beauty pin in right bronchus. Course and result: Ether, Breuning 4 mm. tube, taking fluoroscope. Esophagus explored, no F. B. Fluoroscope still shows F. B. Pin found in right bronchus, point in trachea. Point brought in tube, grasped and removed. Edema larynx, fever three days. Time 1 hour 20 minutes. July 13, 1919. Recovery.

Case 25—E. B., female, 7 years. History: January 3, 1920, developed pneumonia, told attending doctor that she swallowed large ball-bearing four days before. Eight weeks later, rib resection for empyema, no pus found. Three days later began to expectorate foul pus. Thoracotomy wound suddenly discharged pus, rapid emaciation,

clubbing fingers, chest wound closed. August 27, 1920, x-ray shows ball in left bronchus, lung abscess. Diagnosis: Steel ball-bearing in left bronchus, lung abscess. Course and result: Ether, Jackson 5 mm. tube, specially bent double cusp Breuning forceps. Much foul pus removed by suction. Granulations obstruct lumen, left lung. Ball felt in left bronchus, grasped, removed with tube, lost at glottis. Further search failed to find ball. Return to bed, ball vomited. Gained twenty pounds in forty days. Sputum free in two months. Later recurrence, still under treatment. August 31, 1920. Recovery.

Case 26—M. D., female, 2½ years. History: Two days ago swallowed carpet tack. Mother became alarmed as stools did not contain tack. X-ray showed tack in right bronchus. Temperature normal. Diagnosis: Tack in right bronchus. Course and result: No anesthetic, Jackson 5 mm. tube, side-grasping forceps. Point grasped, drawn into tube and removed tube. Time 2 minutes. July 1, 1922. Recovery.

Case 27—D. M., male, 12 years. History: May 5, 1923, aspirated screw. May 6, under ether one hour, local doctor attempted removal with bronchoscope. Brought to Los Angeles May 7. Temperature 101, respiration 30. X-ray shows large wood screw in right bronchus. Observed three days; temperature subsided. Diagnosis: Screw in right bronchus. Course and result: Butyn 5 per cent, Jackson 7 mm. tube, side-grasping forceps. Screw easily found, grasped and removed with tube. Time 4 minutes. No post-operative reaction. May 10, 1923. Recovery.

Case 28—C. M., male, 4 years. History: February 1, 1923, swallowed six-penny nail; four days later developed pneumonia; attending doctor refused to consider nail history. Fever gradually subsided, cough persisted, foul expectoration, emaciation. Moved to Arizona for T. B. X-ray June 20, 1923, showed nail in right bronchus with lung suppuration. Diagnosis: Nail in right bronchus. Course and result: Butyn 5 per cent, Jackson 5 mm. tube, side-grasping forceps. Nail found, extending into trachea from right bronchus, foul pus. Nail grasped and removed. X-ray of chest four months later shows no pathology of lungs. May 1, 1923. Recovery.

Case 29—H., male, 49 years. History: Three days ago dentist gave gas to extract crowned third molar. Tooth broke off and was lost down throat. X-ray showed crown in right bronchus. Patient has had pulmonary T. B. Diagnosis: Gold crown in right bronchus. Course and result: On August 18, 1922, Bronings' instruments, Dr. B. worked one hour, cocain anesthetic, sitting position, unable to grasp tooth. August 19, 1922, Jackson 9 mm. tube, Boyce position, tooth removed in 4 minutes, rotation forceps. August 19, 1922. Recovery.

Case 30—R. S., male, 15 months. History: Six weeks ago was playing with walnut shells; gagged and vomited. Mother gave castor oil. Fragments of nutshell in stool. Breathing noisy. Takes fluids, fever one week. Local doctor advised adenoidectomy. Temperature 100, pulse 120, respiration 24. Chest examination negative. X-ray shows no F. B. Diagnosis: Piece walnut shell in hypo pharynx. Course and result: Chloroform, Jackson infants' laryngoscope. Intense inflammation, granulations, swollen tissue. Shell found in hypo pharynx, grasped with alligator forceps, rotated and slowly removed. Child normal in few days. March 2, 1920. Recovery.

Case 31—R. M., male, 2 years. History: One and one-half hours ago, eating walnuts, choked and coughed; aphonia and labored breathing since. X-ray negative. Diagnosis: Walnut shell in larynx. Course and result: No anesthetic. Jackson child's laryngoscope. Shell found wedged in glottis, grasped with alligator forceps, rotated and slowly removed. Kept under observation twenty-four hours. Time 40 seconds. January 30, 1924. Recovery.

Case 32—K. P., female, 3½ years. History: May 13, 1923, eating sunflower seeds, choked, cyanos at times, cough. Entered L. A. G. H. May 14. Labored breathing. Temperature 101. "Tracheal thud" present. X-ray negative. Diagnosis: Sunflower seed in trachea. Course and result: No anesthetic, casual assistants. Unable to introduce tube (poor exposure larynx); laryngeal edema increased. Tracheotomy. Seed coughed through tracheal wound. Broncho pneumonia developed May 14, 1923.

Case 33—H. J., male, 17 months. History: Three hours ago choked and became cyanotic while playing with beans. Hypertympany over right chest; absent breath sounds over right chest. Diagnosis: Bean in right bronchus. Course and result: No anesthetic. Jackson 4 mm. tube, Breuning double-hook forceps. Bean found in right bronchus, grasped and removed with tube. Time 3 minutes. Was allowed to go home. Twelve hours later laryngeal edema. Tracheotomy not permitted by parents. Atropin given; better. Sudden cyanosis and death fourteen hours after operation. April 8, 1922. Died.

Case 34—E. L., female, 18 months. History: Six days ago playing on the floor, choked and became cyanotic; four days later, cough, temperature 102, rapid respirations. Continued fever since. At L. A. G. H., F. B. diagnosed. X-ray shows air trapped, right lung. Diagnosis: Almond kernel in right bronchus. Course and result: Butyn 5 per cent, Jackson 4 mm. tube. Mucosa right bronchus, swollen; nut fragment found and removed. Laryngeal edema increased; tracheotomy required in forty-eight hours. Tracheal tube removed in one week. December 21, 1923. Recovery.

Case 35—I. J., female, 16 months. History: Four days ago while eating peanut candy, choked and coughed. Forty-eight hours later temperature 102, pulse 120, at

L. A. G. H. Air trapped right lung, demonstrated with x-ray. Diagnosis: Peanut in right bronchus. Course and result: Butyn 5 per cent, Jackson 4 mm. tube. Fragment of nut kernel found in right bronchus; mucosa swollen; removed. Time 4 minutes. Normal in four days. September 12, 1922. Recovery.

Case 36—F. W. F., male, 45 years. History: Five days ago while eating plum pudding, had sudden, complete obstruction to swallowing. At 18 years of age had esophageal obstruction due to lye; treated by dilation. X-ray shows filling defect at diaphragm. Diagnosis: Plum pit in esophagus. Course and result: Ether, Breuning's tube. Esophagus narrowed, old scars. F. B. found, grasped and removed to cricoid, where it slipped from forceps. Further search unsuccessful. Able to swallow for twenty-four hours, when complete obstruction again occurred. F. B. again found and removed. August 8, 1920. Recovery.

Case 37—C. S., male, 12 years. History: Three days ago swallowed marble; complete obstruction to swallowing since; no pain or other symptoms. X-ray shows shadow level 6 d. v. Diagnosis: Marble in esophagus. Course and result: Butyn 5 per cent, Jackson 7 mm. tube, spoon. Unable to grasp F. B. It was pushed into stomach; passed in stool next day. November 20, 1922. Recovery.

Case 38—M. M., female, 2 years. History: This morning child swallowed a large cuff button; choked, became cyanotic. X-ray taken two hours later shows cuff button in thorax. Diagnosed by roentgenologist as in trachea. Child has frequent colds and tonsillitis; two days has had a cold. Diagnosis: Cuff button in esophagus. Course and result: Butyn anesthetic, diagnosis accepted from x-ray report—plates not seen by operator. Bronchoscopic search; no foreign body; trachea inflamed; edema larynx. F. B. found in esophagus; pushed into stomach; passed in stool ten hours later. Laryngeal edema increased. Tracheotomy necessary. December 16, 1923. Recovery.

Case 39—J. W., male, 20 months. History: Difficulty in swallowing thirty-six hours. X-ray shows no F. B. Temperature normal. Diagnosis: Coat button in esophagus. Course and result: Butyn 5 per cent. F. B. seen tightly wedged in esophagus three inches below cricoid. Ether given. F. B. loosened and removed. June 13, 1923. Recovery.

Case 40—A. A., female, 5 years. History: While being treated with intubation for laryngeal stenosis, aspirated O'Dwyer tube. X-ray shows tube in left bronchus. Diagnosis: O'Dwyer intubation in left bronchus. Course and result: Butyn 5 per cent, Jackson 5 mm. tube. Expanding forceps inserted in lumen of tube. Removed F. B. August 16, 1922. Recovery.

DISCUSSION

Chester H. Bowers, M. D. (1136 West Sixth Street, Los Angeles)—Dr. Jesberg is extremely fortunate in being able to present so many cases of foreign bodies in the respiratory and digestive tracts with such favorable outcome. It is highly desirable that such papers be brought to the attention of the general profession, as even today there is current among some of our number the belief that a foreign body is a very rare thing and that if it occurs there is nothing to be done.

Two years ago I removed a rivet after seven months' sojourn from the posterior division of the right inferior lobe bronchus. Although the boy gave the history of aspiration of the foreign body, the parents were informed that the rivet would not go down into the lung, and if it should it would be safer to let it remain than to encounter the danger of removal. Removing the rivet caused no reaction, but cured the child from a lung abscess which had formed.

Another point that the essayist made is to guard against hasty removal of foreign bodies.

The removal of foreign bodies is seldom an emergency operation, and I feel that it is a serious mistake to operate until the case has been properly studied, the exact location of the foreign body determined, the team assembled and the patient properly prepared. Personally I prefer doing these operations early in the morning in contradistinction to rushing about all day in an effort to wildly extract the foreign body at the soonest moment. These are factors which are apparent to every bronchoscopist, but are not generally appreciated by the medical profession.

George W. McCoy, M. D. (Security Building, Los Angeles)—This line of work is a specialty within itself, handicapped by not sufficient revenue to afford a living for the operator and his team workers. About all the financial returns in the majority of cases is the coin removed, and sometimes the patient is offended to give that up. With few exceptions the operator has

to make his living by other work and to make this line practically charity work. The laity nor the medical profession in general do not appreciate the great amount of time and practice necessary to do good work. Without the careful procedure so thoroughly worked out by Jackson, without the requisite skill by the operator and his team workers, the attempt at removal of a foreign body should not be made.

Dr. Jesberg is to be honored that he devotes so much of his time to this work and does it so skillfully.

I would like to report two interesting cases.

A child about 3 years of age had a few pennies in his mouth. X-ray showed one distinct shadow and a faint one somewhat overlapping in the esophagus as if the patient might have moved or there were two pennies. I did not know which. Two pennies with one grasp of the forceps were removed, without anesthetic and without the slightest damage.

A boy about 13 years of age, while running with a silver-plated collar button in his mouth, choked somewhat when the collar button went down. X-rays were taken and reported negative. For about fourteen years the young man coughed and expectorated a muco-purulent sputum and then he reported to Dr. Soiland, who made the proper diagnosis by x-ray and sent the patient to me. At the end of the lowest branch of the right bronchus was an almost closed abscess about two and a half inches in diameter with a small opening surrounded by a firm fibrous ring so small that Jackson's forceps would just pass through. Three separate attempts were made at about one month intervals with local anesthetic to the pharynx and larynx. By the use of Jackson's bronchoscope and the fluroscope to direct the forceps the button was removed without any mishap. In a short time the muco-purulent expectoration and cough disappeared. X-ray showed the abscess gone. The patient resumed his collegiate studies. Dr. Detling, who worked with me on this case, and I were greatly pleased. The collar button had about half disappeared by chemical reaction.

Harvard McNaught, M. D. (Butler Building, San Francisco)—I have enjoyed Dr. Jesberg's excellent and timely paper, and wish to congratulate him on the results of his careful work.

We have all had these problems to meet in this work, and one must be more resourceful in this procedure than in any other branch of surgery, as entirely new situations are continually presenting themselves. Preparedness is a sine qua non of this work, and haste is very seldom called for. The thing that is brought most forcibly to my mind at this time is that some one man or group of men should be given these cases in each vicinity. No one man has enough of such patients to acquire the necessary dexterity.

Where there is a teaching institution they should have a complete equipment for such work, and it would be logical to refer cases there. It is subjecting the patients to unnecessary risks to hold such cases oneself, unless one is constantly in practice. If all cases were so referred in a neighborhood to one man or a group of men the number would be sufficient to keep them in training to do the best for the patient by acquiring the necessary dexterity in handling such cases.

Problem of Health Education—Health education in our schools is receiving a lot of attention on the part of educators, and we are not disposed to condemn the idea, but we are opposed to the kind of health education that is being given out by a lot of school teachers who are proselytizing for the Christian Scientists, chiropractors, and other medical pretenders. All health education in our schools ought to be under the supervision of health officers who are reputable medical men, and not given by teachers who have fantastic and inconsistent ideas concerning health and its preservation.—Indiana Medical Journal.

THE TREATMENT OF FLEXION DEFORMITY OF THE HIP JOINT

By S. F. STEWART, M. D., Los Angeles

In a partially paralyzed individual suffering from a flexion contraction of the thigh, an attempt should be made to preserve as much muscle-power as possible for future use.

Where the tensor fascia remains active, it should not be divided transversely as in the operation of Soutter, but should be lengthened in its tendinous portion, and the transplantation of the lesser gluteals after the manner of Campbell should be held as a reserve measure.

DISCUSSION by Harold H. Hitchcock, Oakland; H. W. Spiers, Los Angeles; A. Gottlieb, Los Angeles; Ethan H. Smith, San Francisco.

FLEXION deformity at the hip may be due to disease of the bones or joints, or a contracture of the soft parts. It may be simple or associated with abduction or adduction. The deformity due to bony lesions will not be considered in this paper. The contracture of the soft parts results chiefly from improper prophylaxis in poliomyelitis, spastic paraplegias, arthritis, and the retention of an amputation stump in a faulty position for an unwarranted period.

If the distortion is unilateral and very marked, the unfortunate usually prefers to use a crutch, making no attempt to place his foot on the ground. A slight or moderate bilateral contracture is compatible with biped progression if the paralysis of the remaining musculature is not too severe. Campbell states that, if the bilateral contracture is greater than 60 degrees, the individual is compelled to assume the quadruped form of locomotion. In some unilateral cases, where the person has permitted the affected member to dangle, it has been observed that there is marked shortening of the bones of both the upper and lower leg. After the deformity has been corrected and the person begins to use the leg, a compensatory growth apparently begins.

Soutter, in 1914, described an operation which, in its essential features, consisted in the exposure of the deep fascia of the thigh at the level of the anterior spine, a transverse division of the tensor fascia from the anterior superior spine to the trochanter, a sub-periosteal stripping of the inner and outer aspect of the ilium and the removal of the anterior superior spine. This operation gave a great deal of satisfaction. Campbell, in 1923, described a more radical procedure, wherein the gluteal attachments to the iliac crest were transferred to a point about an inch above the acetabulum, and the structures attached to the anterior superior spine were permitted to attach at a more inferior position.

These operations work very well in selected cases, but there is a group of cases to which neither procedure is applicable. It would, therefore, seem wise to evaluate the groups to which each operation is applicable. In the operation described by Soutter, there is frequently a division of manifestly good muscle in the belly of the tensor fascia femoris at the time that the overlying fascia is divided transversely. It is a well-recognized fact that the transverse division of the belly of a muscle weakens the muscle in proportion to the amount of muscle separated from its nerve supply. Hence, it would appear inadvisable to perform the Soutter operation

on any individual who showed any power in the tensor fascia femoris and in whom it might be advisable at a later time to transplant the tensor fascia to take the place of the quadriceps femoris or the gluteus medius.

It is likewise patent that when an elastic structure, such as a muscle, is on tension between two points of attachment, that the shortening of the distance between these two points reduces the tension exerted and likewise reduces the range of contractibility, and thereby amounts to a partial paralysis of the muscle. This, in short, is what is accomplished by the operation as described by Campbell, in case there is any power left in the glutei which he transplants.

If, therefore, an operative procedure can be devised which will avoid destruction of the tensor fascia even in a slight degree, and which will retain whatever power remains in the lesser gluteals, and yet permit of the correction of the flexed or the flexed and abducted position of the thigh, it would seem wise to use such a procedure in all cases where power in the tensor fascia and the gluteals can be demonstrated.

Therefore, it would seem proper to review briefly the physiological anatomy of the affected region, and endeavor to indicate the methods of differentiating the various groups. The tensor fascia femoris is the lateral stabilizer of the pelvis when the thigh is flexed, as in walking upstairs; the lesser gluteals, on the other hand, are the lateral stabilizers when the thigh is extended, as in ordinary walking. By the same token they may be demonstrated on examination, respectively, as the abductor of the hip in flexion, and the abductors of the hip in extension. If, therefore, the patient can abduct the thigh while it is in a flexed position, it would seem reasonable to believe that the tensor fascia was present to a greater or less degree, and an attempt should be made to avoid the partial destruction of that muscle by the transverse division of some of its fibers at the level of the anterior superior spine. With a hip drawn up in flexion, it is impossible to evaluate the lesser gluteal muscles, and hence it would seem unwise to weaken them unnecessarily by such an operation as that of Campbell, who believes that where the abduction contracture is great that the operation which he has described is the one of choice. On the other hand, it is our belief that, in orthopedic surgery, one should be governed by the following principle, that when in doubt, always do the least radical thing, knowing that if it does not yield the desired results, the more radical procedure can be undertaken at any time. To avoid these objections, the following operation has been devised. A longitudinal incision is made from the iliac crest to a point one inch below the level of the perineum, and about one and a half inches posterior to the anterior superior spine. The deep fascia is exposed and freed from the overlying tissues till the anterior and posterior borders of the tensor fascia femoris are exposed. The muscle is then isolated from the anterior superior spine to the level of the perineum where the fleshy belly of the muscle terminates. The fascia is divided by a "Z" incision, as is done in lengthening the tendo-Achilles, and the fascia is sutured in the

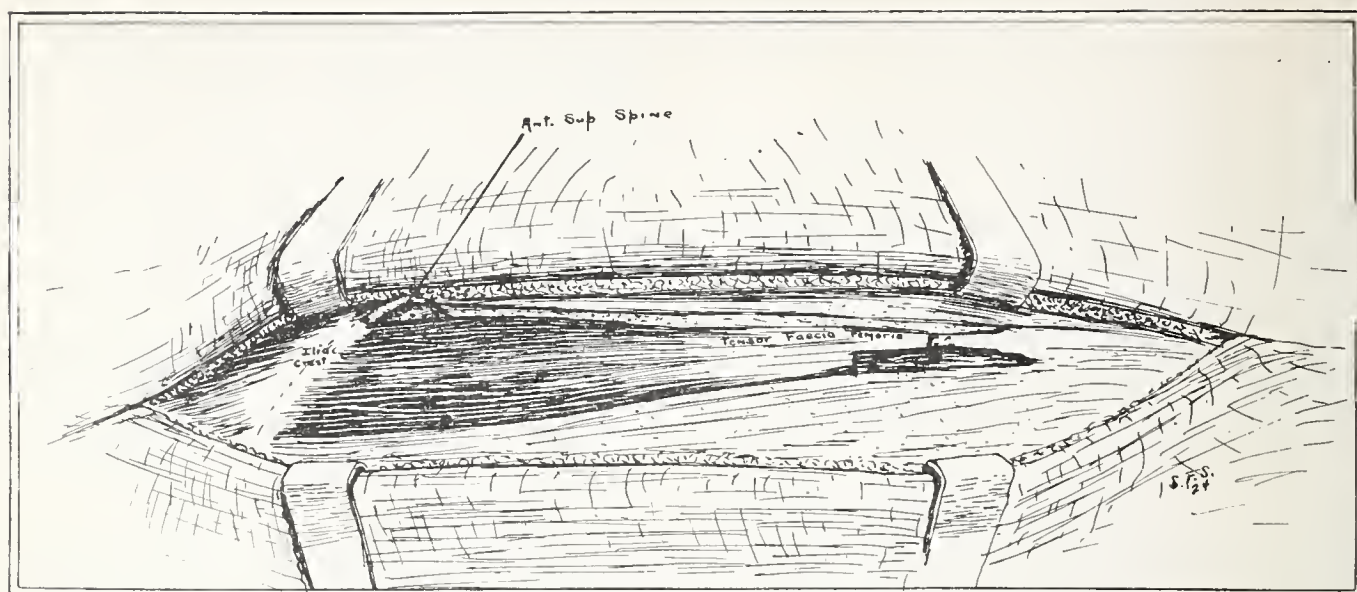


Figure 1—Showing the point of lengthening of tensor fascia femoris, together with the loosening of muscle from the anterior superior spine.

lengthened position. The periosteum over the anterior superior spine is incised and the periosteum is stripped on the inner and outer sides of the pelvis, as in the manner of Soutter. The leg is drawn back into an extended position, and any tight fibers that remain are cut transversely. The wound is then closed, a simple dressing applied, and the patient is returned to the ward.

Although no difficulty has been experienced in the after care of patients treated by this operation, the unfortunate results that have attended immediate hyperextension in plaster jackets in the hands of other surgeons has led to the adoption of the following technique in the after care. Ten days later, when the stitches are removed, a snugly fitting plaster jacket, or jacket spica of the unoperated leg, is applied with the back in the flattened position, and the operated leg is enclosed in a long plaster boot. The patient is then placed on a frame that was described in a previous communication, and the limb gradually hyperextended. The abduction or adduction element is taken care of by lateral traction on the plaster boot. After being hyperextended for a period of six weeks, the plaster is removed and any further operative procedures are undertaken. In the event that one is now unable to correct the abduction element in the deformity, one can then with a clear conscience undertake the operation of Campbell, although in the half-dozen or more cases in which this operation has been done no occasion has been found that required further operative correction. If, after the patient is gotten up and has had his muscle-training it is found that there is a gluteus medius limp, an unimpaired tensor fascia can be transferred to the trochanter after the manner of Legg.

SUMMARY

In a partially paralyzed individual suffering from a flexion contraction of the thigh, an attempt should be made to preserve as much muscle power as possible for future use. To this end, in cases where the tensor fascia remains active, it should not be divided transversely as in the operation of Soutter, but should be lengthened in its tendinous portion, and the transplantation of the lesser gluteals after

the manner of Campbell should be held as a reserve measure.

902 Union Bank Building.

DISCUSSION

Harold H. Hitchcock, M. D. (Medical Building, Oakland)—The tensor fascia latae muscle is supplied by a branch of the superior gluteal nerve which passes through the gluteus medius muscle to the upper third of the tensor fascia latae, and then extends distally from this point, supplying the deep surface of the muscle with small rami.

It is thus obvious, as pointed out by Doctor Stewart, that it is a needless waste of muscle tissue to cut this muscle through its belly. In all cases where one is apt to need the tensor fascia latae for transplant later, I think Stewart has taught us economy. However, in cases of flexion resulting from spastic paraplegia, I would prefer the procedure of Soutter.

For his frame and for this lesson in muscle economy, to aid the correction of these hip flexion cases, Stewart is to be congratulated.

Too much emphasis cannot be placed on the dangers of trying to hyperextend hip flexion cases immediately after operation, especially by the application of plaster of paris spicas.

H. W. Spiers, M. D. (Westlake Professional Building, Los Angeles)—Doctor Stewart has pointed out a refinement of value in cases where the Soutter operation has been previously routinely used. The tensor fascia femoris muscle can frequently be made of use to the individual with paralysis in the gluteal region. It is quite frequently the only muscle not to some extent affected by the paralysis. I have seen several of the doctor's cases in which he has preserved this muscle and later used it. These showed the distinct advantage of the method.

Regarding the immediate post-operative use of fixed hyperextension, I would like to add my word of caution. Until I adopted the plan of not putting on such casts, I rather dreaded the post-operative reaction of my patients. I avoided using this operation, on this basis, in patients that presented an unusual operative risk. There were no fatalities, but I had several in a series which gave me very considerable concern. I am now using, routinely, the method as described, and my experience in this regard has been very satisfactory.

A. Gottlieb, M. D. (607 South Hill Street, Los Angeles)—It has been my good fortune to assist the author in three of his operations for the lengthening of the tensor femoris fascia, and to follow the cases post-operatively. The operation impresses one with its simplicity and its sound physiological judgment that the greatest contracture is present in the fascia and not in the muscle substance, the resistance of which can be overcome by subsequent physiotherapy. It is the fascia which needs elongation, and not the muscle which is being cut across by the method of Soutter to gain the necessary correction of the hip. The favorable

results seen in the above three cases leads me to believe that the Stewart operation is indicated in most all hip flexions due to contracted soft tissues. An exception to this may only be such cases where the operator deliberately desires to destroy nerves supplying the muscle substance, as in marked spasticity where the Soutter may be preferable or where there is, in addition to flexion, a very resistant abduction of the hip, for which a Campbell procedure may find indication. The Stewart operation, with its outlined after treatment, is indeed a valuable contribution to orthopedic surgery.

Ethan H. Smith, M. D. (Flood Building, San Francisco)—The operations mentioned by Doctor Stewart for flexion deformities of the hip-joint such as Soutter's and Campbell's, and a modification by Doctor Stewart himself, have a very limited range of usefulness, in my opinion, if indicated at all.

From a study of the action of the hip-joint, it would seem that the muscles involved in the above-mentioned operations are in but a small measure to blame for the deformity. The muscles most involved are the psoas and iliacus with the combined tendon attached to the lesser trochanter, which is the direct flexor of the thigh. Almost invariably the adductor group is also greatly contracted in these cases. The tendons of the psoas and iliacus muscles are well-nigh inaccessible for extensive operation. Tenotomy of the adductors is a very simple and a very useful procedure in many cases where they are contracted.

The cutting transversely of the body of a muscle, and especially the muscles involved in the operations under discussion, is never warranted by any compensatory improvement in function. The transverse cutting of a muscle is well-nigh uncalled for in any surgical procedure. The psoas and iliacus muscles can nearly always be lengthened by traction. They are not prone to contracture.

To use a popular way of expression, the best method of cure is the prevention of deformity in the beginning of the trouble. This is quite possible if the cases are placed in the hands of surgeons trained in orthopedic work right at the beginning. I would ask that every influence be brought to bear on the medical profession as a whole, to pay more heed to turning these cases of deformity, and many others, over to the orthopedic surgeons just as soon as a diagnosis is made. Telling parents that "the child will outgrow the trouble," or wasting valuable time in useless and unskillful endeavor, brings the case to the orthopedic surgeon in a condition when perfect cure is impossible.

Doctor Stewart (closing)—I would like to take issue with Doctor Smith in two matters, first in regard to the responsibility of the psoas and iliacus in causing flexion deformity. I have never seen a case of contracture at the hip where these muscles were responsible, and I believe my memory is correct when I say that the late Doctor Robert W. Lovett told me he had never seen a case of flexion contracture in which operative measures were necessary on the ilio psoas group. When such a careful observer, and one who had such a large experience in the treatment of these conditions could say that, I doubt very much whether many cases are due to this group of muscles.

As to the responsibility of the adductors, I can only say that adductor contraction is rarely present in infantile paralysis, but is frequently responsible for a portion of the deformity in spastic paralysis and in arthritic conditions.

In the next place, I feel that Dr. Smith is rather radically conservative in advising traction for the removal of the severe deformities of the hip in infantile paralysis. If he were confining his remarks to arthritic conditions of the hip, I would heartily agree with him in the use of traction. In the paralytic contracture, however, I must disagree with him. For many years Soutter endeavored to treat these conditions by non-operative procedures, only to meet with disappointment, and it was these unfortunate experiences that finally compelled him to devise and practice the operation which bears his name. My endeavor has been limited to an attempt to add a refinement of conservatism to the pioneer work of Soutter.

I thoroughly agree with the plea for preventive orthopedics, especially in infantile paralysis.

RATIONAL CONDUCT OF LABOR

By HARRY S. FIST, M. D., Los Angeles

Physician must know what should be done and what left undone.

A plea for physiologic midwifery.

Much of present surgery in obstetrics unwarranted.

The physician's services should date from early pregnancy to complete involution of the uterus.

The lazy doctor should not do obstetrics.

DISCUSSION by E. J. Krahulik, Los Angeles; John Uruwink, Los Angeles; Elizabeth Keys, San Francisco; G. Carl H. McPheeters, Fresno.

THE modern physician has a regrettable tendency toward the use of complicated and involved methods for the accomplishment of plain and simple tasks. The obstetrician is no exception.

The older generation of obstetricians would tie the umbilical cord with a piece of sterile tape, and the result was satisfactory. The newer generation must needs have some sort of a special clamp or technique for performance of the same task. All manner of bizarre maneuvers are advocated and used to deliver the child, when a simple procedure assisting the mechanism of labor would effect delivery. It is a glaring fact that, in spite of all our efforts, the relative mortality rate for parturient women, as the result of sepsis, has not materially diminished in the last twenty-five years.

Something seems to be wrong with our work. Obstetric patients require care from the time of conception to the end of involution. Why do they not obtain it? Delivering the baby is by no means the whole story. The ultimate aim is to have a well mother and a well baby.

PRENATAL

A careful history and a complete examination, instructions as to diet, care of breasts, exercise, clothing, and coitus, are essential in every case. Examinations of urine and of blood pressure at frequent intervals are of the utmost importance.

Previous to the onset of labor, the pelvis and its contents should be studied carefully and the findings recorded. The shape and size of the pelvis should be known, and a pre-labor study made of the position, presentation, and size of the fetus, especially the head.

George Ernest Herman goes so far as to state in his book, "Difficult Labor," "Almost all difficult labors are the result of faulty diagnosis, not only of the position of the fetus, but also of disproportion between the size of the fetus and the size of the pelvis."

LABOR

If labor is to be attended efficiently, it is necessary to know the anatomy of the birth canal and to understand the share each structure has in the mechanism of labor. With this knowledge, the forces nature intended will be applied, instead of the present-day spectacular makeshifts. No matter how careful our aseptic precautions, we endanger the patient's life every time we invade the birth canal. Statistics show that 40 per cent of all fatal septic cases have had some sort of operative interference. How much better it would be if we could more often terminate labor without the performance of

version or the application of fearfully and wonderfully designed forceps, for mother and baby would then both be in less danger. The dangers of a breech presentation may often be avoided by external version prior to the onset of labor. Induction of labor, because of a borderline pelvis, may render a Caesarian section unnecessary.

FIRST STAGE

The uterine contractions are in the upper uterine segment. The lower uterine segment dilates as the upper contracts and retracts, pulling the lower against the presenting part, aided by the hydrostatic pressure of the bag of waters. The child cannot be expelled until the cervix is fully dilated. Clearly, then, the patient should not bear down during the first stage of labor, for the presenting part, surrounded by the lower segment, would be wedged into the pelvis, and dilatation thus retarded. The patient would tire herself out without making any progress. The supports of the uterus would be pulled down, laying the foundation for "falling of the womb," at a later date.

It is possible to know the condition of the cervix, and the progress of the presenting part, by means of rectal examinations at intervals. Until the cervix is fully dilated the patient should not bear down, and should rest between pains. She should have light, easily assimilable food at regular times, and sedatives if indicated.

SECOND STAGE

The second stage of labor is one of active work. The responsibility for this stage rests entirely with the doctor. The man who goes to bed and has the nurse call him when the head is being born is in a class with the midwife; for, if he has the knowledge, he is not at hand to apply it. Worse than the lazy man is the one who unnecessarily invades the birth canal, for he increases the danger of infection, and the patient would be much better off without him.

The bag of waters protects the child and helps dilate the cervix. When the cervix is fully dilated, if the membranes are not already ruptured, this should now be done, or progress is impeded.

In this stage the patient should assist every pain with voluntary efforts, and should receive instructions from the doctor so that she may know how best to do so. If she does not assist, contractions often become weak or die away entirely. If she is reassured and urged to further efforts, to simulate straining at stool, to work throughout the entire course of every pain, and to rest between pains, labor will proceed much better. When pains are tumultuous and labor too precipitate, the patient should refrain from bearing down, or be given a sufficient amount of anesthetic to retard the pains.

In order for delivery to take place, the fetal presenting part must flex, descend into the pelvic cavity, and flex further at the pelvic floor, when rotation and delivery follow.

If flexion does not take place, labor stops. This is, in most cases, due to the inability of the uterine and abdominal muscles to exert enough pressure. Therefore, some method for assisting these muscles to produce flexion of the presenting part seems the logical procedure. The tight abdominal binder, as

used by Beck of Brooklyn, does the work very well. In its simplest form, this binder is a piece of strong cloth, pinned tightly around the abdomen with safety pins. It may be made as a front and a back piece, with buckles and straps on each side. With this support, the patient can exert more pressure, so that flexion takes place and labor proceeds, saving the mother and baby hours of stress and danger. In cases of pendulous abdomen, the effect of the binder is often magical.

"Puller-straps," are helpful. They should be short enough so the patient need not bend the elbows, but can pull straight from the shoulders.

During the second stage, the fetal heart should be carefully checked after every pain by means of the head stethoscope. If slower than 100 per minute, faster than 160 per minute, irregular, or failing to return quickly to normal after each pain, it is a sign of too much compression of the child. The appearance of meconium with a vertex presentation also indicates danger. Upon the development of any of these signs, the binder should be removed and the patient asked to cease all voluntary efforts until the heart is normal, after which more caution is used as to the pressure applied.

A lacerated or relaxed perineum does not flex the head well so that rotation will follow, and has lost the funnel-shape which is so important in directing the occiput forward. It is, therefore, very often a great factor in delayed rotation. Steps should be taken to restore such a perineum to as nearly its normal function as possible. To accomplish this, the thighs should be flexed tightly on the abdomen during each pain, when the head is on the perineum. This tightens the perineum much as the same process would tighten the seat of a man's trousers. As a result, the head flexes, rotation takes place, and many a so-called persistent occiput posterior is avoided. Why, then, attempt forceps extraction or methods of rotation which involve invasion of the uterus, before trying this simple procedure? The mother and baby are entitled to all the safety we can give them.

When the head begins to come through the vulva, the patient should be given sufficient anesthesia to cause partial subsidence of pains; the thighs should be extended to relax the perineum, and a hand placed over the head, slowing its progress and directing it forward against the pubes.

As soon as the head is delivered, search should be made for coils of the cord about the neck. These may be brought up over the head, or slipped down over the shoulder. If neither can be done, two clamps may be applied and the cord cut between them.

The head should be depressed, so the anterior shoulder will slip out under the pubic bone. The head should then be elevated, and the posterior shoulder will pass out over the pelvic floor. Since the bulk is decreased by the anterior shoulder being out of the way, there is less chance of causing a laceration. The rest of the body easily follows.

Mention of the fact that the bowels and bladder should be empty, and that strict aseptic and antiseptic precautions should be observed, seems unnecessary; but the sad fact remains that many obstetricians disregard these important things. The feasibility of forceps extraction, version, or Caesa-

rian section, is always considered; but the necessary practical procedures which are at our command are dismissed without a thought.

THIRD STAGE

From the time the baby is born until the placenta is expelled, the assistant or nurse should keep one hand on the fundus and gently rub its surface if there is relaxation. There is no especial hurry about delivery of the placenta, so the baby may first be taken care of. It should be made to breathe properly, first milking out the trachea with the finger on the front of the neck, and then stimulating respiration by running the hand quickly up and down the spine. The baby should never be struck over the kidneys. It is well at this time for the doctor to cleanse the face and place the prophylactic in the eyes. The cord may be tied when it stops pulsating, and a sterile alcohol dressing and binder applied.

If, at the end of twenty minutes, signs of separation of the placenta are evident, the thumb may be placed in front of the uterus, the four fingers behind, and the two brought gently together to assist expulsion. Manual removal of the placenta should be regarded as a major operation. The cord should never be used for traction. The placenta should always be examined to see that it is complete.

At the end of the third stage, the cervix is usually low in the pelvis. The large veins brought with it are kinked and stretched, so the tendency is toward congestion and hemorrhage of the uterus. By means of one or both hands, applied above the pubes, the uterus can be brought up into the abdomen, lessening the danger of hemorrhage and increasing the chances of ultimate proper position of the uterus. At this time the patient may be given ergot or pituitrin, and the uterus should be watched for at least another hour.

Examination of the cervix and perineum may be made at once or after an interval of seven days, but, in every case, all lacerations should be repaired.

PUERPERIUM

The duties of the obstetrician are not ended when the uterus is emptied. The patient should be seen daily during the lying-in period. Careful attention must be paid to the diet, the breasts, the temperature, the bowels, the lochia, the uterus, and many other details. Properly directed exercise will do a great deal toward hastening good involution. The baby must have the same sort of care as to abnormalities, umbilicus, prepuce, tongue, bowels, weight, eyes, and numerous other things.

Every conscientious obstetrician will insist on making a thorough examination of mother and baby about a month after the delivery so that he may administer whatever treatment is necessary. If this is done, there is no excuse for leaving uncorrected a malposition of the uterus, or neglecting a badly bulging umbilicus.

SUMMARY

Prenatal care, including complete examination for every patient.

Proper preparation for labor.

Rest during first stage; hard work, and protect maternal structures during second; ample time during third.

When cervix fully dilated: rupture membranes; tight abdominal binder; properly adjusted pullers; flexion of thighs. Close check on condition of baby.

Replacement of uterus after expulsion of placenta.

Post-partum care, to include examination one month after delivery.

Westlake Professional Building.

DISCUSSION

E. J. Krahulik, M. D. (6422 Hollywood Boulevard, Los Angeles)—Dr. Fist's plea for physiological obstetrics, at a time when operative delivery is the fashion, should be commended. At present little attention is directed toward the first stage. Sad experience has taught us that attempts at delivery before the cervix is fully dilated are mutilating and often disastrous. The various interferences have, therefore, been postponed to the second stage.

One needs to remain with but a few women during their labor, and he will realize that the second stage is relatively comfortable. When the cervix is fully dilated, one can safely predict a termination within two hours. Three or four drops of chloroform properly administered with each pain will make the patient comfortable. I am familiar with a labor routine similar to the one described which is used by Polak at the Long Island College Hospital, Brooklyn. Forceps are rarely necessary, second stages usually terminate within two hours, and there is little anxiety about posterior positions. The head does not rotate until it reaches the levators, consequently there is little cause for alarm before the cervix is dilated. If at this time there is someone present to direct the patient's efforts, such misfortunes as deep transverse arrest and unrotated posteriors will be historical.

Does the obstetrician who performs a version or applies forceps unnecessarily blame himself for his invalids, as well as his deaths? Does the hour of labor that the patient has avoided sufficiently compensate for the possibility of years of discomfort from a chronic parametrial inflammation, and later for an operation when some hopeful gynecologist will sacrifice a cervix and perhaps a normal tube and ovary trying to cure this pain? When these conditions do occur and one has not done any operative procedures, "the peace of mind surpasseth all understanding."

Our conservative efforts should be directed to the first stage. It is most unmercifully neglected. Usually the patient is allowed to suffer alone in a room. Occasionally a nurse or the doctor stops long enough to tell the patient that "she must help herself," and instructs her to "bear down." How grateful a patient is when someone remains with her to comfort and encourage her. A noisy patient becomes calm and will rest between pains. Knitting or reading magazines are hardly outbursts of sympathy.

Analgesia during the first stage is still a glaring field for investigators. An analgesic must be fool-proof and must not carry any possibilities of complications. Where it is not contra-indicated because of the patient's general condition, gas will alleviate the suffering. It is practically harmless, but rather expensive. Morphine scopolamine may be used safely by trained obstetricians when there is an ample pelvis, but increases the incidence of forceps. The man who promiscuously promises a painless labor is dangerous.

Contracted pelvis with a diagonal conjugate of 10 cm. or above should be given a test of labor; that is, a second stage of at least four hours managed as outlined by Dr. Fist. Should the head fail to engage, a two-flap low-incision Caesarian section could then be performed. In a series of cases where this plan was followed, borderline and flat pelvis occurred about fifty-five times per thousand, but the incidence of Caesarians was only 0.8 per cent. Inducing borderline pelvis would require many unnecessary inductions; some cases might not be induced in time, others would give very small babies.

John Vruwink, M. D. (Pacific Mutual Building, Los Angeles)—Two years in a mining camp in Arizona afforded me an opportunity to watch the immediate results in about five hundred labors. The patients were, for the most part, Mexicans. There was practically no prenatal care, the management of labor consisted, in general, in conducting the second stage. The outstanding fact in my mind was the high proportion of spontaneous labors, the

total absence of eclampsia, the absolute rarity of sepsis, and post-partum hemorrhage.

This was an interesting comparison to a series of cases followed at the Chicago Lying-in Hospital, where the conduct of labor was one of activity in the second stage, namely, prophylactic forceps.

The habitat and life of the woman in the open and her increased capacity for work and pain were no small factors, in the matter of comparison, to the artificialities surrounding the life of the patient in a large city.

The Los Angeles Maternity Service is now conducting more than 100 labors per month. Since its inception the slogan has been "Intelligent Watchful Expectancy." A maternal mortality of one death to 734 deliveries and an infant mortality of less than 5 per cent, including all stillbirths and deaths within ten days, is more than presumptive evidence that we should continue this course.

The end-result, as Dr. Fist emphatically states, is a well mother and a live and normal baby. Such a result is obtainable not merely by conservative management, but conservative management intelligently applied. We will always face the possibilities of hemorrhage, there is disproportion between passenger and passage, not always discernible before labor, and there is sepsis even in spontaneous labor, with no examination or interference. Occasionally, an eclampsia occurs, in spite of judicious management, because of our imperfect knowledge of its etiology.

I do not believe that the midwifery practiced in Arizona equals in results, particularly for the mothers, the end-results obtained in later observations. Neither do I believe that forceps—or version and extraction—may be indiscriminately applied, and that results can approximate the end-result of normal spontaneous labor, intelligently directed according to the principles of this paper. No one, however, who sees much consultation practice can hide the fact that conservative obstetrics ceases to be intelligent conservatism when factors are present or arise during the management of labor causing dystocia. A plea for conservative obstetrics is equally a plea for intelligent interference.

Dr. Fist is to be decidedly encouraged in his plea for rationalism, more attention to prenatal care; more thoughtfulness for the first stage of labor; more intelligent management of the second and third stages of labor; and watchfulness during the puerperium, both for mother and baby.

Elizabeth Keys, M. D. (391 Sutter Street, San Francisco)—Discussion of obstetrical subjects has so tended to the spectacular that the physiological phases of pregnancy and delivery must risk lack of savor. It seems a pity that with so many fundamental problems still untouched, time, labor, and interest should be spent on more or less dramatic detail.

Prenatal care means that at all stages of pregnancy the doctor has a clear picture in his mind of the mother, her baby and their reaction to each other. While safe-guarding the patient, this also greatly relieves the physician of the sickening terror of the unexpected, an experience that may visit the most careful in a fulminating toxemia or sudden violent hemorrhage.

Prenatal care means also attention to all the small details of the patient's life, common sense hygiene, explanation of discomforts, reassurance oft repeated, neighborly experience and advice modified or utilized, morale sustained—and *only on indication* does it mean radical departure from the patient's ordinary mode of life.

It is unnecessary to discuss further Dr. Fist's presentation of the mechanics of labor, but we cannot resist emphasizing his picture of the risks of the vaginal finger. To our mind the greatest (in fact, the only great) advance in childbed prophylaxis in many years is the development of rectal examination, yet some of our interns come to us completely unacquainted with this procedure, and many men who are doing only casual obstetrics will not take the pains to develop their judgment in this important item of diagnostic technique.

That bete noir of the obstetrician, the posterior position, is ever-occurring. With added years of observation, we find many suggestive symptoms in the labor when the case has not been clear on abdominal examination; both first and second stages are slow with varying pains, rectal examination shows persistence of the anterior cervical lip, which does not retract readily over the imperfectly flexed

head, and descent is sluggish. Encourage those patients, perhaps give them a rest with morphine and chloral and bromide, and allow them time for nature's effort at rotation, which is usually less damaging than radical interference.

We are doubtful that any method of support at the outlet is really valuable. After delivering several hundreds of Japanese primiparae with but rarely a stitch, and hundreds of whites rarely without one, we feel convinced that it is a matter of tissue rather than technique; and this opinion takes into account the relative size of mother and baby.

During the third stage we insist on *gentle* manipulation of the uterus, no abuse in the name of Crede. Also when the placenta is lying in the posterior vagina (as evidenced by the fundus, discharge of the retroplacental blood and slackening cord) it can be lifted out by tension on the cord much more safely and humanely than by driving it out from above.

The delivery of our women is largely in the hands of the general practitioner and will remain so. Therefore, an important factor in the "Rational Conduct of Labor" is the technical training of our interns in all the pathology of the maternity service. Since they are sent out at the end of their intern year, authorized to practice a branch of medicine that has such a proportion of true emergencies there should be no reservations on the maternity service. A breech in the hospital, under the eye of a chief, is much better experience than a breech later without help. All the complications of delivery and the puerperium should, with the assistance of the chief or assistant, contribute directly to the technical skill of the young graduate, leaving the specialist to annex as private assistant the young man who plans to limit his work and perfect himself in it.

G. Carl H. McPheeters, M. D. (Mattei Building, Fresno, California)—After reading and re-reading Dr. Fist's very interesting paper, I wish to say that I am in complete accord with the methods which he uses. For years I have employed the thorough physical examination for women before pregnancy, early in pregnancy, and examination of the expectant mother before labor begins. I never employ vaginal examination during the last month of gestation, but rectal touch only.

Care of the breasts of the primipara will well repay the physician, as well as his patient. We advise gentle finger massage of the entire breast to increase the circulation of the glands during the entire pregnancy. We advise traction of the nipples and the use of 10 per cent glycerite of tannin once daily, to toughen the nipples during the last month before the birth.

I especially approve of Dr. Fist's practice of keeping the patient quiet and having her avoid voluntary effort during the first stage. Many patients exhaust themselves by useless straining and bearing down during the first stage, and inertia develops during the second stage at the very time when voluntary efforts are necessary for normal birth. We also discourage the patient from walking about the room during her first stage. For the very nervous patient we employ codeine grains $\frac{1}{2}$ hypo. during the first stage, using morphine grain $\frac{1}{8}$ or $\frac{1}{6}$ for the very frightened and hysterical patient.

It is my practice to continue post-partum care for six weeks, and to examine every mother and baby at the end of six weeks. The ancient knee-chest posture and the hard ring pessary still have their field of practical use in preventing and correcting post-partum retroversions.

We have to thank Dr. Fist for a very interesting and practical monograph.

Slandering a Medical Man—To have and to maintain a good reputation is a matter of very great and serious concern to a physician, and he ought to give thoughtful and careful attention to the best means of protecting it against those who wantonly or wickedly seek to detract from it. Doctors are a frequent subject of gossip, but when it tends to damage them they should remember that it is not always defamatory, and that, indeed, they often derive substantial benefit from it. Ordinary foolish gossip should be altogether ignored, even though it be irritating and unfair, since by dealing with it seriously as a slander, wide publicity may be given to it and people may be led to infer that it is founded on something substantial when, as a matter of fact, it is mere irresponsible chatter.—*Medical Standard.*

AN UNUSUAL CASE OF PYLORIC STENOSIS

CASE REPORT

By ALANSON WEEKS, M. D., *San Francisco*, and
LEROY BROOKS, M. D., *San Francisco*

THIS case is reported because it is unusual, in that the child developed the disease, was operated upon and had recovered before the time it normally should have been born, and to emphasize again the value of surgery when it is indicated. We have not lost one of these babies in the last twenty upon whom we have done the Fredet operation. We repeat again the importance of early recognition and proper care, in order that these patients do not come to operation starved and dehydrated, as has been the custom too often.

K. W. entered Children's Hospital June 22, 1924, for Doctor Langley Porter. The following history, elicited from the mother, was typical of congenital pyloric stenosis, as far as the disease is concerned.

The boy was born May 18, 1924, two months premature, and weighed three and three-quarter pounds. He retained foods well at first and had normal bowel movements. He began to vomit his food on June 17, 1924. After that he regurgitated part or all of every feeding, regardless of what he was given. Vomiting for the last few days before entrance into the hospital was at times projectile in character. The stools became less frequent and finally he had none at all for several days. Enemas were returned with very small amounts of fecal matter. He was very much dehydrated and weighed only four pounds.

Inspection revealed the typical small lower and large upper abdomen of this disease. Definite peristaltic waves could be seen to pass from the fundus to the pyloric end of the stomach.

Doctor Porter elected to try thick feedings to possibly avoid operation, and at the same time gave fluids, both subcutaneously and intraperitoneally. The patient improved under this treatment for a few days, when he began again to vomit. The temperature was 101 to 102 daily, but the baby was some better because of the fluids. Doctor Porter advised operation, which was done on July 1, 1924.

The usual Fredet operation, as previously discussed by us in CALIFORNIA AND WESTERN MEDICINE, was performed.

The patient was given four ounces of 3 per cent glucose solution beneath the skin in the axilla and the groin before leaving the operating-room. He received a rectal drip of 3 per cent glucose and 3 per cent soda solution, which is our routine practice in all these cases, and Doctor Porter started the baby's feedings three hours after the operation, giving him first 3 per cent glucose solution and gradually working him back to his standard formula.

The baby had a hazardous convalescence, the temperature rising to 106 F. three days after the operation. This daily rise of temperature gradually subsided and the patient was discharged July 20, weighing five pounds, and was in excellent condition.

He was readmitted July 31, 1924, because the mother stated the baby had a cold. Since leaving the

hospital he had five or six normal stools per day. Upon readmittance his respirations were rapid, breath-sounds diminished in the right axilla, and there was diminished resonance over the right lobe posteriorly. X-ray showed pneumonia in the right middle lobe. He ran an irregular temperature from normal to 102 for ten or twelve days.

On August 8 he became very cyanotic. His pulse was about 60 and respiration shallow. He rallied from this attack after a few hours, and coughed up considerable rusty sputum which had a foul odor. After this attack he coughed considerably, and had other attacks of cyanosis, less severe, usually accompanied with cough and expectoration.

On September 5, fluoroscopic examination showed a pneumothorax of the right chest extending from the second rib to the diaphragm and filling the posterior two-thirds of the anterior posterior diameter of the chest. His attacks of cyanosis gradually decreased in number and he began to gain weight.

During his second stay in the hospital his abdomen would frequently become very greatly distended and a mass was discovered in the right inguinal region, which proved to be an easily reducible right inguinal hernia.

The patient was discharged the second time from the hospital on September 18, weighing eight pounds and two ounces and was in good condition. Doctor Porter tells us that he was in his office about October 11, and was in perfect condition.

We feel that this case is rather remarkable, in that it shows the surprising resistance of these little patients if they are furnished with plenty of fluids and glucose. Just why his temperature went to 106 three days after the operation is impossible to say. Doctor Porter feels confident that the pneumothorax was due to a suppurating mediastinal or bronchial lymph gland breaking through into the trachea or large bronchus. This would explain the symptoms of cyanosis and expectoration of foul material, as well as the pneumothorax.

It is very interesting that many of these little patients who were formerly operated upon are now cured by thick feeding. We believe that it is justifiable for the pediatrician to try thick feedings and supply the infant with plenty of fluids and 3 per cent glucose solution before an operation is advised. This would, of course, vary with the circumstances of each individual case.

There is no question that the thick-feeding treatment, if started early enough, prevents one-third of these babies from being operated upon. Our explanation of the action is that, because of the consistency of the thicker food, the hypertrophied muscles of the stomach are able to contract around it and force some through the pylorus like a bougie gradually dilating the canal, where more fluid foods are promptly shot back toward the cardiac end of the stomach.

We would like at this time to report in our series the second mother who has had two babies with congenital pyloric stenosis, both operated upon and cured. We some time ago reported another mother who had had four babies, three of whom had this disease, were operated upon and all three recovered.

EDITORIALS

PRACTICING MEDICINE BY MAIL

A situation which can be honestly defined only by calling it the practice of medicine by mail is becoming serious. Strong competition between magazines with large circulations, particularly those widely read by women and children, and *who use their mail order medical departments to get subscribers*, is changing what was formerly helpful health advice into the practice of medicine.

Some of these magazines not only advertise their medical departments conducted by mail, but through obvious sources secure the names of new mothers whom they bombard with circulars and other appeals to join their medical organization which they operate under one name or another. They do not stop at this, but go back to reports of marriage licenses and begin on the new bride and provide "all the health advice she needs." After the baby is born, she not only gets stereotyped medical service for herself, but for the baby as well.

Carefully and wisely prepared informative literature about health and disease given wide publicity is helpful and should be encouraged. Even wisely directed correspondence is deserving of commendation. But the highly commercialized and dangerous practice of medicine by mail as now being conducted by several extensively read publications ought to be condemned.

Several physicians who limit their work to the care of children have reported to us pathetic instances of the result of this sort of propaganda. Some mothers worry themselves sick trying to decide what to do as between the divergent advice and instructions of the family physician and that furnished from one to three or more magazines engaged in the practice of medicine by mail. One mother recently showed her physician three entirely different sets of instructions as to what to do for her three months' old baby with indigestion and vomiting. These instructions were from the "baby experts" of three different magazines, and were sent from an eastern city.

The pediatrician's greatest problem formerly was to neutralize the superstitions of "grandmothers." He thought this a hard problem, but it was nothing to that of the modern pediatrician in overcoming the fifty-seven varieties of unwise advice the present-day mother receives. The chief sources are from paternal government, national, state and local, from women's and children's magazines and other commercial enterprises, and by more personal contact with many varieties of technicians who often go beyond their legitimate field. These are some of the reasons for "forgotten" or delayed birth reports.

Many physicians, either of their own volition or by specific request of a mother, are not enthusiastic in providing "prospect lists" for the dozens of commercial influences that hover over the newspapers and government offices to secure promptly addresses of newly married couples and of births.

THE EFFECT OF MATERNAL SYPHILIS ON THE DEATH OF THE CHILD

Working under arrangements provided by the British Medical Research Council, Doctor Cruickshank has carried out a series of carefully conducted observations in Glasgow to determine the influence of maternal syphilis on child mortality.

From 9 to 10 per cent of unselected mothers from a general hospital service gave positive Wassermann reactions. These figures correspond to similar ones from other centers. They are, of course, somewhat higher than they would be among the population in general. In 94 per cent of the Cruickshank series, the Wassermann reaction in the child at birth corresponded with that of the mother.

One striking result of the study was that the percentage of abortions due to death of the fetus was apparently no greater among syphilitic mothers than others. Stillbirths, however, were 18 plus per cent among syphilitic mothers as against 15 plus per cent among others. The incidence of premature births was 32 plus per cent among syphilitic mothers as against 19 plus per cent of others. Among those children who could be followed up, it was found that the infant mortality was considerably higher among the infants of syphilitic mothers.

This group of infants and young children help to swell the lists of those diagnosed as "malnutrition" and "anemia" by inadequate methods.

The most interesting feature of Cruickshank's work is that, by the most painstaking studies, he confirms the conclusions arrived at by others.

DOCTOR, HEAL THYSELF

Doctor, is your health good? How do you know it is? Do you practice what you preach by having your own periodic medical examinations?

The chances are that you don't. The chances are nine out of ten that a careful examination by one of your colleagues would uncover one or several conditions that you ought to have remedied and which if left alone may cause serious harm. You know this to be a fact. Then why do you procrastinate? Isn't the answer precisely that which is applicable to other citizens? It is, and this explains why it is not more health education most of the world needs, but more gumption. *The knowing and the doing about health or any other question are two different things. The doing is the one generally neglected.*

A person of moderate intelligence who makes a practice of *doing* has a far greater chance of living longer, happier, and more usefully than has the best-informed physician who *knows*, but *does not*. **Think it over, doctor, and either be a doer about your own health or don't complain about your patients who know because you told them so, but who fail to do for precisely the same reasons that are applicable to yourself.**

The Pennsylvania Medical Association is trying to persuade its members to have medical service of the kind its members are advising their patients to have. It is providing the service.

They have arranged to offer examination service to members as one of the features of their annual meetings, notes the editor of the Atlantic Medical Journal. "Twenty of the leading physicians of the

State and County Medical Societies, Attention

THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION PASSED THE FOLLOWING VERY IMPORTANT RESOLUTION AT THE 1924 SESSION:

"WHEREAS, PERIODIC MEDICAL EXAMINATIONS OF ALL THE PEOPLE FROM BIRTH TO DEATH ARE OF GREAT IMPORTANCE IN THE PROMOTION OF HEALTH; THEREFORE, BE IT

"RESOLVED, THAT STATE AND COUNTY MEDICAL SOCIETIES BE URGED TO ENDORSE AS A PART OF THE HEALTH PROGRAM OF ORGANIZED MEDICINE THE MAKING OF THESE EXAMINATIONS:

"THAT THE MEMBERS OF THE RESPECTIVE SOCIETIES BE REQUESTED TO MAKE SUCH EXAMINATIONS IN THE HOMES OR IN THEIR OFFICES, FREE TO ANY PERSONS, WHO, BY REASON OF ECONOMIC CONDITIONS, REQUIRE SUCH FAVORABLE CONSIDERATION, AND

"THAT IN THE PERFORMANCE OF THE WORK THE SAME SYMPATHETIC, CONFIDENTIAL RELATION BE MAINTAINED BETWEEN PHYSICIAN AND PATIENT OR FAMILY AS HAS EVER CHARACTERIZED THE EFFORTS OF TRUE PHYSICIANS."

state have consented to make these examinations. Each will be made in the office of one of the doctors in Reading. The result of the examination will be entirely confidential. The doctor volunteering must think he is well. He will send his name in to the secretary as a volunteer. He will receive a history blank, which he will fill in, putting thereto an examination of his urine, bearing on protein, specific gravity, sugar, roughly total 24-hour quantity. He will receive an appointment from the doctor to whom he is assigned, with a given date and hour, preferably on the first day of the meeting, the street and office number being set forth.

"This examination will be made at a given date and hour, and thereafter the examiner and the one examined will have a brief consultation as to how the examination could be bettered, as to how the history blank could be improved, as to how best this whole subject can be put to the profession in such wise that it will be generally adopted. The one examined will have excluded, insofar as this can be done, a hidden menace to his health. He will have demonstrated a method of examination which he is free to criticize. He will get home better prepared to carry out the general policy."

The only difficulty about the service is that of persuading the doctors to avail themselves of the opportunity.

Is it more "education" or more "gumption" that is needed?

MORE MAIL-ORDER DOCTORS

A non-medical concern, with headquarters in Chicago, is circularizing citizens and inviting paid membership in their longer living, stay well, periodic health examination, medicine by mail, plan. Their advertising matter forms a basis of inquiries from readers of Better Health Service and from both doctors and their patients. A San Francisco business man recently received a batch of this propaganda and turned it over to his physician (Harry Alderson), who in turn forwarded it to CALIFORNIA AND WESTERN MEDICINE for comment. The organization in question claims to be the original one in the personal practice—for a fee—of preventive medicine and life extension by periodic health examinations.

There is a "medical director," and emphasis is

placed upon the fact that he is a member of the Illinois Medical Association and the American Medical Association. He is presumably, therefore, an educated physician licensed to practice in Illinois. The advertising literature is not overly specific as to just what are the duties and responsibilities of the "medical director" in supervision of the laboratory work and in making the "copyrighted explanatory key and helpful suggestion" so "confidentially" supplied to the patients.

The propaganda is specific when it says: "*Our medical director gives on each report personal remarks upon your physical condition, and while we do not treat nor diagnose, we are always willing and ready to help our subscribers by writing a personal letter, advising them of the significance of the findings.*"

Again, in discussing the great value of the California patients' records in the central office in Chicago, the propaganda says that "*reference to them so often enables our medical director, in his comparisons, to note approaching trouble in time for it to be corrected by the simple means suggested in our reports.*"

This health-by-mail service, consisting essentially in a quarterly urine examination of old specimens sent by mail to Chicago, claims that only 5 per cent of 5000 patients had normal urine and that 2223 "subscribers" (patients) were "made normal" (cured) "through attention to our helpful suggestions." The patients of this medicine-by-mail organization are said to reside in all parts of the United States and Canada. The claim is also made that physicians endorse their SERVICE "when they understand there is no treatment connected with the bureau." Immediately following this sentence is a statement of a physician to the effect that "health insurance is coming and . . . the medical profession might just as well make up their minds to swallow it."

After all, "there is more than one way to skin a cat."

CHECKING UP ON DIAGNOSES

It is good for all of us to occasionally have a check-up on the reliability and accuracy of our diagnoses. This is best done by comparing clinical diag-

noses with autopsy diagnoses in a large series of cases.

The best, most complete and most significant study of this kind yet made is that recently reported (Journal of the Philippine Islands' Medical Association) by A. G. and A. B. M. Sison of Manila. Conditions were particularly favorable for the study. The medical college, hospital research laboratories, and city morgue are all upon the same campus. They are all operated under one administrative authority. The records of the college and hospital are unusually complete, well co-ordinated, and the faculty of the school is ex-officio the staff of the hospital, both administered by a dean and director. A far-reaching weekly clinico-pathological conference was instituted many years ago and has continued to function. Practically all patients who die in the large hospital go directly and promptly to the department of pathology and the complete sealed clinical record goes with the body. Autopsy is carefully done and tissues and cultures promptly worked up. The findings and such specimens as are significant are preserved until the next weekly meeting of the clinico-pathological conference.

At the conference a brief clinical report is made, followed by the report, with demonstration of specimens by the pathologist. The results are always interesting, often stimulating, and sometimes depressing. All physicians are invited to attend these conferences and many accept. All medical students, interns and house officers are required to attend, and many members of the faculty are always present. It was from material handled in this way for years that the Sisons were able to compile their report.

Of the more than 10,000 complete clinical and post-mortem records available, the authors selected only the medical cases. As has long been the custom in that splendid service, each *diagnosis* is entered. The average patient having from two to ten clinical diagnoses just as they have several anatomical diagnoses. In Sison's medical cases, there were 2282 clinical diagnoses and 3046 anatomical diagnoses in the same bodies.

THE FINDINGS

In the series of 3260 diagnoses there were 526 errors of commission; in the clinical diagnoses, 848 errors of omission; 1886 correct diagnoses.

Divided somewhat by systems, the percentages of error were as follows: Errors of commission, 16 per cent; errors of omission, 25 per cent; correct diagnosis, 58 per cent.

Further appreciation of the value of this work is made by including comparable figures from Cabot's report of the Massachusetts General Hospital cases some fourteen years ago along the same lines:

	Massachusetts General Hospital Per cent	Philippine General Hospital Per cent
Circulatory diseases	34	35
Respiratory diseases	45	38
Urinary system	53.3	54
Digestive system	43.6	36
Nervous system	31	58
Miscellaneous	6.5	33

The striking differences in the findings in the two series under headings of "miscellaneous" and "nervous system" are explained in the article. The rea-

sons are not of a kind that reflect unfavorably upon anyone's work.

THE WORK OF THE ROCKEFELLER FOUNDATION

The annual report of the Rockefeller Foundation sketches such an amazing volume and variety of activities that a reviewer can note only a few of them. Few people realize the far-reaching and rapidly growing influence of this immensely wealthy foundation, nor the ramifications it is making into many phases of the social and health structure of civilization. Few will question the motives of the trustees of this vast private fortune, and all will applaud most of the things they are doing.

Some have, more do, and many will in future hesitate to endorse *all* of their *methods* and may even question the judgment of the trustees in certain particulars. This, of course, is unavoidable in any enterprise, and it is particularly true of those who serve the human race in the broad fields of health.

Physicians will be interested in the apparent effort of the Foundation to split the profession of medicine into two professions: "The idea that an ordinary medical education fits a doctor to be a health officer is a serious error which does much harm. He needs additional graduate training for what is recognized as a special profession," says President Vincent in his annual report.

The report outlines as among the "most important and fundamental duties" of a county "Health Officer"—"demonstrations in sanitation, the provision of a pure supply of water and milk, medical inspection of school children, organization of *maternity and infant welfare centers*, and the creation of centers for suitable care of such diseases as tuberculosis, trachoma, the venereal trio, and for the correction of remediable defects in children . . . and he will have to study his field so as to be prepared to give advice to the *INDIVIDUAL*." "There were, at the end of the year 1923," says President Vincent, "230 counties in twenty-eight states of the United States with full-time health organizations. The number grows each year, and a few counties which have given the system a *trial fail to continue it* and to expand the unit to meet the more obvious needs of the people."

When each of the some three thousand counties of the United States has a well-paid, full-time "Health Officer" who is even an educated licensed Doctor of Medicine we will have made the most important step in public health now confronting our people. When each of these full-time public health physicians has added to his staff sufficient nurses and administration force, another long step will have been taken which none now living is likely to live long enough to see accomplished.

During the development of these plans, we hope to see the schools of public health turn out more specialists who will have the ability and the tact to become leaders in our many great centers.

When the people have been educated to appreciate and *finance* even these expensive movements, it will be time enough to say that "the day is passed when any physician qualified for practice can act as health officer."

With full appreciation of the vast, wonderful and

praiseworthy work the Rockefeller Foundation is doing so well in so many ways and admitting the fine motives that we are ready to believe activate the trustees of the Foundation, many physicians and other persons nevertheless feel that they are delaying the consummation of some things much to be desired by methods that are at least immature.

WHAT'S THE MATTER WITH THE COUNTY SOCIETY?

Now and again—with increasing frequency of late—there comes notification of the organization of an independent medical society, a physicians' "club," or of the creation of some sort of association of physicians already members of a county medical society. The announcement of one of these, recently organized, stated: "The idea primarily guiding the establishment of such an organization is one which aims at developing greater social intercommunication and better human relationship among members of the profession." What's the matter with the county medical society in that bailiwick?

Another independent organization announced its birth into this overorganized world with a statement to the effect that it was intended to bring about a better understanding among members of the profession and its community, with respect to their social and professional privileges and obligations, and to create firmer friendships and more constant and effective general co-operation between its members; but more particularly to give better opportunity for them to help each other to become better qualified as practicing physicians. What's the matter with the county society in that bailiwick?

What is it that these purely local medical groups can do that the county society cannot do? Just what is the matter with the county society within whose jurisdiction independent organization is being effected by its own members? It may be that a careful investigation into the situation by its officers will discover something wrong and that a little careful study will result in correction, to the end that the need for new non-affiliated organizations will quickly disappear. Incidentally, the district council might help some. —American Medical Association Bulletin.

"IN TWENTY-EIGHT CASES THE PATIENTS WERE—"

I have just completed the editorial examination of three articles submitted for publication in CALIFORNIA AND WESTERN MEDICINE. Improper and even stupid use of "case" or "cases" was corrected in over fifty places in the some 12,000 words contained in the three articles.

Instances like the above heading, where the author goes out of his way and adds useless words to his article apparently solely in order that he may use his beloved word "case" are extremely common in many, many manuscripts.

The "treatment of cases"; the "death of cases"; the "improvement of cases"; "the early stage of cases"; and scores of similar faulty uses of this word by writers who know better contribute a tedious and trying problem to every medical editor.

"Case" and "cases" are perfectly good words when properly used; but they neither die, get well,

nor do many of the other things they are charged with. "*Case*" is not synonymous with "*patient*."

I do not pretend to be a stickler for excellent English, and believe in granting to everyone the right to use words, as he does methods, as his servants. *But there are limitations beyond which no one should go.*

MEDICAL HISTORY

The May number of CALIFORNIA AND WESTERN MEDICINE will be devoted largely to articles about the history of Medicine—particularly California medicine.

Doctor Hans Barkan, secretary of the Pacific Coast Society for the Study of the History of Medicine and the Natural Sciences, has assumed co-editorial responsibility for the number. Several articles are already in hand, and arrangements have been completed for others. Doctor Barkan, 516 Sutter street, San Francisco, welcomes suggestions, notes or short, carefully prepared articles upon any phase of California medical history, provided they are in his hands before March 1.

We are particularly anxious to have a copy of "A History of the Medical Profession of Southern California," written some years ago by George Kress. Any reader who may have a copy will assist us by loaning it to our office.

A FREQUENT FAULT OF MEDICAL WRITERS

A recent article in a medical journal opens with this statement: "Diet in pregnancy has been given too little attention by the medical profession, and even obstetricians do not, as a rule, scientifically determine the composition of the patient's diet, as to caloric value, and relative carbohydrate, fat, and protein content."

Further on in the article the author says: "As one endeavors to lay out a diet for the pregnant woman, it becomes apparent at once that there can be no routine diet for pregnancy. Intelligent management demands that each patient receive special attention. For some patients there need be no modification from the usual diet, while for others very rigid restrictions must be made."

It is often stated that one of the reasons for writing a medical article is to bring the author's conclusions, and incidentally the author, to the attention of his colleagues. *Why then open an article, as so many do, with a criticism of doctors and thus invite the reader's resentment as many writers do?* The above quotation is chosen because the criticism is exceedingly mild compared with that in copy as most editors first see it.

One of the most difficult and inexcusable problems every medical editor has to solve is to delete from medical manuscripts, or render innocuous, criticisms of physicians, usually unwarranted.

WE WISH TO MAKE A PLEA TO OUR AUTHORS TO SAVE THE EDITOR TIRE-SOME WORK AND ENHANCE THE VALUE OF YOUR CONTRIBUTIONS BY OMITTING CRITICISM OF FELLOW PHYSICIANS FROM SCIENTIFIC ARTICLES. IF AN AUTHOR WISHES TO CRITICIZE AND WILL DO SO IN A SEPARATE LETTER OR ARTICLE WE WILL PUBLISH IT IF IT IS NOT LIBELOUS.

Medicine in the Public Press

"Mental Menopause"—This new slogan invented by a "psychologist" is being used as the latest fad in defending criminals.

It is said that an alleged murderer is suffering severely from this "Alzheimer's disease" or "mental menopause," and that his attorneys are putting it forward as the reason for acquittal and as the explanation for the philanthropic propensities that led up to the murder.

Quite a catchy slogan. If the law recognizes the disease (?) we may look forward to another new line of clinics.

To License Child-bearing—Hornell Hart, Professor of Social Economy at Bryn Mawr College, Pennsylvania, is quoted as saying that: "Chauffeurs are licensed, a plumber is not allowed to meddle with your house-drain unless he is licensed, and a doctor cannot prescribe for your children's ills unless he has spent years in study and received a license. And yet so vital a matter as the bringing of children into the world is practically without regulation or legal restraint."

The time has now come, Professor Hart insists, to apply intelligence rather than sentiment, and go one step further and *require every married couple to get a license before they bring a child into the world.*

Hart foresees the day when each marriage license bureau will have on file an up-to-date list of the mentally deficient, just as the police departments have records of criminals.

The Marriage License Bureau is about the only government agency left that does not find some excuse for conducting a "clinic." This will provide them with the excuse.

It will be a "busy clinic," and we presume a "free" one. Think of all the jobs for "doctors" who must carefully "survey" both the man and woman before marriage. Then when they decide after marriage that they want children, they must get another license from another department of the clinic before making efforts to bring one into the world.

What about the bootleggers in child-making? There are plenty of them in this field now, and their "goods" appear quite serviceable, even though they are citizens under disguised labels.

Therapeutic Thaumaturgy—Under this title, Arthur J. Cramp of the American Medical Association Council on Pharmacy and Chemistry tells a story (*American Mercury*) about medical frauds that every doctor will appreciate.

Freeing Mankind From Disease—Under this title, Doctor W. W. Keen, the most universally beloved and most widely honored of living physicians, tells (*Collier's*) what he calls the "amazing story" of modern accomplishments in the world's campaign for better health. Every physician and other health worker, as well as other intelligent citizens, should read this stimulating, encouraging, helpful message. It is told in the simple, clear, convincing style that ever characterizes the worthwhile message.

Is This a Just Criticism?—A professor in a public health school which invites physicians as students, in discussing certain phases of parasitism (*Scientific Monthly*), makes this unnecessary and uncalled for criticism of physicians: "The physician, usually knowing nothing of parasites except the symptoms which some of them produce in human beings, is, of course, prone to believe that the injury of the host is an essential property of a parasite, and to declare that even when we can see no injury one must nevertheless be present."

Another "New Cure" for Cancer and Baldness—Several newspapers published a story sent out from the Radiological Society of North America, meeting in Kan-

sas City, to the effect that the ultraviolet ray would "cure" baldness and cancer!!

The essayist is quoted as having said that the ultraviolet ray "would grow a fine outfit of hair on a head as bald as a billiard ball." And what it wouldn't do to cancer—Oh boy!

The story had such a familiar ring that most editors refused to run it or sent it to the advertising department for consideration as paid space. One paper published part of the story as the doings of the Radio Logical Society. That editor has a sense of humor.

A Prophet and His Own Country—News dispatches announce the arrival in New York of a French doctor with a new "sure cure" for pneumonia. The "doctor" is quoted as saying that "Pneumonia is really not dangerous at all." "And certainly there is no reason for its ever being fatal." "Even persons in the last stages can be cured, as if they had nothing more than a bad cold."

Some editors evidently sent this propaganda to their advertising departments, and others published it as "news"! Any doctor who had a cure of the kind described would not have to leave Paris and come to the United States for patients.

If Benjamin Franklin Came Back Today—"Benjamin Franklin died in 1790—134 years ago. Could he return to make appraisal, what wonders would confront his astonished vision, what triumphs of the Fifth Estate compel his admiration!" says Arthur D. Little (*Atlantic Monthly*). "The Fifth Estate being designated as 'composed of those having the simplicity to wonder, the ability to question, the power to generalize, the capacity to apply.'"

"In great hospitals, permeated with the scientific spirit and equipped with many new and strange devices for the alleviation of human suffering, he would hear of the incalculable benefits which medical and surgical science have conferred upon mankind. He would see the portraits and listen to the story of Pasteur and Lister and Loeb and Ehrlich. We know today with what joy and relief the world would welcome a veritable cure for cancer, but we can little realize the emotion with which one like Franklin would learn in a single afternoon of the germ theory of disease, of preventive serums, of anti-sepsis, of chemotherapy, of the marvelous complexity of the blood stream and the extraordinary influence and potency of the secretions of the ductless glands. What appraisal would he make of the service to humanity which, in little more than a generation, has mitigated the horrors of surgery by the blessings of anesthesia and anti-sepsis, which has controlled rabies, yellow fever, typhoid fever, tetanus, which is stamping out tuberculosis, curing leprosy, and providing specifics for other scourges of the race? What values would he put on insulin, thyroxin, adrenalin? The physician is no longer compelled to rely on herbs and simples and drastic mineral compounds of doubtful value and uncertain action. Compounds of extraordinary potency, isolated or synthesized by the chemist, are now available to allay pain, correct disorders, prolong life, and even to restore mentality and character."

Shall We Have Health?—Under this title, a San Francisco newspaper is conducting what it pleases to term a "New Kind of Health Column." It is. It is essentially a criticism of "orthodox medicine," calculated to undermine the confidence of the sick in the ministrations of healing, consolation and mercy, as carried out by their physicians. The author of the column wishes to bring back into "full play the only remedial agent known to true science—The Healing Force of Nature—the vis medicatrix naturae of the ancients."

We wonder what killed people and killed them at much earlier ages than now in those good old days of "vis medicatrix."

Where the Highest Skill is Needed—The medical service required in making periodic health examinations is of a high order, in that it requires not only time, but also discriminating judgment rightly to interpret the significance of various minor findings in relation to habits of living.—Anna Richardson (*Medical Times*).

California Medical Association

GRANVILLE MacGOWAN, M. D., Los Angeles...President
 EDWARD N. EWER, M. D., Oakland.....President-elect
 EMMA W. POPE, M. D., San Francisco.....
Secretary and Associate Editor for California

MEMBERSHIP DUES

The membership assessment of the California Medical Association and of your County Society is now due and payable. Delinquency is as of March 1. Non-payment after that date debars a member from participation in the state program, from holding office, and from the receipt of CALIFORNIA AND WESTERN MEDICINE until reinstatement. Many members carelessly let their membership lapse and, upon reinstatement, write for the omitted numbers of CALIFORNIA AND WESTERN MEDICINE. In very few instances has the secretary's office been able to comply with such request.

The California Medical Association dues for 1925 were fixed at \$10. The prompt payment of this sum, together with your county assessment will obviate later grief.

1925 SESSION C. M. A.

Reservations—Reservations for the 1925 session will be handled by the Yosemite National Park Company direct, and will be opened as of March 1. For the information of those who have not attended a Yosemite meeting, Yosemite Lodge will be convention headquarters.

Various kinds of accommodations are available. Rooms in the Sentinel Hotel and also detached redwood cottages with bath, both in conjunction with meals in the main dining-room, can be had on the American plan at the rate of \$8.50 per day. Redwood cabins and rooms in the Sentinel Hotel without bath, and with meals in the main dining-room are furnished at \$6 per day. Canvas cabins without bath are \$2 per day. Meals in the cafeteria average about \$2 a day. It is obvious that the cost of attendance on the convention may range between \$4 and \$8.50 per day.

When a reservation is made with the Yosemite National Park Company, the applicant is sent a questionnaire, asking for definite instruction as to the kind and cost of room desired, the duration of his stay, the date of arrival and the number in his party, and the route by which he expects to reach the valley.

This office would appreciate a full and prompt reply to this questionnaire, as from it our registration cards will be made out. Each member will be indexed by his county and name before his arrival, and the tiresome and annoying delays incident to the usual registration obviated. The registration desk will be at the extreme left-hand of the main porch of Yosemite Lodge. Every member should report there immediately on arrival. The number of his assigned room and his ticket to the dining-room or cafeteria will be furnished him at that desk. His luggage is in the baggage room immediately adjoining

the registration desk, and boys will be on hand to show him to his assigned quarters.

Program—Section officers report active progress on the meeting program. On February 15, the program closes. All members who desire to present papers should secure a place on the program before that date.



THEODORE RETHERS
1867-1924

The death of Doctor Theodore Rethers recently is a distinct loss to the medical profession of San Francisco and California. His passing is a greater loss to his many friends and patients whom he served so skilfully during his lifetime.

Doctor Rethers was a man of exceptional scientific and mental attainments which, combined with his great simplicity and sympathetic friendship, made him a most human doctor and loyal friend. His skill as a surgeon is known to the physicians, and needs no added tribute at this time.

The funeral was a notable outpouring of all classes of people, and the eulogy pronounced by his lifelong friend, Monsignor Joseph Gleason of Palo Alto, was one of the most eloquent tributes ever heard by the friends of Doctor Rethers and the professional men who attended the obsequies.

Doctor Rethers was born in San Francisco June 28, 1867. After attending the public schools he went to the University of California, leaving there in 1885 to study medicine in Germany. He obtained his degree magna cum laude in the University of Berlin.

Returning to San Francisco in 1892, he began the practice of his profession. In the following year he was appointed a member of the San Francisco Insanity Commission, a position which he retained for thirty-one years.

In 1898 he went with the First California Volunteers

as regimental surgeon to the Philippines, remaining with the Army until the end of the Spanish War. Later on, during the administration of Governor Johnson, he was appointed surgeon-general of the National Guard of California.

For the past fifteen years, Doctor Rethers was surgeon-in-chief of St. Mary's Hospital of San Francisco. It is said of Doctor Rethers by Doctor John Galloway and others that, more than any other doctor and surgeon, Rethers gave assistance, advice and professional help to the younger members of the profession.

In 1896 the Doctor married Annie O'Kane, the daughter of a pioneer San Franciscan. He is survived by his widow and six sons—Theodore, Frank, Harry, Edward, Charles and Robert, and a brother, Colonel H. F. Rethers, U. S. A.

EULOGY PRONOUNCED AT THE FUNERAL SERVICES BY
MONSIGNOR JOSEPH GLEASON

"We are assembled to do honor to the memory of Dr. Theodore Rethers, a public-spirited citizen, a true friend, a devoted father of his family, a veteran surgeon of the Spanish-American War, a recognized leader of the medical profession in California. His life was an inspiration to us all. It was my privilege to know Dr. Rethers from childhood. From his earliest days he had the faculty of making friends and holding them. He never from his youth took up a problem that he would not see through to the finish, and this characteristic of work and thoroughness characterized his entire career. He was noted for this during his university course and his professional studies in Europe. When, therefore, after his return to California, he began his career as a young doctor, it took but a very short time for him to obtain recognition. By unremitting study he kept abreast of scientific advances and he was accorded a position of leadership, particularly from the members of his own profession.

"He was a man, however, who had not merely the technical knowledge and skill of the accomplished physician and surgeon, but he had with it that Christian character which always ennoble the physician. I never met a man who had a higher regard, not for the mere dignity, but for the actual sanctity of his profession. There are two great mysteries of human life, our entrance into and our exit from the world. At these the physician presides. He welcomes the new born babe, he bids Godspeed to the dying. It is a very easy thing for a physician to become so familiar with the technique of his profession in handling the human body to forget that that human body is the temple of God. The physician and surgeon who forgets this, and callously ignores the divine mystery of life, is very liable to become little more than a cold blooded mechanic or an artistic carver. The real inspiration of the physician and surgeon's professional life is the recognition of the fact that he is handling the work of God. Dr. Rethers never allowed his skill as a surgeon or his long practice in his profession to breed that familiarity which fathers contempt. And the reason of it was that Dr. Rethers was a man of faith—he believed in God—and that faith guarded him and guided him. This may explain to a certain extent the remarkable trust that his patients always had in him. He was their friend. Rich or poor, black or white, there was no distinction, every man who ever was his patient remained his friend. He was devotion itself in his attendance. The relation between the physician and his patient is very parallel to the relation between the priest and the penitent who comes to confession. Both priest and physician are custodians of the secrets of the soul. They must have the faculty of inspiring confidence and they become confidants whose sacred trust can never be broken. On this account the role of physician was to Theodore Rethers almost sacramental in its sanctity.

The physician and surgeon are supposed to lead a life of self-sacrifice. He actually did live that life of self-sacrifice. There was no doctor who more heartily abhorred the necessity of a monetary compensation for his services. From my own personal knowledge he had a large clientele from whom he could never receive any returns.

Dr. Rethers was endowed with the sense of humor. There is no question but that this is a real gift from

God. The man who can laugh will find it a very easy matter to save his soul. There was a merry twinkle in the eye of Dr. Rethers that spoke the joy of his soul and kept his friends in good humor. It was a tonic to his patients. It served to bridge him over two or three severe crises in his own life for it was not all smooth sailing in the long years of his professional career and when difficulties did come, his faith in God and his sense of humor saved the day for him.

"Privileged as I am today in speaking over Dr. Rethers, I am prompted to recall a little incident in the life of St. Paul that the ordinary reader might gloss over. St. Paul, convicted in Syria, appealed to the Supreme Court of the Roman Empire. When the time came he was shipped on a Roman transport and sent on to the Capital. Under the Roman law even an officer's wife could not go with him on the transport. There was only one allowed to accompany a prisoner and that was his personal slave. St. Luke, who wrote the third Gospel and who was the companion of St. Paul in his missionary journeys, was likewise a physician. He was devoted to St. Paul and when the Apostle was shipped on the transport, St. Luke, the physician, took advantage of the one loophole in the Roman law and signed up as the slave of St. Paul. It always comes before me as an example, not merely of personal fidelity, but of the devotion of the physician. That same St. Paul, when he wrote from his prison in Rome to his friends in Greece and Asia Minor, spoke of all his companions leaving him, one after the other. How human it is to read that little line of his where he says, 'they have all left me, all except Luke, my beloved physician.' This warm relationship between physician and patient was always the characteristic of Dr. Theodore Rethers.

"From childhood I knew him in the thoroughness of his study, and in the integrity of his character. It was my privilege years ago to officiate at the ceremony which united him and his bride. I have seen him develop, with the highest recognition in his profession, and I always found him the same—quiet, unassuming, good-humored, devoted and self-sacrificing. He lived and died a credit to the medical brotherhood of California. All of them will miss him, but he will be held in particularly grateful remembrance by the army of young physicians whom he guided and helped in the first difficult steps of their career. He was the friend of all, but especially of the young doctor.

"Gathered in this sacred edifice, please do not forget that Dr. Rethers was a sincere Christian believer. He understood and appreciated the Catholic philosophy of life and death. He would remind you, if he could speak from his casket today that we have come here not to honor him with empty words. He has finished his term of probation here in this world and the good God has beckoned him through the gate of death. At this solemn Sacrifice of the Mass, the holiest act of the Catholic religion, we are assembled for a nobler purpose and that is to say a prayer for the repose of his soul. Common ordinary decency develops charity in the heart of man. Like all decent men you feel that a man who will not reach out a sympathetic helping hand to one in distress is beneath contempt. And because we believe in giving a helping hand to the living, it is very easy to understand the Catholic practice of extending our charity beyond the grave and saying a prayer for the repose of the dead who can no longer help themselves. That is why we are here today. If it were simply a matter of doing civic honor to the memory of Theodore Rethers, a few words and a quartet in a public hall would cover the program. On the contrary, all of us are assembled today as friends of the dead doctor for the specific purpose of doing for him, what he, as a Christian believer, would do for you if one of you lay in that casket today. No matter what might be your religious belief, he would give you the best that his Catholic religion afforded him under the circumstances, namely, a prayer for the repose of your soul. That is what I ask of you now. Unite with me in saying within your hearts these words: 'Forgive him, Oh Lord, for any mistakes he may have made. He was human but he was thy faithful servant. Remember his good deeds and blot out the chance error. Eternal rest grant unto him, Oh Lord, and let perpetual light shine upon him.'"



LUTHER MILTON POWERS, M. D.
1853-1924

Doctor Luther Milton Powers, for thirty-two years Health Commissioner of Los Angeles, died October 31, 1924.

He was born in New Hanover County, N. C., April 5, 1853, attended Wake Forest College, North Carolina, and was graduated from Washington University School of Medicine in 1877. After post-graduate study at Bellevue and the College of Physicians and Surgeons of New York, he practiced medicine at Plymouth, N. C., until 1886. Then, after a year in Nebraska, he came to Los Angeles. Doctor Powers is survived by his widow, Mary R. Powers, two daughters, Mrs. Anne Powers Keller, Miss Lucy Powers, a son, William, and a grandson, Milton Powers Keller.

When the history of the last three decades of Los Angeles is written by impartial observers, the work of Luther M. Powers will be so outstanding that he may be easily awarded the honor of being our most useful citizen. In the delirium of his last hour he called upon those about him to save the children from diphtheria, showing that the "ruling passion is strong in death."

WILLIAM DUFFIELD.

Los Angeles County Medical Association Honors Doctor Powers' Memory—WHEREAS, The death of Doctor Luther Milton Powers, Health Commissioner of Los Angeles for almost a third of a century, should cause, and does cause, this society and our profession to pause and meditate upon the work of a most useful citizen and physician, and to honor his work and the good name he has left among us.

The study of the life of Doctor Powers is a study of the evolution of modern scientific sanitary medicine, for his connection with the Los Angeles Health Department goes back to the time when that which is now considered basic in public health work was in its beginning. Through study, travel, and association with leaders in the thought of the time, he became an authority in sanitation and public health. He built our health department from a service of two men to a great department with sixteen divisions employing several hundred men and women in its various activities.

He was in advance of his day in organizing a bacteriological service, and he was one of the real pioneers in the crusade for pure milk and in the establishment of milk commissions. The remarkable working efficiency of the department was demonstrated just at the time of Dr. Powers' death by the instant recognition of pneumonic plague and its annihilation within ten days of the onset.

No more efficient public health service was ever given in a grave emergency at any place.

Dr. Powers was past president of the Los Angeles County Medical Association. He served on the Board of Councillors for many terms, where his service was most valuable, because of his wide acquaintance and good judgment. His whole life and work were in and for organized medicine, and no man ever served the profession and the public more faithfully, more loyally, nor more unselfishly.

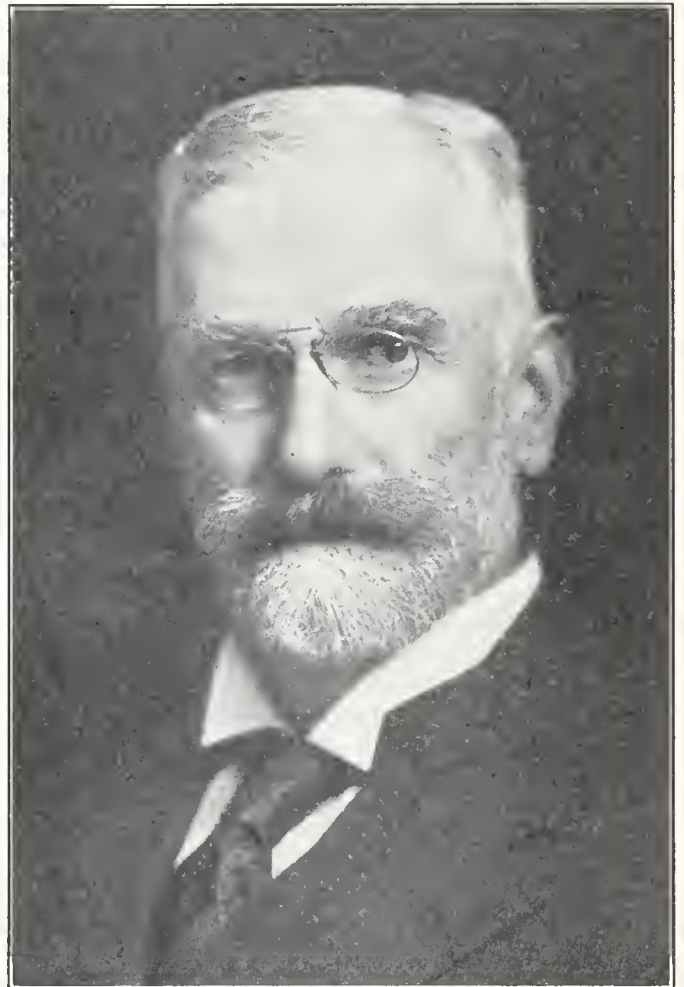
In view of the great service rendered to mankind by Luther Milton Powers, it is hereby

RESOLVED, That a tablet of bronze be placed in a conspicuous place in the County Medical Building, recording the distinction of his service and the high esteem in which his name is held.

RESOLVED, That one scientific program, devoted to public health and sanitation, be given each year in memory of Doctor Luther M. Powers and Doctor Stanley P. Black, two outstanding pioneers in public health medicine.

RESOLVED, That the sympathy of this society, with the expression of our highest esteem, be extended to the bereaved family of Doctor Powers.

F. C. E. MATTISON.
ELMER R. PASCOE.
WILLIAM DUFFIELD.



FRIEDRICH FEHLEISEN, M. D.
1854-1924

(Eulogy by the San Francisco County Medical Society)

In Doctor Friedrich Fehleisen, the San Francisco County Medical Society has lost a member whose name is known wherever medicine is taught. His work will live after him, but so modest and devoid of pretentiousness was he that not many of his younger colleagues knew by name the upright and austere figure that used to sit at the back of the medical meeting room, quietly and attentively, often it seemed, pensively and reminiscently listening. Not many of the younger men to whom he listened knew that this was Fehleisen, the discoverer of the streptococcus of erysipelas. And as he would get up and stride solitarily and silently from the meeting, he

seemed to carry with him the shades of other hours—of V. Bergmann's clinic, of attendance upon emperors; and his mind to muse upon the vagaries of Fate and the determination of life by the whims of kings.

Friedrich Fehleisen was born on the 20th of April, 1854, in Reutlingen, Germany. His father was Doctor Friedrich Fehleisen. He studied at the Universities of Tübingen, Strassburg and Würzburg, and took his degree at Würzburg in 1877, with a dissertation "On a Case of Aphasia." For many years he was V. Bergmann's first assistant and head surgeon of the surgical clinic of the University of Berlin. He left Germany in 1895, taught for a short time at Washington University, but soon followed an invitation of Doctor Vowinkel of the California Women's Hospital to visit him. He remained to make San Francisco his home, and succeeded Doctor John F. Morse as chief surgeon to the German (now the Franklin) Hospital in the same year—1895.

Fehleisen married Fraülein Marie Herdtmann in 1890. He leaves two children. His wife was one of two German nursing sisters chosen by the Empress Frederick to learn English nursing under Florence Nightingale. She returned to V. Bergmann's clinic after a course at St. Thomas' Hospital in London. Finding it difficult to get volunteers for the diphtheria ward, she volunteered for this duty herself, and there first met Fehleisen.

Fehleisen died suddenly on the 28th of August, 1924, of heart disease.

His fame will rest on his discovery of the germ of erysipelas; he also made pioneer research into the influence of streptococcic infection on malignant tumors.

Germany was unfortunate to have lost this man, but we were the gainers. The memory of his person and the influence of his work, which fell at the beginning of the constructive period of San Francisco medicine, remain ours; and ours is the figure of this earnest, modest, and upright surgeon.

OSWALD H. BECKMAN, M. D.

1851-1924

It is with great regret that we note the loss of one of our members, Dr. Oswald H. Beckman, who died at his home in Glendale, November 28.

For fifteen years he followed his vocation in Fort Bragg, Mendocino County, where he owned and managed Beckman's Sanatorium.

As secretary of the County Society, he devoted himself untiringly to its welfare and growth.

Always energetic in his efforts to uphold principle and justice, his loss will be felt in both County and State Society.

JOSEPH WILLIAM JAMES

1876-1924

On Saturday, December 13, 1924, Doctor J. W. James was borne reverently to the grave by members of the profession, by whom he was so highly esteemed and for whose welfare he so valiantly labored.

The twenty years and more of his career as a physician and surgeon were terminated at the height of his usefulness and endeavor, but if estimates of a life are to be measured, not by the number of years lived, but by the amount of good accomplished, then Doctor James furnished an example which few can equal, none surpass. If one is required to give an epitaph adapted to his character and career, "I live to serve" would be most fitting. To him, medicine was truly an art as well as a profession, and his happy buoyant nature, coupled with an unusual sense of duty, enabled him to bring hope and cheer when physical means failed.

Born of sturdy Welsh-English parentage, he came to this country early in life and literally carved his own career. Circumstances compelled him to rely chiefly on himself for support in his education, but his will to succeed readily overcame all obstacles and brought out that determination of character, which, knowing the right,

fight to achieve and always wins. Of the great numbers who employed him, there were none but remained his friends, for it was easy to realize that he gave himself wholly and freely to his tasks, no matter how trivial.

That which was finest and best in life guided his every instinct and act, as the loadstone and the star. Art, music, literature and things refining and cultural, always engaged his interest and support. His abundant enthusiasm and energy carried him far and, in good measure, were contagious. Without his support, the splendid Sutter Hospital, recently erected and operating, could hardly have been carried through. In spite of the demands of a large and exacting practice, he saw the new institution



functioning chiefly through his own efforts. His name is indelibly linked with it.

As a citizen, Doctor James more than performed his part: serving faithfully and for many years on the local Board of Health and the State Board of Examiners; in civic matters, he gave freely of his purse and time; all movements seeking better hygiene, social or economic improvements, had his enthusiastic support and undivided attention.

Though he persistently sought to enlist in the late war, impairments caused the authorities to restrict or decline his services. All honor to those who exposed themselves in the front line, but the war could not have been won without the united support of those "behind the lines," and of these Doctor James led in examples of patriotism and successful endeavor.

Life has been likened to a beautiful mosaic, built up of a number of small stones or bits, each one representing a deed well done. The good deeds accomplished by Doctor James have aided, bit by bit, in making of his career the picture of a good life, long to be cherished and revered by his friends and associates. Wise counselor and esteemed friend, he "sought to prove all things and to hold that which was good."

S. E. SIMMONS, M. D.

ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer, secretary)—The program at the regular meeting of the Alameda County Medical Association held November 17 was devoted to a symposium on encephalitis lethargica. In his paper, "Epidemic Encephalitis from the Experimental Standpoint," William Lee Bender of San Francisco stated that recent investigations have established the presence of widespread spontaneous encephalitis in rabbits, throwing open to doubt results of previous experiments on the etiology of encephalitis in man. He and his co-workers have been able to immunize rabbits against experimental encephalitis, which offers a means of studying the relation of various strains of virus to each other. He further stated that no uniformly satisfactory treatment of epidemic encephalitis had been developed, that there is no specific therapy, and that it might prove possible to confer immunity to a man as well as to rabbits.

Albert H. Rowe, in his paper, "Clinical Aspects of Lethargic Encephalitis," went into the symptoms and physical findings in detail. The importance of following up cases of encephalitis was emphasized, since sequelae are apt to be accompanied by persistent mental irritation, insomnia, hallucination and, at times, neuritic pains in various parts of the body. In view of the severe sequelae and the progressiveness of the disease in such cases, any reports of successful treatment should be followed up. At this time protein injections, especially in the form of typhoid protein administered under the most careful supervision, seems to be of value. Reports of success with other forms of protein therapy, such as non-specific serum or milk injections, must be kept in mind.

Sydney K. Smith's paper, "Psychiatric Sequelae of Encephalitis Lethargica," included the consideration of the following points: 1. "Lethargic" encephalitis is a misnomer. 2. Encephalitis is a syndrome and not a disease entity. 3. The psychiatric sequelae may include behavior and character changes—adult and juvenile, manic or depressive episodes, emotional apathy and less often trend reactions. 4. Our knowledge of encephalitis is so recent that the ultimate psychiatric prognosis cannot properly be given. 5. Summary of series of seventeen cases.

The discussion of these papers was opened by R. T. Legge.

At the Fabiola Hospital staff meeting, R. L. Richards read a paper on "What We Think With," setting forth the development of the brain according to the different stages of growth.

A. H. Rowe gave a talk on the "Treatment of Asthma," disclosing new discoveries and noting the progress that has been made during the last four or five years.

Upon the retirement of Susan J. Fenton from the Fabiola staff, W. L. Bell said in part: "It is not necessary to say how faithful, honorable, and ethical Dr. Fenton has been during the long years of her service. She has given most generously of her time, her knowledge and her money. This fine gentle woman has been an honor to her profession and to this staff."

At the meeting of the Merrit Hospital staff on December 8, W. H. Barnes reported three fatal cases of infections with pyogenic staphylococci. Emphasis was placed on the importance of early recognition of the infection, absolute rest of patient and the infected part, proper elimination, and intelligent surgical intervention. Intravenous injections of gentian violet and mercurochrome failed to stop the advance of the infection in these cases.

A. C. Siefert spoke of his attendance at the annual meeting of the American Roentgen Ray Society at Swampscott, Mass., and his visits to the leading hospitals, both in the United States and Canada. The doctor saw much of interest, and found that each group of men had some special work in which they particularly excelled.



FRESNO COUNTY

Fresno County Medical Society (reported by T. Floyd Bell, secretary)—A special meeting of the Fresno County Medical Society was held at the Hotel Fresno at luncheon on November 15.

Those present were: Aller, Bell, Couey, Cowan, Cross, Ellsworth, Goldberg, Jamgotchian, James, Kjaerbye, G. L. Long, Luckie, Madden, Manson, Mathewson, Miller,

Montgomery, Morgan, McPheeters, Pettis, Schottstaedt, Sciaroni, Staniford, Stein, Thompson, Tillman, Tobin, Tupper, Vanderburg, Wahrhaftig, J. R. Walker, G. W. Walker, and Willson.

Gavin J. Telfer, district health officer of the California State Board of Health, discussed plague. He went into the history of plague in the old world, and also in California, and said that the disease was endemic among animals all over California. The first case was discovered in this state in 1900, and there have been several outbreaks since. The squirrels in the region of San Francisco harbor the infection and transmit it to humans. In July, 1924, it was noted that the rats and squirrels in the region of San Luis Obispo were dying rapidly, and investigation showed that 20 per cent were infected with bacillus pestis. More recently there has developed an outbreak in Los Angeles, with the pneumonic form prevailing. He spoke briefly of the symptoms of both the pneumonic and bubonic types. The mortality is very high, being 90 per cent to 100 per cent, with the pneumonic form. Those who do recover do so after about ten days, but the convalescence is long and drawn out. The organism is easily stained and cultures are definite. Animal inoculation is the positive test.

Prevention of plague is the important means of attack on the disease. Attendants must be protected by mask and goggles, as well as the other ordinary means of protection. Vaccination and serum has no relation to the control of the disease. The main means of prevention is eradication of the rodents. The measures that should be used in Fresno are those used to eradicate the rodents. There should be no squirrels within ten miles of the city and a minimum of rats in the city. Make the city as rat-proof as possible; sanitary inspection and rat-killing by experienced men.

Cross moved, Luckie seconded, that the secretary be instructed to secure literature on plague for the library. Carried.

The regular meeting of the Fresno County Medical Society was held December 2 at the Hotel Fresno with dinner, this being a social meeting.

Members: Aller, Anderson, Barret, Bell, Broemser, Collins, Cross, Craycroft, Callaway, Dearborn, Goldberg, James, Jorgensen, Kjaerbye, Konigmacher, Lamkin, Luckie, Madden, Manson, Mathewson, Miller, Montgomery, Mitchell, Morgan, Milholland, Pasley, Pettis, Pomeroy, Quimby, Schottstaedt, Sciaroni, Tillman, Tobin, Tupper, G. W. Walker, and Wilson.

Visitors: Dahlgren, Nider, Dow, and Mr. Ben Harrell.

Before being seated, Madden gave the following reading, in memory of the late A. B. McConnell.

"The shadows deepen and we set our faces toward the new year which time will soon usher in.

"The fading of the present year recalls to our minds the brother who answered the silent roll-call, and we pause.

"Let us turn to memory's storehouse and draw therefrom those fine fragments of recollection, the mere thought of which will supplant sorrow with joy.

"Let this be the occasion of a careful inventory of the past of the living, as well as a resumé of achievements of our dead in his earthly struggles, remembering always that the most endearing memorial we can erect will be a constant effort on our part to perpetuate by our faithful devotion to the principals of our profession those things that were dear to our departed brother.

"May he rest in peace."

The application for membership of O. P. Pisor of Monmouth was read.

The following officers were elected for next year: President, A. E. Anderson; first vice-president, W. G. Milholland; second vice-president, Charles A. James; secretary, T. Floyd Bell; assistant secretary, J. A. Montgomery; delegates, T. F. Madden, H. J. Craycroft; alternates, B. Lamkin, R. B. Tupper; board of governors, W. P. Miller.

Doctor Konigmacher had arranged a very pleasing and entertaining musical program, which was presented.

W. W. Cross gave an illustrated lantern lecture on the "Sierra Nevada Mountains." He was raised in the shadow of these mountains and has spent a great deal of time studying them and enjoying their wonders. He told how mountains in general were formed and how the Sierras came into existence and how the ocean washed

their western shores. He then showed pictures of many interesting and beautiful places in this rugged range of mountains.

KERN COUNTY

Kern County Medical Society (reported by William H. Moore, secretary)—The regular meeting of the Kern County Medical Society was held at the Kern County General Hospital November 20, 1924, P. J. Cuneo presiding. Twelve members of the society were present.

L. W. Blake, a new physician in Bakersfield, was present, and R. M. Jones' transfer of membership from Fresno to the Kern County Medical Society was accepted.

Clain F. Gelston of San Francisco read a paper on "Bronchiectasis in Children."

MERCED COUNTY

Merced County Medical Society (reported by Brett Davis, secretary)—The meeting held November 7 was without program, as Dr. Samuel W. Hurwitz, who was scheduled to appear, was unable on account of sickness to be present. December 4, the regular December meeting was held at Merced. Dr. Lee S. Seward of Ahwahnee T. B. Sanitarium and Dr. Charles L. Ianne of Arroyo Grande Sanitarium were present as visitors. These two doctors held a chest clinic the following day in Merced.

Election of officers for 1925 resulted as follows: President, A. S. Parker, Merced; vice-president, T. R. Trick, Dos Palos; secretary-treasurer, Brett Davis, Merced; delegate, W. C. Cotton, Atwater; alternate, C. H. Church, Yosemite.

C. F. Harrar, M.D., who has been in Merced for the past year, has just moved to Turlock, Calif.

While there has been no smallpox in Merced County, public clinics were held by the State Board of Health and county health officer, with about five thousand vaccinations.

ORANGE COUNTY

Orange County Medical Association (reported by D. R. Ball, secretary)—A very excellent paper was provided for the December meeting by Dr. F. E. Coulter of Santa Ana on "Observations on Functional Nervous Disease." The conditions of neurasthenia, psychasthenia, and hysteria were gone into particularly after a broad survey of the field had been given. A plea was made for the proper recognition and treatment of these conditions by the general practitioner.

Officers for the coming year were elected as follows: President, H. D. Newkirk; vice-president, Bessie S. Martell; secretary-treasurer, D. R. Ball; librarian, C. D. Ball; delegate, Harry E. Zaiser; alternate, R. A. Cushman; councillors, John Wehrly, F. E. Coulter, and G. M. Tralle.

The Santa Ana Clinical Society held its regular meeting at the office of the president, John Wehrly, on November 19. A. E. Belt of Los Angeles presented a very interesting lantern slide demonstration of "The Anatomy of the Kidney." The slides illustrated the work which the author did in conjunction with Frank Hinman of San Francisco in winning the gold medal awarded by the A. M. A. in 1921 for the best piece of scientific research of the year. Following this demonstration, Dr. Belt showed an interesting collection of x-ray pictures of various urological conditions.

The profession has, within the last month, lost two of its oldest members in the county. Dr. Willella Howe Waffle, age 70, of Santa Ana died on November 12 while attending a patient. She had practiced in this community since her graduation in 1886. She followed the Homeopathic school of practice. Dr. John L. Dryer, age 79, of Santa Ana died on November 30, after a two weeks' illness. He had practiced in the state since 1877, and in Santa Ana since 1888. He was a charter member of the Orange County Medical Association, and maintained his active membership until his death. Although in poor health for the last few years of his life, he kept up his work in his chosen field of tuberculosis until the last. The profession and the community have indeed lost two worthy and respected members.

Two new names have been added to the membership

list: George A. Paige of Anaheim was elected at the October meeting; W. A. Kisting of Santa Ana, transferring from Livingston County, Ill., was elected at the December meeting.

PLACER COUNTY

Placer County Medical Society (reported by Robert A. Peers, secretary)—The society held its annual meeting in Auburn, Saturday evening, December 6. This being the regular meeting for the election of officers, no literary program was presented.

The following officers and delegates were elected to serve for 1925: President, H. N. Miner, Blue Canyon; vice-president, J. A. Russell, Auburn; secretary-treasurer, Robert A. Peers, Colfax; associate secretary, Charles J. Durand, Colfax; delegate to State Society, F. E. McCullough, Lincoln; alternate, H. M. Kanner, Colfax.

It was decided to have the next literary program in Auburn late in January or early in February.

RIVERSIDE COUNTY

Riverside County Medical Society (reported by T. A. Carl, secretary)—At the annual meeting of the Riverside County Medical Society, officers for the year 1925 were elected as follows: C. R. Geith, president; W. B. Wells, vice-president; T. A. Card, secretary-treasurer.

SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by G. J. Hall, secretary)—At the November meeting forty-four members were present.

Presentation of Cases—Brendel reported a case of rupture of biceps tendon repaired; dislocated semi-lunar cartilage; lengthened quadriceps tendon. O'Brien reported a case of rupture of uterus at six months' pregnancy.

William J. Kerr of San Francisco discussed "Modern Methods of Treatment of Heart Disease." The essayist stated that the most important thing in treatment of cardiac disease is treatment of congestive cardiac failure—muscle failure—signs and symptoms. The principles of treatment are:

Rest most important in treatment of cardiac insufficiency—bed position. Diet: Easily digestible; no effort in mastication; no large amount; frequent feedings, concentrated food. Sleep is necessary—maybe morphine in certain types.

Depletion—Removal of fluid; may use magnesium sulphate; purgation; diuretics. Removal of fluids from body cavities; cupping; venesection 500 to 750 cc. of blood. Bandages in oedema of legs.

Stimulation—First, digitalis; second, caffeine. Diet: avoid gas-forming foods, large amounts of bread, etc. Mode of life to lead afterward. Right kind of work. Graded exercises to develop proper hypertrophy of heart. Prophylactic treatment, removing foci of infections. Digitalis most valuable—sometimes abused—no special indication in rapid heart. Heart failure; then digitalis. Many books state ten drops of digitalis is proper dose—variation in droppers and in tinctures themselves—use graduated dropper or graduate, or place in vehicle. Fifty drops from dropper equals 1 cc. in graduate. Superior to the use of dried or in pill forms. Few contra-indications for digitalis. Quinidine: Chief value in auricular fibrillation is to restore normal rhythm. If muscle failure with edema and anasarea, then digitalis first; later quinidine. May give six grains t. i. d. for three or four days, if first three grain doses are okay. If embolism or heart muscle extensively damaged, then quinidine is no use. Camphorated oil of no great value. Strychnine, long continued use as stimulant in vasomotor system. Whisky aromatic ammonia temporary.

Bacterial rheumatic endocarditis demands attention. Prognosis bad in 100 per cent. Usually young people with rheumatism; no results with any treatment. Saw none recover. Moffitt saw one recover.

For pulmonary edema: Prop up in bed; morphine and adrenalin. If blood pressure is high and cyanotic, should be bled. Take one pint or two pints. Long rest. Angina pectoris and coronary disease: Nitrates or nitroglycerin and rest; if syphilitic, iodides and arsphenamine. More

recently, operations on sympathetic nerves. Pain relieved. Danger of patient overdoing later because the pain is relieved. Luetic aortitis: Differentiate between patients with aneurysm and without aneurysm; if with aneurysm, do not give arsphenamine; if without aneurysm, give tremendous doses of iodides. Patients may die from arsenical treatment. Hypertension: We have probably gone a little too far in trying to reduce blood pressure to certain levels. Heart block: Atropine. Heart in pregnancy: Very few conditions demand intervention. Very few cases of heart disease that contra-indicate necessary surgical operation.

Discussion by Grazier, Gundrum, Reardan, Scatena, O'Brien, Twitchell, Brendel, Drysdale. Closed by Kerr.

Parkinson talked on the new directory of the C. M. A.

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SAN BERNARDINO COUNTY

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—A meeting was held December 2 at the San Bernardino County Hospital. Fifty members present, thirty-five absent; fifty guests.

The program: "Allergy," by George Piness, Los Angeles.

The talk was illustrated and accompanied by practical demonstrations, both human and animal.

The following men have been elected to membership: H. Garcelon, Victorville; H. A. Bogue, Ontario; A. S. Garnett, San Bernardino; E. H. Hull, San Bernardino; O. H. Von Emon, San Bernardino; J. A. Patterson, San Bernardino; C. G. Newbecker, Rialto.

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SAN FRANCISCO COUNTY

Franklin Hospital Staff Meeting (reported by Ewald H. Angerman, secretary)—The monthly staff meeting of the Franklin Hospital was held on Monday, November 24, Dr. J. Wilson Shiels presiding.

The paper of the evening was "The Treatment of Asthma," by Samuel H. Hurwitz, M.D. This interesting topic was exceedingly well presented by Dr. Hurwitz, and discussed by J. Wilson Shiels and C. E. Taylor.

St. Joseph's Hospital Staff Considers Head Fractures—"The Treatment of Head Injuries" was discussed by Howard Naffziger before St. Joseph's Hospital staff of San Francisco on December 10, Dr. A. S. Musante presiding. Charts and sectioned skulls were used to illustrate the discourse. Treatment of depressed fractures and penetrating wounds from picks and axes is uniformly that of relieving the depressed skull and in opening up, cleaning and draining. Operations during shock should be avoided, as life-saving measures can seldom be withstood. After reaction, x-ray pictures and operation with local anesthesia are in order. Fissured fractures need no operation usually. If the base is fissured, we may have bleeding into the nose, ear or mouth. Meningitis supervenes in about 6 per cent of these, as well as all other compound fractures. Dorsal decubitus and ice cap are recommended.

The brain injury needs attention. Intracranial pressure is important. Acute intracranial pressure generally produces slow pulse, which, when below 50, is hazardous. Rise of blood pressure is overstated, being often due to precedent trouble (kidneys, heart, etc.). Pulse pressure is of concern; if high is dangerous and rises as the pulse rate falls, being often higher than the count and constituting an alarming symptom. Increasing stupor, alternations in respirations (stertrous or Cheyne-Stoke's), and rhythmic alternating restlessness (rarely mentioned in texts) are bad prognostic signs. High spinal fluid pressure is also a symptom. The best factor in determining the gravity is the way signs are going, rather than what they are at any one time. In the first four hours, one cannot usually form a sound judgment, and any radical treatment may be meddlesome. On account of shock the patient's chances are usually reduced rather than improved by operation so early. The percentage of all fissured fracture cases requiring operation is about 10 to 15 per cent, not including depressed and penetrating fractures. If there are signs of increasing intracranial pressure and hemiplegia or other focal signs, operation is demanded. Free fluid can be removed by decompression and

damage, but not true edema. Free fluid may be either blood or cerebrospinal fluid. Middle meningeal hemorrhage causes slowly increasing stupor and paralysis, but is often difficult to diagnose. May have classical signs and no hemorrhage, and vice versa. Intracranial bleeding from other sources often resembles it. Subdural fluid accumulations can cause high intracranial pressure and can be relieved. Spinal puncture two to three times a day can be used to relieve pressure. If pressure and fluid return promptly after the puncture, it is a case of subdural accumulation. Hypertonic solution, as 40 cc. of a 25 per cent salt solution, injected intravenously in about twenty minutes, can be used. The maximum effect will occur for two to three hours. Do not use in manifest kidney insufficiency. Salt by mouth and epsom-salt purging is used to dehydrate, but the effect is only temporary. Salts can be given by rectum. If the pressure is high enough, do a subtemporal decompression, over the temporal bone, and also explore base and motor areas, draining for twenty-four hours.

C. E. Nixon advised small doses of morphine and spinal puncture to quiet. Prognosis generally good, if patient survives first twenty-four hours except for meningitis. Late post-traumatic neurotic symptoms show up after several weeks or months. Roy Parkinson discussed eye and ear symptoms and the slight demonstration often seen in fatal cases. Dr. David Stafford stressed the advantage of local anesthesia. H. A. Deering quoted a case with possible late cerebral lesions, and A. S. Musante presented cases of terrific impact without fracture and unilateral congenital markings in x-ray pictures, resembling fracture line. L. B. Crow closed by exhibiting illuminated "Radiograms of the Cranium," many of which were taken with a new technique by the use of a 1/10 second exposure, and advised against rushing these patients while in shock.

Case histories were discussed by R. F. Grant (perforated gastric ulcer) and Arthur Sonnenberg (pneumonia with hemiplegia). Stafford spoke favorably of the service offered by the Community Chest to hospital obstetrical patients during their first week at home. C. E. French recommended the hospital "bond" or insurance policy issued to cover hospital expenses of the insured.

Officers elected for 1925 were A. S. Musante, president; F. A. Lowe, vice-president; L. J. Overstreet, secretary; and F. C. Keck, treasurer.

The program for January 14 will include: "Indications and Contra-indications for Tonsillectomy," E. C. Fleischer; "The New Dietitian's Work at St. Joseph's," Sister M. Dionysia.

On January 22, the patronesses of St. Joseph's Hospital, Mrs. W. T. Cummins, president, will give a soiree to the student and graduate nurses at the Y. M. I. hall, and the doctors of the staff are invited.

Southern Pacific General Hospital Clinical Meeting (reported by W. T. Cummins, secretary)—The regular monthly clinical meeting was held at the Southern Pacific General Hospital, Huntington hall, on Wednesday, December 3. There were about sixty physicians present.

Scientific Program—Symposium on Heart Disease: J. Wilson Shiels, "The Old, the Young; The Ideal Attitude Towards Cardiology." He reviewed the history of cardiology and generalized on the physician's viewpoint towards the various phases of cardiac pathology, and emphasized the importance of graphic methods of study; A. W. Hewlett, "Attacks of Arrhythmia," covering the different phases of the subject, with their significance, frequency and termination, together with the value of electro-cardiographic examinations; E. S. Kilgore, "Bacterial Endocarditis," including the salient points of the bacterial and sub-bacterial stages of the infection and noting the difficulties in some cases attending the bacteriological study of the early stage; W. J. Kerr, "The Treatment of Heart Disease," with a comprehensive review of the entire subject, including the use of quinine and its derivatives selectively in some instances by intravenous injection; M. P. Burnham, "Roentgen Demonstration," comprising a number of chest plates, one of which illustrated the importance of detection of an enlarged thymus. The aorta, as well as the heart, was reviewed.

Worthwhile Work for Department of Anthropology—Doctor Saxton Pope has recently returned from an extended vacation in the mountains of Tehama, Butte, and Shasta Counties. He undertook to explore and place upon

the map the various camp sites, battlegrounds and caves of the Yana Indians, and has made a valuable contribution to the knowledge of this extinct tribe. The work was done under the auspices of the Department of Anthropology at Berkeley.

Dr. Pope is spending his sabbatical year in research work of this sort, after twenty-five years of medical practice, and intends completing his vacation with a hunting trip into British East Africa, after which he will return to the peaceful pursuits of professional life.

Successor to Doctor Rethers Appointed—Doctor Tillton E. Tillman has been appointed a member of the San Francisco County Lunacy Commission to fill the vacancy caused by the death of Doctor Theodore Rethers. The other members of the Commission are B. J. McElroy, Arthur Beardslee, and Charles McGettigan.



SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by Alex C. Soper Jr., secretary)—The regular meeting was held December 8, at the Cottage Hospital, Santa Barbara, President Robinson in the chair. Present, twenty-two members, one intern, and two guests.

Moved, seconded, and passed that a letter be written to the editor of the Scientific American, thanking him for the work in exposing the Abrams' machine, in the name of the society.

The membership of Joseph D. Lewis, by transfer from the Minnesota Medical Society, was unanimously voted.

The matter of a doctor's telephone exchange and operator, in connection with the Nurses' Directory, was outlined by Miss Jameson, superintendent of the Nurses' Association, by Drs. Robinson, Isaac, and Mellinger, in view of a plan to have a central point where calls for physicians could be sent in emergencies. Matter referred to Drs. Lamb and Isaac for further investigation.

Five-minute case reports followed: Partial Heart Block, H. O. Koefod; Obstruction of Bowel Following Appendicitis, H. L. Schurmeier; Traumatic Rupture of Membranous Urethra, Irving Wills; The Audio Amplifier, shown by W. J. Mellinger.

Egerton Crispin of Los Angeles delivered the principal paper of the meeting—"Angina Pectoris, a Measure of Exhaustion," which was discussed by Sansum, Nuzum, Pierce, Koefod, and Means.



SISKIYOU COUNTY

Siskiyou County Medical Society (reported by C. C. Dickinson, secretary)—At the fourth quarterly meeting of the Siskiyou County Medical Society, held in Yreka, November 3, the following officers for the ensuing year were elected: President, Dr. R. H. Heaney, Yreka, Calif.; vice-president, Dr. W. H. Haines, Etna Mills, Calif.; secretary-treasurer, Dr. C. W. Ankele, Dunsmuir, Calif.

At the same meeting the application for membership in the society of David Joseph Mahan, Fort Jones, Calif., was accepted, subject to confirmation by the A. M. A. and State Board of Medical Examiners.



SONOMA COUNTY

Sonoma County Medical Society (reported by N. R. H. Juell, secretary)—The society met at Santa Rosa December 11, with seventeen members present, twenty-three absent, and two visitors.

There was no definite program; only election of officers and a social gathering.

The officers elected were: President, A. M. Thomson, Sonoma; vice-president, G. W. Mallory, Santa Rosa; secretary, Guy A. Hunt, Santa Rosa; treasurer, R. M. Bonar. Censors: (three years) S. Z. Peoples, Petaluma; (two years) E. Emerson, Santa Rosa; (one year) J. H. McLeod, Santa Rosa. Delegate, A. A. Thurlow. Alternate, M. J. Fulmer.

CHANGES IN MEMBERSHIP

New Members—Ben. F. Eager, John C. Dement, San Diego; Gerald H. Beck, George C. Brandt, R. M. Hippach, Thomas P. Manning, E. Stafford Safarik, Albert J. Scholl, Ernest W. Townsend, Los Angeles; W. Arden

Fate, Santa Monica; Wallace W. Holley, Inglewood; Lawrence L. Lindsey, Hermosa; W. F. Kistingner, Santa Ana; George A. Paige, Anaheim; W. S. Wallace, Orange; Gordon E. Hein, San Francisco.

Transferred—Samuel Hanson, San Francisco County, to Alameda County; Clement H. Arnold, San Francisco County, to Santa Clara County; Robert M. Jones, Fresno County, to Kern County.

Resigned—W. D. Clark, San Francisco.

Retired—Louis Bazet, San Francisco.

Honorary Member—T. W. Huntington, San Francisco.

Reinstated—Giles S. Porter, Los Angeles.

License Revoked—Olaf A. Kvello, Los Angeles.

Deaths—Beckman, Oswald Heribert. Died at Glendale, November 28, 1924. Graduate of Jefferson Medical College, Pennsylvania, 1884. Licensed in California in 1895. He was formerly a member of the Mendocino County Medical Society, the California Medical Association, and the American Medical Association.

Dryer, John L. Died at Santa Ana, December 1, 1924, age 79. Graduate of the Cincinnati College of Medicine and Surgery, Ohio, 1877. He was a member of the Orange County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Hendricks, Hiram Porter. Died at Pasadena, September 28, 1924, age 50. Graduate of Northwestern University Medical School, Chicago, Ill., 1908. He was formerly a member of the San Diego County Medical Society, the California Medical Association, and the American Medical Association.

James, Joseph William. Died December 11, 1924, at Sacramento, age 49. Graduate of Cooper Medical College, San Francisco, 1900, and licensed in California the same year. He was a member of the Sacramento County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Rethers, Theodore. Died at San Francisco, November 21, 1924, age 57. Graduate of the University of Berlin, Germany, 1891. Licensed in California in 1892. He was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Van Tine, Cothran. Died at Selby, October 27, 1924, age 67. Graduate of Pulte Medical College, Cincinnati, 1890. Licensed in California in 1914. He was a member of the Santa Cruz County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

STIMULANTS, DEPRESSANTS, HUMOR

In reading the article in the A. M. A. Bulletin entitled "What is Wrong with the County Society" (see page 69 of this issue of C. and W. M.). That is what has been troubling me for ten years past. The — County Medical Society during this time has been a dead letter. I, a member, have not had notice of a meeting being held for about three years, and for approximately that length of time there has been no regular election of officers. The medical men of this town are divided into groups or cliques, who are antagonistic to each other to such a degree that I doubt if any argument could get them to work in harmony. If other counties of small membership are in the same predicament—that's what's the matter with the County Society.—R. C., —.

The Medical "Mossback," God Bless Him!

My first bit toward the education of the Mossback (old-time family physician) was done on my father," writes Roland G. Breuer (Journal of Kansas Medical Society). "It was almost my first call case—a boy of 16, with a regular afternoon temperature, higher each day, toxicity—all of the symptoms of a typical Oslerian typhoid. Promising the parents a discouraging session of six to eight weeks, I succeeded in impressing them with the gravity of the case. I permitted my father to accompany a real medical man and watch him work. With due humility he followed me, and humbly asked permission to make a cursory examination, a request which I magnanimously granted, explaining to him, the while, that in several days the Widal test would become positive—a thing which he indelicately refused to believe. However, after I gave him a good lecture, he subsided. On the following day he volunteered to stop and see the case on his way to the

offlee. With misgivings I gave my consent. Late that afternoon I hurried over for a specimen of blood for another Widal. The boy was sitting up; there was a sparkle in his eye, snap to his smile and a sting to his grin. A large wad of dressing was in his left axilla—my benighted father, refusing to wait for a Widal, had found an axillary abscess, lanced it, drained it, and shot a durned good diagnosis of typhoid fever all to thunder."

I have been very much interested in your editorials and consider them the best published in any medical journal, as they cover live topics, subjects that concern the doctor's future welfare, but which policy causes most medical leaders to straddle, and then a few years later when the damage has been done they make their cry. I subscribe for seven medical journals and I honestly believe that California and Western Medicine is not only the most attractive but the most valuable that comes to my desk.—M. B. W., San Francisco.

Father—Tommy, stop pulling that cat's tail.

Tommy—I'm only holding the tail; the cat's pulling it.

When all is said, the general practitioner, the real trunk of our tree, is the man who can do most at solving the problem of feeding infants.—E. M. T., Los Angeles.

Thank you very much for your recent letter and for your helpful criticisms of my paper on—. The paper was much better for the purposes of delivery at the County Society, than it was for publication in its present form. With your kindly and valuable suggestions in mind, I shall divide the paper into two parts and make certain revisions. I realize that I have demanded far more of your time than was right, in connection with a communication, which at first sight showed its unavailability for publication in California and Western Medicine. I am fully appreciative of your kindness and I wish you to know that I have a very high regard for your judgment in the matter at hand. May I take this opportunity to tell you of ever-increasing satisfaction being felt by medical men with whom I come in contact, for our State Journal? Your untiring efforts are surely bearing fruit.—J. C., San Francisco.

Have no additions or corrections to make on my paper. I think your plan of discussion is excellent and greatly adds to the value of the paper.—W. M. H., Los Angeles.

Some time ago the editor returned a manuscript of mine, saying that if I would reduce its size he would be glad to publish it. Since that time, however, you have published an article of mine. So with your permission I will not re-submit this article, since it seems to me that it would be rather selfish on my part to ask publication of two articles in one year.—H. K. B., Los Angeles.

Dentist—So you have broken off a tooth, have you?

Patient (tough youngster)—Yes, sir.

Dentist—How did you do it?

Youngster—Oh, shifting gears on a lollipop!

I am sorry to say that I have been ill and away from my office for some ten days, returning yesterday. For that reason I am late in returning the paper at the time indicated in your letter. I trust it will not inconvenience you too greatly. I am very much interested in these papers and I hope you will not hold this against me in the future when asking members to discuss papers.—A. L. D., Torrance, Calif.

Does the Child Always Resemble the Father?

Terence—"Tis a fine kid ye have here. A magnificent head and noble features. Could ye lend me a couple of dollars?"

Pat—I could not. 'Tis me wife's child by her first husband.

Popular Medical Lectures—The Stanford University Medical School announces the forty-third course of popular medical lectures, to be given at Lane Hall, north side of Sacramento street, near Webster, San Francisco, on alternate Friday evenings from January 9 to March 20, 1925. The dates, subjects and speakers are:

January 9—"Influenza and Common Colds," Dr. A. W. Hewlett.

January 23—"Migration as a Factor in Communicable Diseases," Dr. W. N. Dickie, Secretary of the State Board of Health.

February 6—"Parasitic Infections," Dr. N. E. Wayson, United States Public Health Service.

February 20—"Constipation and Auto-Intoxication," Dr. W. C. Alvarez.

March 6—"Loss of Life from Preventable Diseases," Dr. W. C. Hassler, Health Officer of San Francisco.

March 20—"Vaccines and Serums," Dr. E. W. Schultz.

The Poor Boy and Medical Education—"The medical profession must not by any circumstance of excessive costs of medical education allow its doors to be closed to the poor boy. Ways and means, endowment and gifts, must be provided for the fulfillment of his medical call," says the Cincinnati Journal of Medicine editorially.

California Board of Medical Examiners

(Reported by C. B. Pinkham, Secretary)

According to the San Francisco Herald of December 1, 1924, James William Richards, M. D., once a highly respected physician of Newark, N. J., pleaded guilty before Federal Judge John S. Partridge to a violation of the Harrison Narcotic law, and was sentenced to two years in Leavenworth prison. Dr. Richards was declared to have had a forged narcotic prescription at the time of his arrest. According to reports, on September 24, 1923, James William Richards, M. D., pleaded guilty to a narcotic charge in Los Angeles, and was sentenced to 180 days in the county jail. A citation has been served on Dr. Richards, returnable at the February, 1925, meeting, to show cause why his license to practice in the state of California should not be revoked.

Leon Hurwitz, licensed to practice in California some years ago, was recently sentenced to three years in Leavenworth penitentiary, on a charge of violation of the Harrison Narcotic Act and has been served with a citation, returnable at the February, 1925, meeting, to show cause why his license to practice in California should not be revoked.

J. C. Gancsu, posing as a doctor of medicine, was recently arrested in Pasadena on a charge of violation of the Medical Practice Act. According to newspaper reports, he had two concealed cameras in his office and thereby had taken the photographs of some one hundred patients in unconventional attitudes on his operating-table. Gancsu, while doing some electrical repair work, is reported to have taken the Ohio and California licenses of Drs. Ralph W. and Harriet C. Reynolds, having erased the name of Harriet Reynolds and written in the name of Joseph C. Gancsu; also, to have removed the Ohio seal. A reproduced copy of an Ohio license in blank was seized at the time of Gancsu's arrest; also, reproduction of the city of New York certificate of registration in blank, it evidently being Gancsu's intention to start a "diploma mill."

Francis Eugene Elmer, arrested in San Francisco, February 13, 1924, on a charge of violation of the Medical Practice Act, and who was held to answer May 21 for trial, left the jurisdiction of the court. Dr. Elmer is one of those indicted by the San Francisco Grand Jury in connection with the diploma mill frauds. He has been reported as "making himself obnoxious to the American colony" in Mexico City.

Charges against three Chinese herb doctors, recently arrested in San Francisco for violation of the Medical Practice Act, were dismissed by Police Judge Golden on November 28, 1924, on the ground of insufficient evidence.

W. L. Martin, claiming to be a graduate from the American University of Sanipractic, Seattle, Wash., arrested in Long Beach on a charge of violation of the Medical Practice Act, pleaded guilty on October 28, 1924, and was given a suspended sentence of sixty days in the county jail. A search of Martin's office disclosed, among other things, a speculum, four sounds, thirteen bottles of drugs or medicines, etc. Reports from Washington state that quo warranto proceedings to revoke the charter of the American University of Sanipractic have been instituted by the Attorney-General of the state of Washington.

Slapping Her on the Wrist—Complaint was made to CALIFORNIA AND WESTERN MEDICINE by a Visalia physician that a woman unlicensed to practice medicine was doing some dangerous things. Photographs were submitted, showing a most deplorable condition of a man's jaw, said to have been aggravated by her improper treatment.

The complaint and photographs were forwarded to the Board of Medical Examiners. Their special agent investigated and promptly arrested the woman. She was charged before a Fresno judge, pleaded guilty, and was given a suspended sentence for six months.

Correspondence

The July, 1924, number of CALIFORNIA AND WESTERN MEDICINE carried an editorial entitled "Fantastic Schemes for Formularizing and Socializing Medicine." Many messages commendatory of the editorial have been received, and one letter written on the stationery of the Public Health Center of Alameda County is as follows:

October 17, 1924.

Dr. W. E. Musgrave, Editor California and Western Medicine, Balboa Building, San Francisco, California.

My dear Doctor Musgrave—In a recent issue of California and Western Medicine (Vol. XXII, No. 7) there was an editorial headed "Fantastic Schemes for Formularizing and Socializing Medicine." The conclusions in the editorial were apparently drawn from extracts from an article, "Health Surveys in the Oakland Public Schools," in the Alameda County Public Health News (Vol. II, No. 3), as frequent quotations from this article are given. The article states, in italics, that "it is findings like these upon which parents rely to safeguard the health and lives of their children."

Knowing that it is the desire of California and Western Medicine to be entirely fair, the Board of Directors (Public Health Center), to whose attention the criticism was called, have instructed me to make a reply, knowing that your idea of fair play will be such that you will publish it.

The purpose of these health surveys seems to have been misunderstood and other parts of the article quoted overlooked. As stated in the article, "you will notice that at no time (as based upon this survey) has a diagnosis been made; merely the fact recorded that a defect is suspected." The survey is a series of simply objective tests recommended by leading specialists about the San Francisco Bay who had in mind the method in which they were to be used, and are intended to find the children that are apparently well, so that they may be eliminated from special attention.

"To verify the survey findings and to gain the co-operation of the parents in the promotion of their children's health, eleven community centers have been established. The doctor is in each of these centers one morning or afternoon a week." "With the parent or guardian of the child present, the physician makes a thorough examination." The children are seen by appointment only, and the physician himself regulates the number of appointments. Each doctor sees on an average from three to five children an hour "conferring (with the parent) as to the best way of improving the child's health. If there is a family physician or dentist, the child is referred to him by the school doctor on a form provided. If not, the parents are advised to select and consult one. Should they state they are unable to pay for medical service, they are referred to the medical social service department at the treatment clinic of the Public Health Center, a card being given stating time and place."

Yours very sincerely,
ALVIN POWELL, M. D.,
Director.

Comment—Yes, we don't.

Dear Doctor—I have just been reading the article on throat swabs in the enclosed bulletin (official bulletin, State Board of Health), and am mad.

We have enough slams from the lay health worker, etc., at present, without a member of our profession in an official position going out of his way to furnish them with ammunition.

Since when have laboratory technicians developed a system of ethics or a sense of responsibility?

Since when have the ethics and honor of the average M. D. been improved and purified by his acceptance of a

political job so that he may be trusted beyond the rank and file of our profession?

I have known a health officer to put a scarlet fever patient of his own in a back room, with the sign on the door of the room; nothing on the front of the house, and then allow the sister of the patient to give music lessons to children in the front rooms.

I have known of the assistant to a health officer to hand the swab to a 7-year-old boy and tell him to take the culture, etc., etc. (Signed) DOCTOR X—.

Note—The paragraph referred to by the writer reads:

"The importance of absolute exactness in diphtheria diagnosis, made possible by correct report of cultures from the throat and nose, makes obvious the necessity of a proper technique in taking swabbings for cultural tests for diphtheria. Even so simple a procedure is often inadequately or carelessly done with a resulting report which may mislead. *Laboratory technicians* sometimes wonder if poor swabbings are not sent intentionally to obtain negative findings. For release, it has been deemed safer to have the swab taken by the *health officer* or *his assistant*."

STATE BOARD MEDICAL EXAMINERS

Sacramento, Calif., November 6, 1924.

Re: Anesthesia.

Dear Dr. Musgrave—Our legal department has held that the giving of an anesthetic by a nurse constitutes a violation of the Medical Practice Act.

In the standardization of hospitals, does your committee make any point of this important feature; i. e., is it required that anesthetics in an approved hospital must be given by one licensed under the Medical Practice Act in the state of California?

Very truly yours,

C. B. PINKHAM, M. D.,
Secretary-Treasurer.

CALIFORNIA AND WESTERN MEDICINE

December 3, 1924.

Dear Doctor Pinkham—This is in reply to your letter inquiring whether or not we will accredit a hospital where anesthetics are given by other than licensed individuals.

In view of the fact that the Council on Medical Education and Hospitals of the American Medical Association, in consequence of your similar inquiry to them, has invited my comment upon the same point, it seems advisable to again answer this question rather fully.

We have not required that anesthetics be given only by an educated physician in our hospital betterment work, except in those hospitals purporting to teach anesthesiology.

Some years ago the House of Delegates of the California Medical Association passed unanimously a resolution recognizing the giving of an anesthetic as the practice of medicine and created an anesthesiology section in the California Medical Association. The opinion of the attorney of your Board of Medical Examiners, as well as an opinion of the Attorney-General, to the effect that the giving of an anesthetic by other than one licensed to practice the healing art constituted a violation of the laws of California was important evidence in influencing the California Medical Association to take the action it did.

Since that time, in hundreds of public addresses, letters, personal visits to hospitals, and repeatedly in CALIFORNIA AND WESTERN MEDICINE and in BETTER HEALTH, I have urged that, inasmuch as we have made anesthesiology the practice of medicine in principle, that we follow that principle to its logical conclusion in practice. This I have done as chairman of the Hospital Betterment Service of the League for the Conservation of Public Health, which committee, as you know, has by delegation of authority represented the California Medical Association and the Council on Medical Education and Hospitals of the American Medical Association for years in the hospital work in California.

With the co-operation of your board, the three Class A medical schools of the state and the members of the Section on Anesthesiology, the League was able to secure an

amendment to the California Medical Practice Act, requiring the teaching of anesthesiology to medical students. Much more has been done in a consistent, sustained effort to develop a wider appreciation of anesthesiology as a medical specialty.

However, as stated above, we have not as yet made it a *requirement* for accredited hospitals for many reasons, a few of which may be mentioned.

License—This, as you know, does not mean enough in California to warrant our using it as a basis from which to classify anything pertaining to health. There are persons whose state license probably grants them legal authority to give an anesthetic who would not be permitted to give an anesthetic or practice the healing art otherwise in any hospital accepted as an institutional member of the League or accredited by the American Medical Association. Then, too, the legal phase of the question has not been cleared up. The accuracy of the opinions of your attorney, that the giving of an anesthetic is the practice of the healing art, could be very readily tested in court and if sustained and law enforcement pushed, it would help clarify the problem. It has been, and still is easy to get evidence, and the Board of Medical Examiners is at least one of the boards charged with the enforcement of the law. If I mistake not, *there are government hospitals, as well as others, in the state where even unlicensed persons have been and are giving anesthetics.*

Other Legal Difficulties—The absence of court decisions in California and their varied trends elsewhere makes even a moral force—which is all we pretend to have—hesitate to get too far ahead of public opinion, particularly about a matter which is not of nearly the importance of other matters claiming our attention. Some superior courts have ruled that the surgeon is responsible for the anesthetist's work; others have ruled that the anesthetist is responsible whether licensed or not; others have ruled that the hospital is responsible, and there are still other slants deducible from court records.

What Constitutes an Anesthetic—There is much difference of opinion on this point. Some claim that a few whiffs of ether or gas during labor or in a dentist's office is not the giving of an anesthetic. Some would include these and the use of scopolamin and any and all of the various substances and methods used in producing local anesthesia.

Not Enough Educated Anesthetists Available—There are many places in this and other states where no educated doctor of medicine is willing to give an anesthetic except in emergencies and to selected patients. There are, of course, enough of specialists and young physicians who are willing to give anesthetics in the larger centers, but even here, as you know, many of the highly respected surgeons and obstetricians prefer their own specially trained technicians to give their anesthetics.

And so I might go on for pages telling of other facts to this many-faceted problem as it has presented itself to me in my hospital and other medical economics work.

These complications in the aggregate have induced me, and those I speak for, to limit our efforts to education and persuasion, hoping that, in the course of time, we will be able to make a *requirement* of what we now cover with a *request*.

If I have failed to make my answer clear, or if there is any assistance I can give you in what I assume is the beginning of a movement for law enforcement, please call upon me.

Sincerely yours,

W. E. MUSGRAVE,
Chairman Hospital Betterment Service.

Gurdon Potter, M.D., in a letter to the editor says:

"On page 647 of the December issue you quote a surgeon as having said, 'that anyone who believed in physiotherapy was the son of a quack.' I am sorry for this man, because just such an attitude in the profession has kept it in the narrow groove it has occupied for so many years, and allowed the birth of half-baked cults to arise on every hand.

"I have been a student of the application of 'mechanical means on a physiological basis' to the correction of pathology in the human body for the past twenty years, and have been given the laugh many times for my views in the matter. However, I have yet to see it fail, if your

diagnosis is correct, and you know your pathology. Richard Cabot well says 'that 50 per cent of our diagnosis is incorrect.' Physiotherapy is not a 'cure-all,' and never will be. Neither is anything else, but, brother medical man, there is some truth in physiotherapy, hydrotherapy, and other controllable agencies if you have an open mind to investigate them, and really investigate them, and not take the 'barbershop chatter' that so often passes as 'gospel' in some medical groups.

"No wonder that H. C. Wood said, thirty years ago, 'if further progress is to be made we must question the old methods and search out new, which may happily lead to more fruitful fields.' Yea, verily. At the present time the really big minds in bacteriology frankly say that we are again approaching a somewhat similar condition in that branch—or words to that effect. In the light of common sense, and for the sake of real progress—yes, for the love of Mike—wake up, get out of the rut, look things over, and if they don't prove up, scrap the whole thing—but stop, look, and listen."

Tryparsamide in the Treatment of Neurosyphilis—

Udo J. Wile and Lester M. Wieder, Ann Arbor, Mich. (Journal A. M. A., December 6, 1924), attempted to determine the value of tryparsamide in the treatment of neurosyphilis, as well as to determine the toxicity and the untoward reactions of the drug, if such existed. Fifty cases of cerebrospinal syphilis were utilized. In the neighborhood of 325 injections were given to these patients. The fifty cases allow of the following differential clinical analysis: General paralysis, twenty-one cases; taboparesis, six cases; tabes dorsalis, three cases, and diffuse cerebrospinal syphilis, twenty cases. Tryparsamide showed itself of great service in causing a profound change for clinical betterment in these cases. The type of case found most favorably influenced has been the type in which least might be expected, namely, the parenchymatous type in which a considerable degree of deterioration had apparently occurred. The most striking clinical changes noted have been increase in weight, color and general appearance. In nine cases, a marked improvement of the mental state of the patient has been found coincident with the improvement in the general appearance. In five cases, the treatment was followed by clinical improvement when other forms of therapy, including intraspinal treatment, had failed. This clinical betterment is not paralleled by striking corresponding changes for the better in the spinal fluid. For this reason, it is possible that the improvement characterized by gain in weight and general appearance may be due partly to the effect of the drug on syphilitic foci outside the nervous system, as well as to the tonic effect of the arsenic content of the drug. Gastric crises and the lightning pains of tabes dorsalis have, as yet, not yielded to tryparsamide treatment in this series. It would appear that more treatment of the same type should be given in those cases in which no laboratory response has been noted, on the one hand; and that a greater period of time must elapse, on the other hand, before accepting clinical improvement as definitely evident of the therapeutic activity of the drug. With the exception of vomiting, which followed each injection in one case, in no other case was there the slightest untoward result, either from the standpoint of constitutional reaction or from that of disturbance of vision.

Another Middleman in Medicine—In commenting editorially upon another great corporation planning to practice medicine wholesale, the Illinois Medical Journal says that they are going to establish a system of industrial surgery in New York City, with its beginning a series of first-aid stations placed at intervals throughout the city. This application of "chain-store methods" to the practice of medicine by a corporation of lay people will be as appalling as it is brazen, and is a direct attack upon the health welfare of the community.

"Fifteen per cent of all pregnancies result in miscarriages, and 5 per cent in stillbirths," says Charles Herriman, secretary New York Children's Welfare Association. Three times as many deaths occur in utero and at birth, as during the first year of life.

Utah State Medical Association

SOL G. KAHN, Salt Lake City.....President
 WILLIAM L. RICH, M. D., Salt Lake.....Secretary
 J. U. GIESY, 512 Felt Bldg., Salt Lake City,
 Associate Editor for Utah

HAPPY NEW YEAR

A new year! Always it seems to mean so much. Another twelve months, a whole wonderful chain of three hundred and sixty-five and a quarter days in which to live, and work, and serve. It is a wonderful, an exalting, uplifting thought. It fills the heart with hope. To all you men of the medical profession who follow the calling of helpful service in the great state of Utah, to all of our brothers elsewhere—A Happy New Year. We can wish you nothing better on earth.

DESERVED CONFIDENCE

Those of you who follow the daily news may have read the following, under date of Tuesday, December 2, 1924: "Five persons are charged with practicing medicine without obtaining a license." If not, read it further along in this month's notes. Here is at last a practical illustration of one of the chief functions of the State Board of Registration—an illustration of how it should work. We who practice under the law, should realize that we have a duty to the body politic beyond the mere prescribing for human ills. To relieve suffering, to halt the course of disease is a noble work; but to safeguard the man who is ill, whose life may be in danger, is as much the duty of the doctor as that of the guardian of the law who shoots a dangerous animal on the street. Times change. With the passing, in a measure, of the "family doctor"—he who was physician, friend, and advisor of his patients in the past—let us not forget that the average patient is a man or woman who needs advice—a friend as well as a physician—that he knows not as we know what is genuine, what is worthy of trust and confidence as applying to our craft. It is on this almost childlike confidence, this ignorance if you like, this unfortunate gullibility of the masses that the cults flourish and grow temporarily fat. Hence, it is to the doctor, after all, to see that the standards of the profession are maintained and raised. The doctor, through the legal channels of the state machinery and his own committees on health and legislation may serve his fellow-man and his fellow-craftsman thus. Let those who are not qualified be cast out, cut off. The unqualified physician is as dangerous to the unsuspecting dupe of his pretensions as a dangerous drug. "He who steals my purse," says Shakespeare, "steals trash. But he who steals my reputation—" And what of the man who through ignorance, false pretense, personal greed, loses a patient's life? He steals—all. More power to the committee on health and legislation in their endeavors to ferret out and bring under the law men of this sort. In so doing they are protecting the people of the state, conserving their interests and their lives. And in so doing—in beginning this new year in this fashion—let us hope that they may win, not only their own and

ours, but the entire commonwealth's confidence and respect. Service is the great keynote of true human association, and how can one serve better than by safeguarding and defending human life against the wiles of that type of harpy which battens off of human pain and sickness, as the other type of harpy was supposed to batten off of human flesh. Let medicine today draw a sword of righteous indignation and, literally, protect the innocent.

Utah Notes (reported by J. U. Giesy, associate editor)—Salt Lake County Hospital Clinic Meets—The clinic of the Salt Lake County Hospital met Friday evening, November 28, at the hospital. The following subjects were presented: "Typhoids and Effect of Typhoid Immunigen," George R. Roberts; "Bladder Tumor in Child Four Years of Age," discussed by W. W. Barber and W. C. Cheney, and "Interesting Spine Cases" by A. A. Kerr, F. D. Calogne and Foster Curtis.

Illegal Practice of Medicine Is Charged—Five persons are charged with practicing medicine without obtaining a license in complaints issued from the office of the county attorney. Those named are Vonner E. Raymond, Alma S. Ash, Albert T. Faerber, Harold Hulme, and Spyros J. Parthenon.

Community Clinic Ends Busy Year—At the annual meeting of the Community Clinic and Dispensary, reports were presented by Harold M. Stephens, president; Miss Eva Hollis, treasurer; Dr. George W. Middleton, managing trustee; and by Mrs. M. S. Avery, executive secretary.

Following the reports, a resolution of respect for the late A. N. McKay was passed, and also a resolution thanking the Salt Lake County Medical and Dental Societies, who furnish the entire clinic staff.

The following trustees were elected: W. W. Armstrong, Dr. A. J. Hosmer, H. N. Byrne, F. M. Critchlow, and Harold M. Stephens. Following the regular meeting of the clinic, the board of trustees met to elect the new officers for the coming year, who were elected as follows: President, Harold M. Stephens; vice-president, Amy Brown Lyman; secretary, W. N. Williams; treasurer, Mr. Fitzpatrick, to succeed Mr. McKay.

Reports given at the meeting showed that a total of 3184 patients had been treated during the year, of which 1118 had never before received treatment from the clinic, while 2066 were patients who were returning for additional treatment. The report on the character of the treatment given showed 833 medical cases, 572 surgical, 1459 eye, ear, nose and throat, and 320 dental; also, 74 radium treatments. The patients sent to hospitals numbered 253, four of these receiving major operations, and 249 receiving minor operations.

The Salt Lake Community Clinic and Dispensary was founded by a number of business men of Salt Lake, of which the late A. N. McKay was one, for the purpose of giving free medical attention to those unable to secure it for themselves.

A Family Doctor One Hundred Years Old—Friends Honor Pioneer Utah Physician—The Centennial anniversary of Dr. Harvey C. Hullinger was recently celebrated in Vernal, Utah. Dr. Hullinger was born fourteen years after Lincoln, and was 2 years of age when Thomas Jefferson died. He came to Utah from Iowa in 1859, and served in the Civil War as a physician.

The celebration was probably the largest birthday party in the history of his county. The honor guest was presented with a leather chair, as a gift from the community. The large building was packed to capacity and many pioneers were present, as well as young people.

Dr. Hullinger made a touching address, and throughout the day refused to allow anyone to assist him as he moved about. He would say, "Don't take hold of me, you might pull me down." Dr. Hullinger has living twenty-five grandchildren, eighty-one great-grandchildren, and twenty-four great-great-grandchildren.

Dr. Hullinger received the following message from President Coolidge: "Dr. Harvey C. Hullinger, Vernal, Utah: My congratulations to you on this remarkable anniversary occasion. You have my sincere wishes that you may celebrate many returns of the day."

He also received telegrams from Governor Charles R.

Mabey, Congressman Colton, President Heber J. Grant, and many others. He was escorted about town by Messrs. McGraw and McPherson of Salt Lake City, in a beautiful new automobile.

According to Special Order No. 171, Headquarters 104th Division, United States Army, dated December 6, 1924, paragraph 6, Major John U. Giesy, Med. O. R. C., Felt building, Salt Lake City, Utah, is relieved from the 413th Infantry and is assigned to Headquarters 329th Medical Regiment as Division Medical Inspector.

Salt Lake Society—Secretary Critchlow makes an interesting 1924 annual report that might well be studied by county medical societies everywhere:

Number of regular meetings held, 18, including this meeting; number of special meetings held, 1; number of meetings open to the public, none; number of meetings held at hospitals, 3; largest attendance at meetings, 104; smallest attendance at meetings, 41; average attendance at meetings, 60; largest attendance of visitors at meetings, 24; smallest attendance of visitors at meetings, 1; average attendance of visitors at meetings, 5; number of clinical cases shown other than at hospitals, 17; number of papers read by members, 28; number of papers scheduled and not read, 2; members on 1923 roll, 209; members left town in 1923, 2; members paid dues in December, 1923, 5; members admitted in 1924, 19; grand total for year, 231; members moved from town in 1924, 2; members died during 1924, 4; members suspended for non-payment of dues, 1; active members this date, including honorary members, 224.

Members Elected—Fifteen, as follows: Newton Miller, F. G. Eskleson, George E. McBride, E. R. Van Cott, J. Clinton Bown, Burtis F. Robbins, Scott A. Jones, Edwin R. Murphy, Sam G. Paul, William R. Cannon, F. K. Root, M. Skolfield, G. H. Pace, S. H. Besley, Charles W. Woodruff.

Members Elected by Transfer—Four, as follows: D. W. Henderson, Juel E. Trowbridge, R. O. Porter, G. Wallace Hanks.

Deaths—Death has taken a heavy toll from the society during the year 1924. L. B. Laker of Eureka, Utah, died February 7, 1924, following an operation. J. Lane of Salt Lake City died of pneumonia March 18, 1924. J. F. Critchlow, Salt Lake City, died in an automobile accident July 24, 1924. Ernest Van Cott of Salt Lake City died of angina pectoris August 27, 1924. Patrick S. Keogh, an ex-honorary member, died November 25, 1924, of uremia.

Officers—The following officers have served during 1924: President, A. A. Kerr; vice-president, John Z. Brown; secretary, M. M. Critchlow; treasurer, J. E. Jack.

Board of Censors—T. A. Flood, term expires 1924. E. D. Hammond to serve one year. F. A. Goeltz to serve two years.

Delegates Whose Term Expires in 1924—E. F. Root, E. D. Hammond, W. G. Schulte, F. F. Hatch, J. Z. Brown, J. P. Kerby, J. E. Tyree, F. A. Goeltz, T. A. Flood.

Holdover Delegates—A. A. Kerr, E. M. Neher, C. L. Shields, V. J. Clark, A. C. Behle, W. R. Tyndale, H. P. Kirtley, F. B. Steele, J. C. Landenberger, M. M. Critchlow, Ernest Van Cott (deceased), W. R. Calderwood, D. L. Barnard, etc.

Alternates—W. F. Beer, F. E. Straup, T. B. Beatty, Clifford Pearsall, David Smith.

Committees

Public Health and Legislation—Ernest Van Cott, chairman; R. R. Hampton, J. J. Galligan. When Ernest Van Cott died, Dr. R. R. Hampton was made chairman and Sol G. Kahn was appointed on the committee.

Library Committee—W. R. Tyndale, chairman; George F. Roberts, B. E. Bonar, F. J. Curtis, E. M. Neher, F. B. Steele, F. A. Goeltz, R. T. Richards.

Program Committee—A. A. Kerr, chairman; M. M. Critchlow, secretary; John Z. Brown, F. E. Straup, John R. Llewellyn, E. D. LeCompte.

To Investigate Institutions Caring for Charity Patients—W. R. Calderwood, chairman; M. M. Nielson, Thomas E. Clark.

Auditing Committee—E. D. LeCompte, chairman; A. A. Kerr, L. N. Ossman.

Broadcaster for Hygeia—Willard Christopherson, succeeded by T. B. Beatty.

Community Clinic Committee—George W. Middleton,

chairman; A. J. Hosmer, W. Christopherson, F. E. Straup, J. F. Critchlow, succeeded by A. C. Behle.

Medico-Legal Committee—E. F. Root, chairman; H. P. Kirtley, J. C. Landenberger (three years); A. C. Behle, S. H. Allen, W. S. Ellerbeck (two years); M. L. Lindem, C. L. Shields, F. Leaven Stauffer (one year).

Building Committee—M. M. Nielson, chairman; W. R. Calderwood, Fred Stauffer, E. F. Root.

Medical Liability Insurance Committee—B. W. Black, chairman, resigned March 12, 1924; Sol G. Kahn, appointed chairman, March 12, 1924; F. A. Goeltz, S. D. Calonge.

Aschoff Committee—G. G. Richards, chairman.

Disabled Veterans' Committee—L. J. Paul, chairman; S. C. Baldwin, R. J. Alexander, W. F. Beer, J. U. Giesy.

Receipts

Members paid \$10 each, 202.....	\$2020.00
Members paid \$12 each, 20.....	240.00
Sale of caducei, 26 at \$1.25.....	32.50

Turned over to treasurer.....\$2292.50

The officers wish to thank the members who have served so faithfully on committees and who have co-operated to make the scientific programs a success. All committees have been active, but the Committee on Public Health and Legislation and the Library Committee deserve special praise for their untiring efforts.

At the last meeting in 1923, the by-laws were amended so that members not having paid their dues by February 1, 1924, were considered delinquent and the dues automatically raised to \$12.

On January 28, 1924, the by-laws were amended so that a medico-legal committee became one of the standing committees. The function of this committee is to advise with the defendant in any malpractice suit; to survey the evidence and the elements of the treatment; to appoint witnesses in the defendant's behalf; to adjudicate the question of fight or compromise; to advise with witnesses for the prosecution in malpractice cases; and to arrive at a conclusion as to the merits of such a case. Also to advise with medical experts in personal injury and corporation cases with the idea of promoting substantial justice. To attend the trial as spectators in person or by proxy all cases bearing medical testimony, either "malpractice" or "personal injury"; to listen carefully to such testimony and later review it among themselves; and finally, to prefer charges before the society against any member who makes statements contrary to modern scientific knowledge.

In view of the fact that the society has grown and now is a powerful organization, the present officers recommend that an office of historian be created so that records of the society may be kept from year to year in a concise form.

December 8, 1924.

Minutes of the Salt Lake County Medical Society (reported by M. M. Critchlow, secretary)—The program of the November meeting of the Salt Lake County Medical Society was a symposium on contagious diseases. The first paper was given by William A. Pettit on the "Differential Diagnosis of Contagious Diseases." Scarlet fever, measles, recurrent scarlatina, epidemic exfoliative dermatitis, German measles, drug eruptions, chickenpox, and smallpox, were thoroughly discussed. The paper was discussed by Drs. Beer, Jeidell, Day, and Calonge.

The treatment and sequelae of contagious diseases were dealt with in the paper by William C. Cheney. He took up post-diphtheritic polyneuritis, the various sequelae of scarlet fever and measles, smallpox, and mumps. He discussed the treatment of diphtheria, scarlet fever, and whooping-cough. This very interesting paper was discussed by Drs. John Z. Brown, McHugh, Calderwood, Peterson, Scott, Pettit, Jeidell, Lipkis, Calonge, and Major S. C. Gurney.

Earl Van Cott announced the death of Dr. C. M. Hart. Sol G. Kahn reported for the Committee on Public Health and Legislation, and gave his views on advertising. Fred Stauffer reported for the Committee on the Doctors and Dentists' Building. He exhibited plans for a new building, to be put up on the south side of South Temple, between Main and State, and related the plans for erecting such a building. This building is to be used by doctors and dentists, all except the first floor which is to

be rented. Discussed by W. R. Calderwood, M. M. Nielson, Fred Stauffer, and J. A. Phipps. W. R. Calderwood moved that the society declare itself in favor of the proposed building, and the committee be authorized to proceed with the plans. Seconded and carried. Further discussion by F. S. Scott, M. M. Nielson, F. H. Raley, and J. A. Phipps.

Resolutions on the death of Patrick S. Keogh were read by the secretary. It was moved by Warren Benjamin that the resolutions be adopted. Seconded and carried.

R. O. Porter announced that a railroad company had an opening for a physician out of town, and anybody interested should communicate with him.

A communication was read from Mrs. L. N. Ossman which stated that the Ladies' Auxiliary would hold a tea at the home of Mrs. J. C. Landenberger, December 3, 1924.

Annual Meeting—The annual meeting of the Salt Lake County Medical Society was held at the Commercial Club, Salt Lake City, December 8, 1924. The meeting was called to order by President A. A. Kerr. Seventy-seven members and one visitor were present. Minutes of the previous meeting were read and accepted, with one correction, as follows: "That the society declare itself in favor of the proposed building, and the building committee be authorized to proceed with plans for a building."

A clinical case of hare lip and cleft palate which had been operated was presented by S. H. Allen.

Applications for membership, signed by Lyman M. Horne and J. E. Morton, were read and referred to the board of censors.

President Kerr read an address, setting forth the work done by the society during the past year.

M. M. Nielson and Fred Stauffer reported for the building committee, and three plans were submitted. Mr. Vincent spoke a few minutes on his proposition to erect a \$600,000, eight-story building on First South, between State and Second East, to be partly financed by physicians and dentists, and used by them exclusively, at about \$1.75 per foot.

Thomas Boise of the Hogle Investment Company spoke on their proposition to erect a building on the corner of First South and State, to be leased to physicians and dentists only, at approximately \$1.75 per foot. Discussed by L. J. Paul, Fred Stauffer, and G. A. Cochran. Claude Shields moved that the various propositions be submitted in writing to the building committee, and that the committee should report to the society with their advice. Seconded and carried. M. M. Nielson wished a standing vote of those in favor of the doctors and dentists' building. All stood up.

Fred Stauffer reported for the banquet committee, and suggested that the banquet in honor of Salathiel Ewing will be held December 29, 1924, and the admission to be \$3.

The secretary's annual report was read and accepted.

The report of the treasurer, Joseph E. Jack, was read and accepted.

E. F. Root reported verbally for the Medico-Legal Committee.

W. R. Tyndale reported for the Library Committee, and recommended that \$600 be allowed annually for the library fund. The report was accepted.

M. M. Nielson reported, in place of W. R. Calderwood, for the Committee Investigating Charity Institutions. He read two legal opinions in regard to charging patients who are able to pay for physicians at the Salt Lake County Hospital by outside practitioners. Discussed by F. E. Straup. It was moved that the report be accepted. Seconded and carried.

Sol G. Kahn read the report for the Public Health and Legislation, which was accepted.

L. J. Paul reported for the Disabled American Veterans' Committee, and his report was accepted.

The following officers for the year 1925 were elected: John Z. Brown, president; F. H. Raley, vice-president; M. M. Critchlow, secretary; Joseph E. Jack, treasurer; A. A. Kerr, censor.

Fred Stauffer and F. H. Raley conducted President Brown to the chair. After a short speech by the new president, the meeting adjourned at 10:40 p. m. and refreshments were served.

M. M. CRITCHLOW,
Secretary.

Nevada State Medical Association

W. M. EDWARDS, M. D., Mason.....President
CLAUDE E. PIERSALL, M. D., Reno.....
Secretary-Treasurer and Associate Editor for Nevada

Washoe County Medical Society (reported by Vinton A. Muller, secretary)—The Washoe County Medical Society met in regular session in the rooms of the Chamber of Commerce, Reno, December 9, President R. H. Richardson presiding. The minutes of the previous meeting of November 11, 1924, were read and approved.

Communications—Two letters of condolence, which had been sent to Doctor David L. Shaw in connection with the death of his mother, and to Mrs. John Lewis in connection with the death of Doctor Lewis at the time of their passing, were read to the society, whereupon it was voted that these resolutions be adopted and spread upon the minutes.

Program—Doctor J. La Rue Robinson presented a paper on the extraction of magnetic foreign bodies from the eye by means of the giant electric magnet. He presented three case reports and demonstrated to the members of the society a magnet of his own design which differed primarily from the magnets upon the market, in that it possessed an armature which greatly intensified the pull of the magnetic tip. The magnet is operated by a six-cell storage battery. There were several questions asked by Doctors Albert, Piersall and others, which were in turn answered by Doctor Robinson.

C. E. Piersall, the secretary of our State Association, having recently returned from the meeting of the secretaries of the state medical societies in Chicago, rendered a report on the activities of this meeting.

Election of Officers for the Ensuing Year—The chairman announced that the election of officers for the year of 1925 was in order and called for nominations.

Doctor Tees nominated Vinton A. Muller for president. Nomination was seconded by C. E. Piersall, after which on motion duly seconded and carried, the rules were suspended and the secretary instructed to cast the unanimous vote of the society for Doctor Muller for president for 1925. C. W. West next nominated Doctor Piersall for the office of vice-president, which nomination was seconded by Doctor Pickard, after which on motion duly seconded and carried the nominations were closed, the rules suspended, and the secretary was instructed to cast the unanimous vote of the society for Doctor Piersall for vice-president for 1925. Doctor Piersall next nominated Doctor Horace J. Brown for the office of secretary-treasurer. Doctor J. L. Robinson in turn nominated Doctor Henry Albert for the same office. Doctor Albert declined the nomination, but this was not accepted by the society, whereupon ballots were passed and a vote taken, with the result that Doctor Henry Albert was elected to the office of secretary-treasurer for 1925. C. E. Piersall was next nominated and elected as censor for two years, and C. W. West as censor for three years.

Officers-elect for 1925, therefore, are as follows: President, Vinton A. Muller; vice-president, C. E. Piersall; secretary-treasurer, Henry Albert; censors for one year, S. K. Morrison; censor for two years, C. E. Piersall; censor for three years, C. W. West.

Doctor Ajika Amano, who has filed application for membership in the society, being present as a guest at this meeting, was formerly introduced to the members.

Attendance—Members: Richardson, Albert, Robinson, Walker, Piersall, Pickard, W. H. Hood, Robison, West, Adams, Servoss, Tees, Morrison, Muller. Guest: Ajika Amano.

Before placing the motion of adjournment in order, Doctor R. H. Richardson, as retiring president of the society, gave a short closing speech.

Nevada Medical Bulletin Notes (edited by C. E. Piersall, Reno, Nev.)—You will see in the next few issues of the Bulletin of the American Medical Association what was said and done at the recent conference of the state secretaries.

There are 145,000 M. D.'s in the United States and

only 90,056 members of the American Medical Association, and that 40,000 of them are indifferent about organization and progress is all worth knowing, and the reason for such statistics is most important to us.

At our 1925 state meeting at Elko, we will have a paper about "The Workings of the American Medical Association." This should create interest where now there is indifference.

Read on and see what Dr. Harris said about Direct vs. Indirect Medical Service and Dr. Haggard's message on Periodic Health Examinations. You may obtain articles on and examination blanks for physical examination of apparently healthy persons, from the American Medical Association.

The graduate extension work being carried on by several universities and proposed to be done by the American Medical Association will save us time and money by bringing the teachers to us.

More clinics and case reports are advocated for our county and state programs.

Remember that the American Medical Association is not only a group of officers; it is you and I. What would American medicine be without this organization? Belong and boost. Read the Journal and Bulletin. Subscribe for Hygeia for your clientele, your city library, your politicians.

What subjects do you want presented and discussed at Elko next fall? What subject will you present or discuss? After the program is arranged it is too late to say "Why was I not listed for discussion or a paper?"

California Northern District Medical Society (reported by Charles J. Durand, secretary) — The thirty-seventh semi-annual meeting of the California Northern District Medical Society was held in Sacramento on November 25, 1924. C. E. Schoff, Sacramento, president, and C. J. Durand, Colfax, secretary.

The morning session was devoted to clinics of the Sacramento Hospital:

Surgical, by J. B. Harris, M. D.; A. K. Dunlap, M. D. Medical, by F. F. Gundrum, M. D.; F. N. Scatena, M. D. Urological, by N. G. Hale, M. D.

At the afternoon session, Dehydration in Infancy and Childhood was discussed by Edward S. Babcock, M. D., Sacramento; The Kidneys in Pregnancy, by Alice F. Maxwell, M. D., San Francisco; Practical Points in the Diagnosis of Gastro-intestinal Disease, by Walter C. Alvarez, M. D., San Francisco; Practical Considerations of Sinus Diseases, by Joseph O. Chiapella, M. D., Chico; and Pyelography in Its Relation to Urology, by Nathan G. Hale, M. D., Sacramento.

At the closing business session, the following officers were elected: President, Charles J. Durand, Colfax; first vice-president, J. R. Snyder, Sacramento; second vice-president, Oscar Johnson, Sacramento; third vice-president, Dewey Powell, Stockton; secretary, J. O. Chiapella, Chico; treasurer, O. Stansbury, Chico; board of censors, James H. Parkinson, Sacramento; J. D. Dameron, Stockton; D. H. Moulton, Chico; Charles E. Schoff, Sacramento; George J. Hall, Sacramento.

California Association of Medical Social Workers (reported by C. Ruth Hersey, secretary pro tem.) — At an executive meeting held November 21 at the Children's Hospital, the following new members were elected: Miss Alice M. Keene, Director Health Center, St. Luke's Hospital; Miss M. Meininger, clerical assistant, Mount Zion dispensary; Miss Margaret M. Lindsay, Stanford Women's Clinic; Erla I. Ninnis, Skin Clinic, Stanford Hospital; C. Ruth Hersey, head worker, Medical Clinic, Stanford Hospital; Abbie Carleton Doak, Children's Clinic, Stanford; Ida Schoenitzer, district nurse, San Bruno clinic. Ruth Cooper, County Charities, Los Angeles.

The president reported seven favorable answers to fourteen letters sent to possible candidates to membership in Southern California.

The Army Wants Doctors — On January 12, 1925, an examination will be held for the selection of medical officers of the United States Army. Those interested may secure additional information from any military organization.

Medicine Before the Bench

FINDINGS AND COMMENTS OF THE COURTS ON ACTS AND OMISSIONS OF DOCTORS

[EDITOR'S NOTE—The law reports contain many interesting decisions, involving the reputations and fortunes of doctors. In this column in each issue a brief summary of one or more decisions and comments of the several courts of last resort upon the cases will appear. The matter will be selected by our general counsel, Hartley F. Peart, who, with Mr. Hubert T. Morrow, attorney for Southern California, will contribute from time to time.]

In a case cited with great frequency before the courts, it appeared that the defendants were licensed physicians and surgeons practicing as partners. One of them, Dr. S., amputated the right leg of the plaintiff, the patient dying a short time thereafter. The representatives of his estate secured a verdict before a jury, from which verdict an appeal was taken. It appears that the body of the deceased plaintiff was exhumed at the instance of the deceased's administrator to determine just what the condition of the bones were, and a portion of the bones of the plaintiff were produced in court. The Supreme Court of the state in which the action was tried, in passing upon the case, wrote an opinion which has become a classic. We quote from a portion of it, as follows:

"A final and practical reason for the exception to the ordinary rule in negligence cases is the inherent and inevitable uncertainty of available testimony. The basis of the proof of negligence and of the hypothetical questions to plaintiff's experts is, naturally, the narrative of the family or friends of the patient. Their testimony must ordinarily be unsatisfactory, because of the presence of natural bias, the absence of technical knowledge essential to proper observation, and often the want of opportunity for actual perception, as will presently appear in this case. 'The physician,' said Judge Upton, 'is liable to have his acts misjudged, his motives suspected, and the truth colored or distorted, even where there are no dishonest intentions on the part of his accusers. And from the very nature of his duty he is constantly liable to be called upon to perform the most critical operations in the presence of persons united in interest and sympathy by the ties of family, where he may be the only witness in his own behalf.' This is not necessarily, however, the greatest of the surgeon's tribulations. He is confronted by other uncertainties in testimony greater than those of the human constitution, however fearfully and wonderfully we may be made or act, and greater than those of physical science, however elusive it may be. He is faced by the eccentricities of medical experts. We have no inclination to share in the prevalent and intemperate denunciation of their unreliability and veniality. But if every verdict mulcting a reputable physician in damages must be sustained, if any of his professional brethren can be induced to swear that, assuming the testimony of the family and friends of the patient to be true, the physician had made a mistake of judgment or had been guilty of unscientific practice, then the profession would be one which 'unmerciful disaster follows fast and follows faster.'"

Whose Doctor Are You? — "Nearly every industrial concern employs some doctor," notes Samuel E. Earp (Journal Indiana Medical Association). "Every department store, hotel, fraternal and civic organization also has its own doctor. Most of these physicians receive a nominal fee. A general practitioner is called to see none of these sick persons, and hence he does less practice than in former days, and the newer generation feels the effect more than do those who have been established for a number of years and do work as consultants."

Medical Economics and Public Health

Oregon Defeats Health Insurance—The most complete and drastic scheme of Universal Compulsory Health Insurance yet devised was on the Oregon ballot this year, and was defeated by about three to one. The initiative was craftily drawn as an amendment to the Industrial Accident law, and would have placed the complete control of all agencies of scientific medicine under a political board.

The most interesting feature of the fight, which was carried forward in the usual crusading manner, was the line-up of the forces. *Many so-called health and welfare groups were strongly with the socialists.*

Public Health Ideals—In discussing this interesting topic, as compared with current procedures in England, Doctor R. A. Lyster (Lancet) says:

"The separation of the medical work of the Board of Education from the Ministry of Health is just as complete as ever, *and any alleged unification in that direction is merely make-believe.* It has long been an established ideal of this society that practical unification in this direction is urgently necessary, and I have no doubt that during the coming session the prosecution of this campaign will be continued.

"Local unification of medical services is still a pressing need. All public medical work should be combined in one department under one head, and as far as possible controlled directly through one committee of the local authority.

"At the present time the Ministry of Health and the Board of Education are paying large sums of public money direct to county nursing associations, district nursing associations, welfare centers, and all kinds of voluntary associations, with results that are deplorable from the economic expenditure of public funds and the point of view of efficiency of organization.

"The strangle-hold of the big voluntary associations upon public health work has become one of the dangers of health work. No one appreciates or values more highly than myself the valuable work accomplished by small local associations for after care of tuberculous persons and defective school children, and also by those voluntary workers attached to maternity and infant welfare centers all over the country. These deserve the highest praise and every possible encouragement, but the big associations and "national councils," with whole-time paid officers (a curious kind of "voluntary" work), invariably attempt work which, in my opinion, is far better done by officers employed and controlled directly by local authorities.

"The ideal that public administration should be carried on by public officers and not by voluntary associations can only be departed from with grave danger to the state and to the individual.

"It is a curious mentality which puts a halo round self-appointed members of so-called "voluntary associations" and their (usually unqualified) officers.

"There has been a constantly increasing public danger due to a growing inclination on the part of the central authority to make rules and regulations for all sorts of detailed conditions, and to exercise a supervision over minutiae of administration which, if successfully established, can only result in a degradation of local government. This pernicious tendency is the cause of an increasing irritation on the part of local government officers and local authorities. It is gratifying to be able to record the fact that recently the Prime Minister, and also the Minister of Health, expressed opinions that *the powers of local authorities should be greatly increased, and that there should be greater freedom in local government.*"

Government in Business—"The tendency of government has been, during the past decade or so, to rush headlong into business," writes Paul Shoup (California Journal of Development). "In doing this it has the great advantage over private enterprise, and a great disadvantage as well, in that it does not have to succeed to keep

going. It does not have to justify itself on economic grounds. It may operate a gas plant, run a street railroad, conduct a waterworks, and lose vast sums and yet not be held accountable, for it has the resources of taxation to make up deficits of all kinds, whether the causes of these deficits have been incapable management, profligate wastefulness, or direct dishonesty. Private enterprise must be conducted economically and must justify itself in a business way or fail."

The unanswerable force of this argument still applies if "medicine" is substituted for "business."

"Shall the medical profession vend its products directly to the consumer or shall it sell them to a middleman or third party?" was discussed (House of Delegates, A. M. A.) from the standpoint of what is best for the public as well as from the standpoint of the ultimate effect on the independence and the welfare of the physician as a result of "dealing through a jobber or middleman." This presentation was placed before the House of Delegates by the Judicial Council, because, as stated in its report, lay organizations are offering periodic medical examinations to the public for a stated sum per annum, the examinations being made by physicians who receive from these organizations a much smaller sum than is charged the person examined and who report their findings, not to the examined, but to the officers of such organizations. The council having expressed its disapproval of the methods and the general activities of lay organizations in the field of periodic health examinations was sustained in its position, that *"the proper person to make such examinations and to give advice relative thereto is the family physician, aided, when necessary, by local specialists."* The House of Delegates adopted the following resolutions, after consideration of the matter as a Committee of the Whole:

RESOLVED, That the Committee of the Whole recommends to the House of Delegates that the practice outlined in the supplementary report of the Judicial Council be condemned as against the best interests of the public; and be it further

RESOLVED, That the Judicial Council be instructed to carry on an educational campaign in conjunction with the constituent state associations and to co-operate with other councils and bureaus of the American Medical Association in the promotion of periodic health examinations by family physicians.

If county societies or individual members wish further information, they should communicate with the secretary of the California Medical Association.

Medical Charles Darwins Needed—"What we need today a good deal more than a larger number of research workers is a medical Charles Darwin who could correlate the innumerable detached scientific truths applicable to the practice of medicine already discovered and show us how these can be put to more general practical use," believes E. H. Ochsner. "No one will ever be able to accomplish this important task who does not know medicine from every angle, including the economic angle."

Rockefeller Foundation in a New and Splendid Service—The prefatory note in the first issue of a new series of publications explains the very commendable purpose and the methods by which the Rockefeller Foundation proposes to assist the cause of medical progress by bringing together ideas not otherwise widely available.

"In the present period of unprecedented progress and readjustment in medicine, the problem of the dissemination of information is becoming increasingly difficult and perplexing. In the field of research, productive effort is so abundant that it is quite impossible for an investigator to keep in touch with general literature except through abstracts or reviews. Moreover, lengthy papers, and especially those dealing with problems of administration, equipment, methods and maintenance of laboratories and clinics, are year by year more difficult of publication. This is especially true of contributions in the field of medical education, which, in that they are fundamental to all progress, are in the long run of prime importance. Plans of new buildings, methods of instruction, and experiments in teaching are usually published in local journals or for distribution as commemorative volumes in

connection with a dedication or inauguration of new facilities. Such material, naturally, is not widely disseminated. Likewise, the traveler to other countries, interested though he may be in fundamental problems of medical education and returning with first-hand information of new buildings, and new methods, can reach only a few associates or perhaps the staff of a single institution.

"To avoid some of these difficulties, it has seemed advisable to the officers of the Division of Medical Education of the Rockefeller Foundation to collect and publish from time to time brief descriptions of clinics, laboratories, and methods of teaching in different parts of the world in order that the information in convenient form may be brought to the attention of those most interested. It is hoped that the material may be of assistance to those planning improvements in buildings and methods."

Fake Health Literature—"The New York Department of Health calls attention to the fact that health articles containing advice on how to keep well are now copied as to style by the manufacturers of cure-alls and fake remedies of every description. Under these circumstances it is difficult for the public to recognize the true from the false and be able to protect itself from the snares of the fakir," says the Indiana Medical Journal editorially.

When the Frost is on the Pumpkin and the Fodder's in the Shock is the time for county fairs and with them the inevitable baby contests. Of course, these baby shows put on in the guise of promoting children's health are, for the most part, sponsored by lay persons, but nevertheless in order to give them an air of trustworthiness and finality some very reputable and experienced physicians will be called upon to give their time gratuitously for about a week to the main idea of telling fond mothers whether their pot-bellied youngsters are getting well balanced rations or not, or suffering from anything from hives to infantile paralysis. The big idea is to have a good show that will attract mothers and get a lot of very valuable free advice from some very reputable physicians, and it does not make any difference whether the candidates are able to pay or not.—Indiana Medical Journal.

Dangerous Advice—"Shall the health officer expect the nurse to diagnose communicable disease? Certainly not. But he does expect her to be alert for its possible presence and to report her suspicions for his (health officer's) confirmation, even in cases under the care of physicians," says J. J. Sippy, Executive San Joaquin Health District (Pacific Coast Journal of Nursing). "Physicians resent this at times, but the responsibility is not hers as a nurse but as the health officer's assistant or deputy, and so long as cases of smallpox continue to be diagnosed as 'Cuban itch,' scarlet fever as 'stomach rash,' and diphtheria as 'croup,' we all know that some physicians have their limitations in diagnosis, and that regardless of their sensitiveness they must expect some official intervention if these diseases are to be controlled."

"Even the ultra-conscientious and capable physician may at times be unaware of the prevalence of diphtheria in a locality and thus overlook a mild diphtheritic tonsillitis, the true diagnosis of which the nurse, with her knowledge of other contacts positively diagnosed as diphtheria, can rightfully suspect. In fact, there is symptomatically nothing so obscure about most of the contagions, which the well-trained nurse with keen observation and experience with large numbers of cases is not in a position to diagnose almost as accurately as the average physician whose experience is limited to the occasional case."

The taxpayers of California, in county, municipal, state, and national taxes in 1923, paid considerably more than \$500,000,000 in taxes, or substantially the value of all the products of the soil of the state, fruit, and farming in their raw state.—California Journal of Development.

These figures include the Sheppard Town (er) and Country practice.

The Editor Illinois Medical Journal Believes That what the colleges want and what the country and profession needs is the study of medicine so arranged that a

man of intelligence, of moral principle, and of talent for medicine, can learn how to make sick people well, and how to teach well people how to keep so. There is now too much detail, too much preparation, too much red tape, and an absolute lack of balance. What the public wants urgently is a replenishment of the ranks of old-fashioned doctors. Until this is done the study of medicine will continue to dig its own grave.

Health Examinations—After giving the problem of periodic examinations serious consideration, the committee of the Massachusetts Medical Association, among other important findings, believes (Boston Medical and Surgical Journal) "that unless the profession at large can and does carry out health examinations the real object of health examinations cannot be obtained. . . ."

"While it is true that in some of the more elaborate plans for conducting physical examinations several specialists participate in each physical examination, the committee feels strongly that, as a general policy, it is much sounder if the examined individual is regarded as an entity by one physician rather than as a collection of segments with each of these segments a province of a different physician. . . ."

"The committee would like to see the general practitioner in rather more complete charge of his patients both in illness and in health, not because it might seem to be of benefit to the physician, but because the committee believes that it would be of great benefit to the patient. . . ."

"The committee believes that the medical profession is and must be the very foundation stone of public health, and is inclined to look askance at certain tendencies to separate widely the functions of curative medicine and preventive medicine. Always there will be, of course, specialists and leaders, but the general practitioner should practice preventive medicine as he practices curative medicine."

Hospital Association Among University Students—The University of Illinois (The Nation's Health) claims the most thorough and complete medical service to all students largely at state expense.

The essayist, Joseph F. Wright, believes other universities will copy their system. "The plan for the student health work is carried out in three closely related but distinctly separate departments: the medical department itself, the department for physical training, and the one for general athletics. . . . Most medical attention to students is carried on by the university at state expense, and the work in this department is one of the outstanding things at this university. . . . Most of the work is done by the corps of six university physicians, four of whom attend to the health of the men students, two to the women."

"In connection with the health service there is a hospital on the campus expressly for student use. Many of the students belong to the hospital association, membership in which costs \$3 each semester. This minimum fee entitles the member to all the care furnished by the university hospital, without further cost."

The Need of a Course in Medical Economics in Every Medical College—Today the average medical student is well grounded in the fundamental sciences underlying the practice of medicine. This is acquired at great expense of time and money. The student leaves his alma mater less well prepared in the art of medicine and utterly unprepared to handle those problems which are quasi-scientific in nature, with the result that either he flounders around for from five to ten years until he works out these problems for himself or accepts some poorly paid position in a health department or industrial concern or gives up in despair and leaves the medical profession in order to enter some other vocation.—E. H. Ochsner.

Yes, We Do Not Practice Medicine—An essayist (Pacific Coast Journal of Nursing) illustrates how nurses do not practice medicine, by telling of an instance where a teacher reported to the nurse that pupils had an itching eruption.

"Upon inspection of the pupils, the nurse found that eleven out of fifteen pupils had either in-

petigo or scabies. What was she to do? The parents would not take these children to a physician nor would they have a physician come out—\$70 for scabies—it isn't done. The nurse had gotten permission from the county physician to use ammoniated mercurial ointment for impetigo, sulphur ointment for scabies, and always had a supply with her for such emergencies as this. The children usually paid from 10 to 15 cents for a very small box of the ointment. In this case the school district paid the cost of the ointments. As you know, these small schools are usually made up of four or five families; therefore, it was not difficult for the nurse to make the necessary home visits to teach the mother how to carry out the treatment for impetigo and scabies."

If this is not diagnosing and treating disease and thus practicing medicine, what is it?

Educated licensed physicians do not always find it so easy to make a correct diagnosis of all itching skin eruptions, nor do they all take chances with ammoniated mercurial ointment when the diagnosis is uncertain. Sulphur ointment has the virtue that it is harmless.

All worthwhile physicians fully appreciate the tremendous value of public health nursing, and they have the greatest admiration for the splendid work the vast majority of these women are doing. Doctors, better than others, realize the personal sacrifices that the pioneers in this comparatively new service are making, and always extend the hand of helpfulness and encouragement to these nurses.

Physicians do feel that public health nurses have enough to do in this broad and hardly explored field in which they have been educated and trained to serve, without attempting to diagnose and treat disease.

Compensation Insurance Fund Pays Dividend—The Industrial Accident Commission has authorized the return of an average of 30 per cent of the premiums collected from policy-holders during the year 1924. The dividend for the current year reflects a successful conduct of the fund that is shared in by its patrons. Notices of return premium will go out about January 1, 1925. During its existence, extending over a period of eleven years, the fund has returned to its policy-holders \$8,300,000.

This year's volume of business is the largest in the fund's history.

Telephone Amenities and Otherwise—An editorial under the above caption in Northwest Medicine, November, 1924, evidently struck a responsive cord in the hearts of several of our readers. The closing paragraph of the editorial reads:

"If anyone is to be kept waiting at the telephone, the one who calls should do it and not the one who receives the call. It might be well if physicians would bear in mind that good manners will be better served if they will allow their attendants to ring up others only after they themselves are ready to answer. Or, better still, as soon as the other fellow's attendant has indicated that he is on hand to take the telephone, and themselves do whatever waiting is necessary."

Some Things the Mail Man Brings Doctors—One of our members dropped into the editorial office the other day and handed us the odds and ends of the things that had come to him through the United States mails recently.

We note the following abstracts:

Case 1—*Called a West Union Tel-Gram*—"Long Beach, Calif. Many doctors and 80 to 90 per cent of the patients treated with concentrated orchitic solution—goat, ram or monkey type—have decreed that your interest should be eminent. Return this Tel-Gram, designating quantity desired of Concentrated Orchitic Solution—goat type, ram type, monkey type."

Case 2—*Form Letter on the Stationery of an M. D.*—"Mr. — suffered a hemiplegia of the left side, January 13, 1924, and the doctors there said nothing would do any good. April 16, I gave him 20 cc. more of the Concentrated Orchitic Solution. Today, April 19, his blood

pressure is normal and he is very much improved. Walking without his cane."

Case 3—Was an announcement to the effect that the chiropractors were going into politics!!?

Case 4—A "Catechism of the Electronic Methods of Dr. Albert Abrams."

Case 5—An invitation from —, A. M., M. D., on stationery of "The Birth Control Clinical Research," to send \$1 for "Birth Control Methods."

Case 6—A. D. O., M. D., announces the removal of his offices and invites his friends to a two-day pre-view of his new offices.

Case 7—Announces the opening of the — Laboratories "Under Medical Supervision."

Case 8—Letter inviting purchase of lottery tickets. (Letter forwarded to postoffice authorities.)

Case 9— — Foundation Clinic. They want to cooperate with doctors."

Case 10—A "personal puffery" bulletin of the type now issued by certain hospitals, health centers, clinics and individual physicians, telling other doctors all about me and my methods.

Case 11—An invitation to buy "six essays on sex" and "How and why we are made."

Cases 12, 13, and 14—Advice about investments and urgent invitations to buy—and—and—

Some Day We Will Meet Here—Maybe—What, if any, common ground is there for the physician, the health officer, and the layman to meet upon? This has been a cause for much discussion, and apparently a partial answer may be found in periodic medical examination of the apparently healthy person. This is a field in which the health officer can preach the lowering of morbidity and mortality rates; the health enthusiast picture a perfect future race; the physician exercise his diagnostic technique and develop along therapeutic lines; and the average citizen, the apparently healthy person, participate with reasonable expectation of a fair return for the effort.

The health officer has been mainly active in mass health promotion and protection; the physician steeped in disease diagnosis and treatment; the layman interested in his pains and symptoms. *All must become adjusted to personal medicine—the health officer as the promoter, the physician as the guide, and the layman as the willing seeker after health.*

"The private physician is more or less familiar with the patient's interests and environment and, therefore, better able to render health service to the individual than is the case when the examinee comes as a stranger to a strange physician. This is important—the success of the health examination depends more upon the rapport between physician and examinee than does a diagnostic examination."

"The medical technique used in making health examinations differs in no essential from that of any thorough physical examination. The points of view of physician and examinee and their attitude toward the examination, are, however, essentially different from the usual relationship between physician and patient."—A. N. Thompson (The Commonwealth).

A Microscopic Study of Mercury Absorption From the Skin—Microscopic examination made by Karl G. Zwick, Cincinnati (Journal A. M. A., December 6, 1924), of intact animal skin, to which mercury, in the form of mercurial ointment had been applied by inunction, established: 1. The presence of globules of mercury: (a) in the infundibula of the pilosebaceous follicles; (b) in the orifices and excretory ducts of the sebaceous glands. 2. The absence of globules of mercury: (a) in the intact epidermal layers that are not constituents of the integumentary appendages; (b) in the cutis vera. Microscopic findings lead Zwick to conclude that: 1. Percutaneous absorption of mercury, following inunction of animals with mercurial ointment, takes place preponderantly from the material deposited in the pores, consisting of the orifices of the hair follicles and of the excretory ducts of the sebaceous glands. 2. Percutaneous absorption of mercury is not materially influenced by removing from the intact skin the excess of mercurial ointment deposited on it during inunction, because mercury does not penetrate into or through the intact epidermis.

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MEDICAL STRAWS

By THE EDITOR

Experience is fallacious and judgment difficult

Professional Pitfalls—The Council of the Union (a British medical defense organization) states that the number of cases (malpractice) with which it dealt has increased and that there is reason to believe that charges against medical practitioners are becoming more frequent, possibly because certain actions lately heard in the High Court have encouraged patients to seek to obtain damages from their medical attendants when recovery has been more prolonged or less complete than they imagine it should have been.

Federal Government Wants More Salaried Doctors—They want them of the Grade A and Grade B classes, and they propose to pay them from \$1680 to 3000 a year. In order to make these remarkable salaries still more intriguing they offer maintenance in some of the least desirable of the positions.

The Gamest Guy in the World (Meigs O. Frost, Collier's), is a beautifully told story of fortitude, patriotism and medical service that bristles with morals and statements for exhausted SERVICE batteries.

THAT there is an ebb and flow in the tide of syphilitic morbidity should always be taken into account by those who are studying morbidity rates of venereal disease, and especially by public health officers who are attempting to arrive at conclusions regarding the value of laws compelling the reporting of these diseases.

Too many vital statisticians are losing track of the tides, in frantic efforts to measure individual waves.

The Doctors We Patronize—The examining physician of the Y. W. C. A. in Pasadena reports that, in examining 1200 women and girls, she asked them the names of their attending physicians. Seven hundred and seventy-two of these young women patronized osteopaths; 120, chiropractors; 183 christian scientists, and 125 educated physicians.

Is this a logical consequence of our several years of "health education" for everyone?

Who Are "We"?—"Shall the nurse perform vaccinations or immunizations?" asks J. J. Sippy, M. D. (Pacific Coast Journal of Nursing) and then, answering the question, says: "Without authorization, no. But as far as actual technique is concerned, WE are most of us willing to admit that *she is usually as capable as the physician.* (Italics ours.) It has seemed somewhat contradictory to me that many physicians will entrust the care of serious wound infections to their office nurses and yet resent the performance of a smallpox vaccination by the public health nurse."

"Yellow Medical Journalism"—Doctors are still neophytes in the field of popular journalism, and already some writers are calling them "Princes among yellow journalists."

It is said that some doctor writers, with more newspaper notoriety than professional reputation among their colleagues, are occupying the field of flamboyancy, the spectacular and the personal bombast now all but vacated by the patent food, patent medicine, and "get-rich-quick Wallingford" fakirs.

How much truth is there in this charge?

Osler Said Cannily—"It is more important to know *what kind of a patient* has pneumonia than it is to know *what kind of pneumonia* the patient has."

A New Spirit in Health Work—A writer, in a recent issue of the State Board of Health official publication, says:

"Concerted effort is needed to correct the false impression that is prevalent in some sections of this state that the public health nurse is violating the Medical Practice Act by making diagnoses and treating disease. Wherever wilful misrepresentation is made, and where false charges are brought, *vigorous retaliation should follow.*"

Several Departments of Government Still Advertising for More Doctors—The Public Health Service; the Indian Service; the Coast and Geodetic Service; the Panama Canal Service; and the Veterans' Bureau are all advertising for more doctors. The opening salaries (?) offered are from \$140 to \$250 per month. Those interested should address the United States Civil Service Commission at Washington.

Regents of University of California Uphold Scientific Medicine—Protection against smallpox by vaccination is still one of the *requisites* of students at the University of California. The strenuous campaign of certain internists to change the "*requirement*" to an "*optional*" failed. It is said that the only regents who voted for the backward step were the Governor of California, Chairman of the Board, and J. O. Hayes from San Jose, appointed regent by Governor Richardson.

The Things That Count—In the every-day work of medical practice, as in the world of business, the qualities of absolute honesty, integrity, and consistent industry are far more important than brilliance of intellect or flashes of genius, valuable and stimulating as are these latter traits.—E. J. G. Beardsley, Journal New Jersey Medical Society.

Prevention and Cure—One official state health bulletin now boldly places in prominent headlines its program of public health betterment to include *Prevention and Cure.*

Heretofore, all official health bodies have denied their intention to include the practice of personal medicine as part of the public health medicine program.

Fewer and Better Books—"A plea for fewer and better books was applauded at the annual convention of the American Booksellers' Association," says The Nation's Business. "Too many 'pot boilers' are coming from the printing houses, to the discouragement of book reading and book owning."

This should apply and must apply to the medical books. Why not eliminate some of the medical "pot boilers" at least?

Why Do Doctors Assist Laymen in the Practice of Medicine?—Medical men probably never will overcome the dabbling of lay persons in purely medical problems, but we can put a crimp in such activities by refusing to have anything to do with them. Medical problems should be solved by medical men without the intervention of lay persons who interest themselves for commercial reasons or to exploit themselves.—Journal of the Indiana State Medical Association.

Sauce for the Goose

—Physicians receive bills the first of every month from everyone to whom they owe money. . . .

—A doctor's worst enemies, and the ones most apt to speak ill of him or even give him trouble without cause are the persons who owe him money and can pay but will not, and some of the charity patients who long have been accustomed to dependency, are not ashamed to ask for assistance and are very exacting.

—If the doctor's services are donated, the patient should understand that they are being donated and that he is accepting charity.—Lovett Morse.

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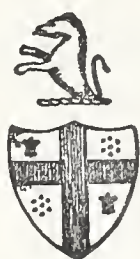


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As President Vincent, Rockefeller Foundation, Sees It—“The well-trained, properly equipped, experienced general practitioner of ability, character, personality, is a fundamentally valuable person. He is a good diagnostician. He sees his patient as a whole. He knows his peculiarities and circumstances. He can decide when to refer him to a specialist and when to protect him against the very real danger which is threatened by a narrowly specialist point of view.”

Rickets as Influenced by Diet of Mother During Pregnancy and Lactation—Judging from their experiments, Alfred F. Hess and Mildred Weinstock, New York (Journal A. M. A., November 15, 1924), conclude that rickets cannot be prevented by improving the diet of the mother, previous to pregnancy, during pregnancy, and throughout lactation, although it can be mitigated to a certain degree. Supplementing the diet of the mother for two generations also failed to render the young refractory. Infants were not protected by giving the mother cod liver oil during the last two months of pregnancy. On the other hand, the fact that premature infants are markedly susceptible to rickets shows that prenatal nutrition does play a role. A consideration of the experimental evidence, of clinical tests, of the susceptibility of bottle-fed compared to breast-fed babies, and the striking seasonal incidence leads to the conclusion that rickets is mainly of postnatal origin. Although its incidence and severity may be influenced by improving the nutrition of the mother, our main efforts should be directed toward improving the environment and nutrition of the infant. Until these postnatal factors are corrected, we cannot hope to prevent rickets.

What Are You Doing About This?—“But I (Frank J. Monaghan, Long Island Medical Journal) want to say, as a result of my observance (of periodic medical examinations) that, if we are to have absolute success in this particular endeavor we are now taking up, *it is going to remain with the individual physicians to see that this thing is absolutely carried out to its logical conclusion*, and that means that any examination that any physician undertakes to make for this purpose must be made so particular, so painstaking, with all the assistance that science can give him, that there shall be no question that when he has finished with the examination of any particular case, he will be able to say he has made 100 per cent examination, and be practically sure he did it.”

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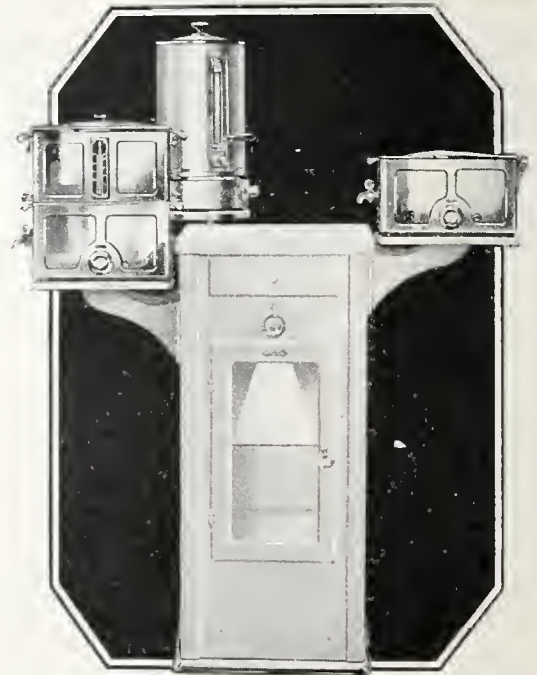
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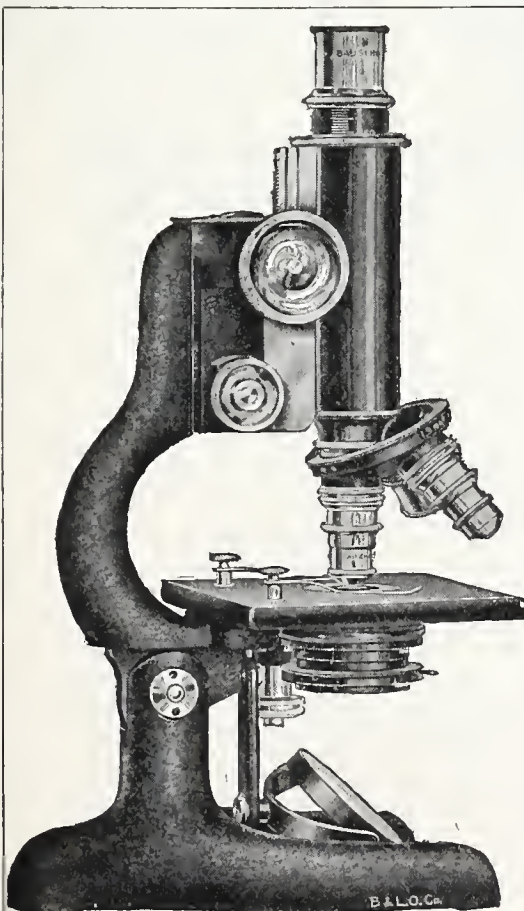
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"Consistency, Thou Art a Jewel"—Under this title the Illinois Medical Journal, speaking editorially, says: "It is remarkable that in industries most threatened by government ownership, many of the leaders do not seem to care what becomes of the other fellow in the same boat, provided they themselves keep a few feet ahead of the socialist sheriff with his writ of ejectment. The real issue in America today is not whether certain industries shall be socialized, but whether the institution of private property shall be maintained. It is too much to expect people to take seriously protestations of one industry against government ownership when we find the leaders of that industry advocating government ownership of somebody else's business. There is no more reason why medicine should be socialized than there is for the socialization of every other industry. People are just as much entitled to free groceries, free clothes, free shoes, and every necessity of life as there is for free medical attendance."

The Home Is the Only Important Teacher in Sex Matters—The home is the first school in which the facts of sex are inevitably being revealed to the child. If the home drama, with respect to sex, is clean and inspiring, solid foundations for sound sex character are being laid (Social Hygiene). *If the home fails in this respect, nothing can ever wholly make up for the loss.* No matter how correct sex-teaching in the home may be, if the atmosphere, inferences, remarks, and example, with reference to sex, are out of accord with the teaching, the teaching will not avail.

The fees for an insanity commission, witness-fees in court, and insurance examinations, as a rule, compensate a physician so poorly that, if he sacrifices his time to give them his attention, he belongs to the underpaid.—S. E. Earp (Journal Indiana Medical Association).

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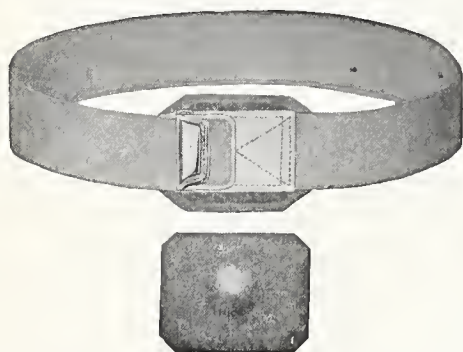
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This column is conducted solely in the interests of California and Western Medicine readers. Critical comment, favorable and unfavorable, purely from the standpoint of the interests of the medical reader, will be made about books selected from the larger number acknowledged in the Books Received column. The advertising columns are open to book publishers who wish to make additional statements about their publications.

Practical Electrotherapeutics and Diathermy. By G. Betton Massey. 401 pages. New York: Macmillan Company. 1924.

The publication of this work on the utilization of electrical modalities in medical treatment by a physician so capable and experienced in electrotherapeutics is distinctly worth while.

Too often the electrical measures are considered immaterial and bordering on quackery. The inability to estimate electrical treatment so definitely as calculating blood cells or the chemical analysis of urine, influences many physicians to under-rate the value of this physical method. Doctor Massey in a clear, practical manner first describes the various forms of medical electricity and their scientific application in medical treatment and then, chapter by chapter, by "statements in the concrete for complete comprehension," imparts information which the physician will find applicable in a host of medical problems.

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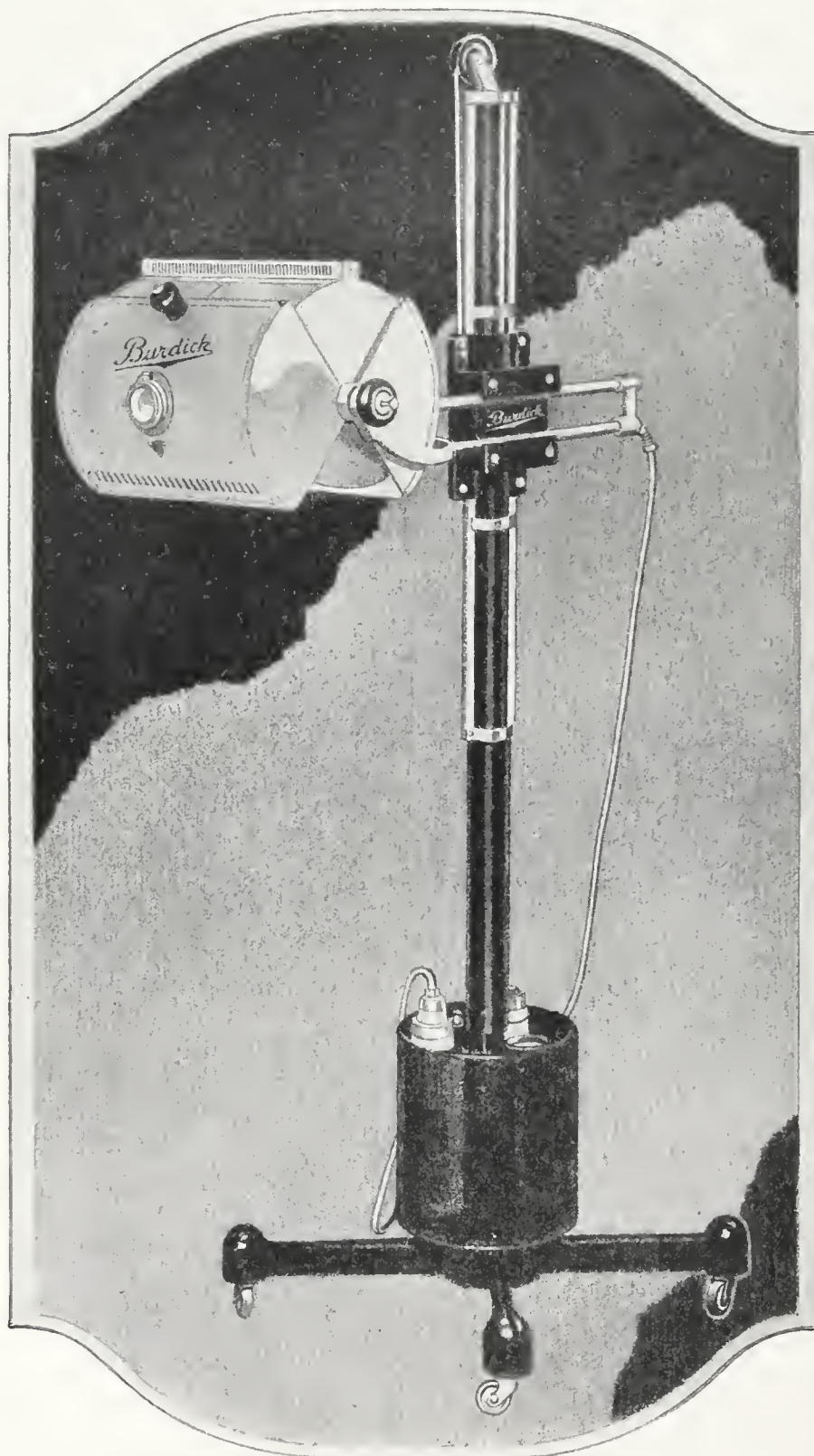
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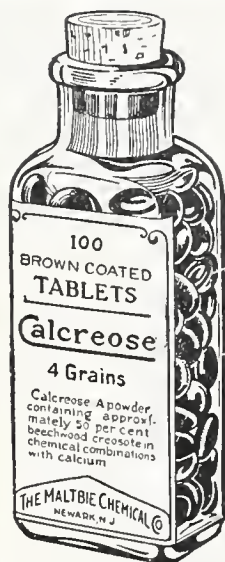
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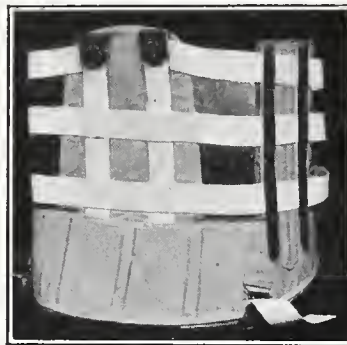
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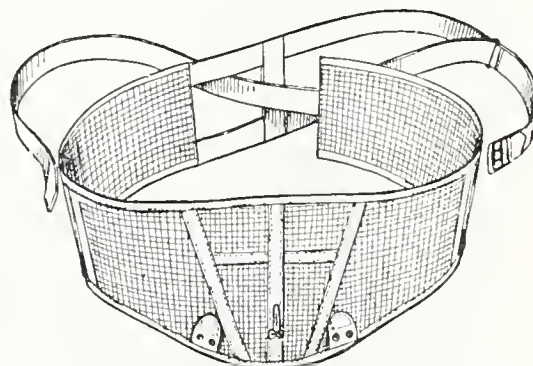
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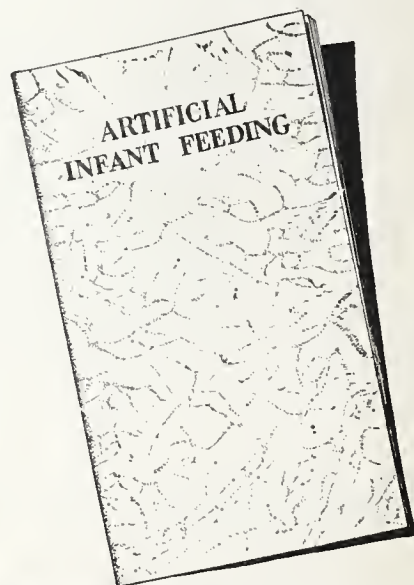
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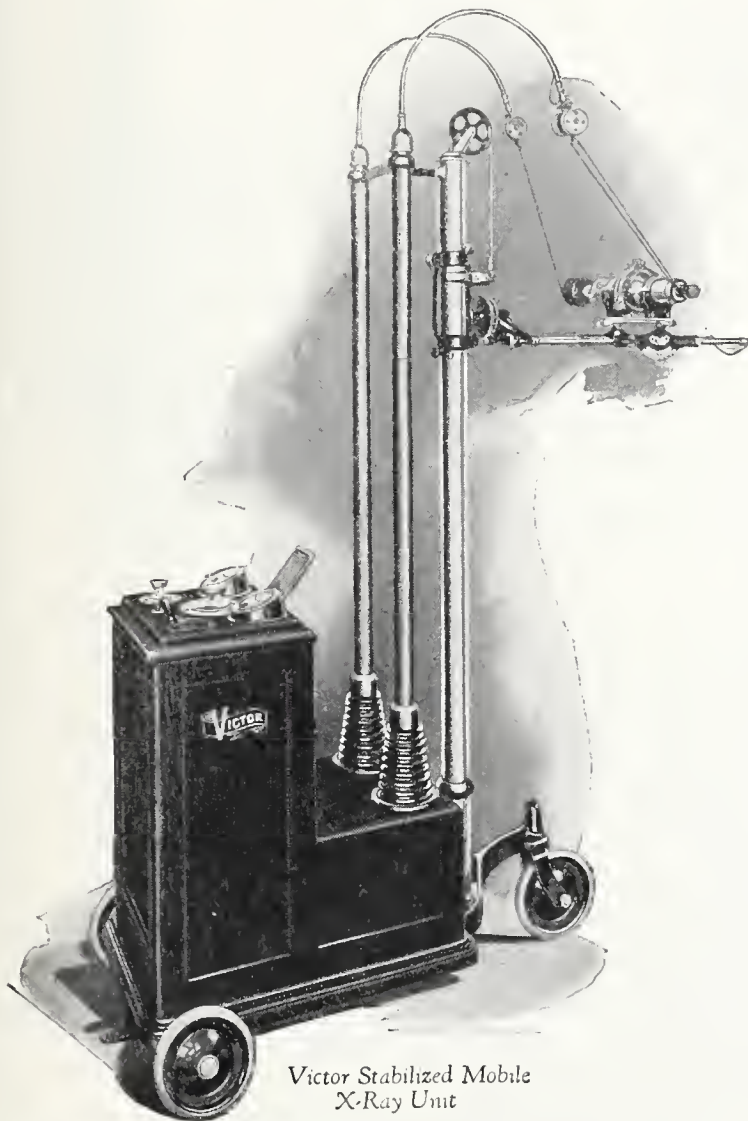
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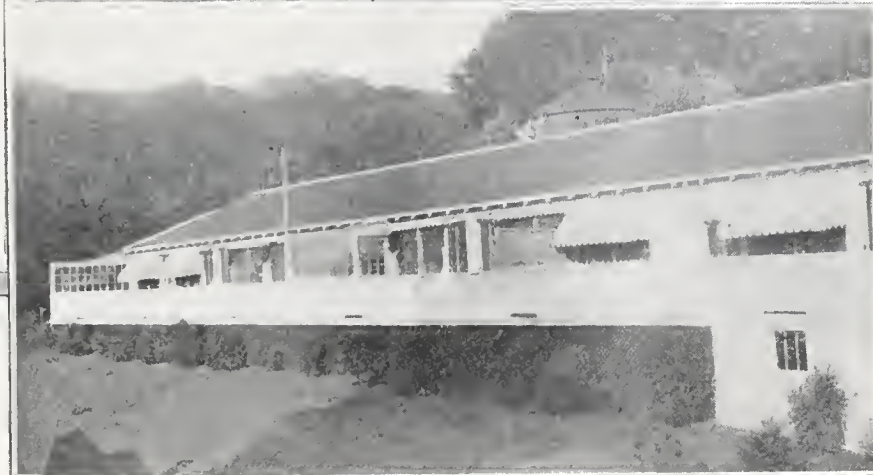


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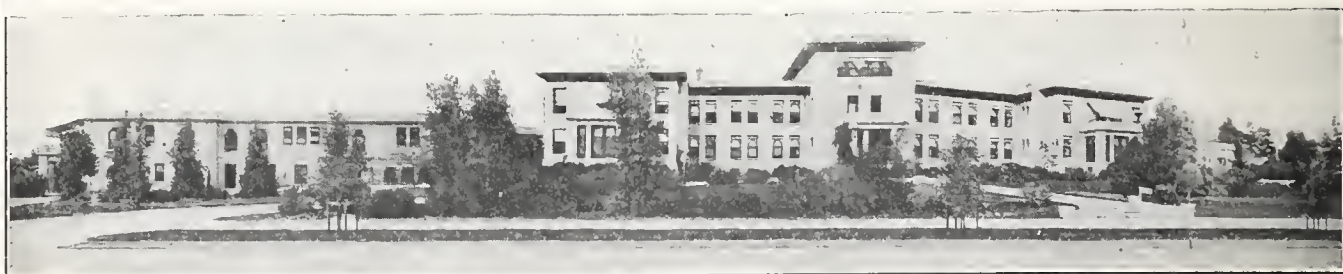


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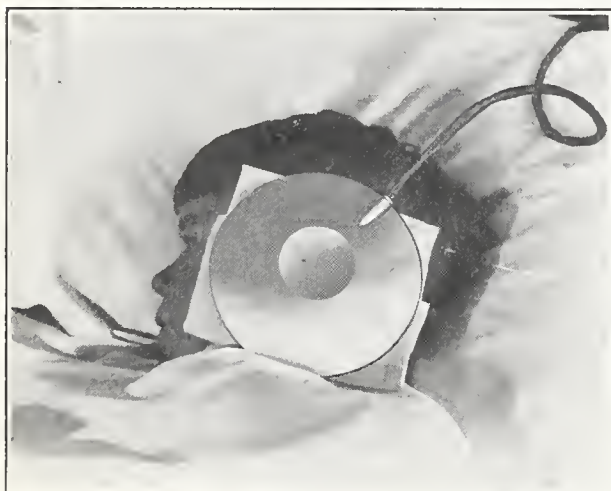
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Role of Monilia Psilosis (Ashfordi) in Experimental Sprue—Experiments conducted by Lawrence Weld Smith (Journal A. M. A., November 15, 1924), support Ashford's theory of the specific etiology of sprue as due to monilia psilosis by the production in guinea-pigs of a chronic moniliasis with gastro-intestinal lesions roughly comparable to those found in man. The development of the lesions, however, was rarely noted except in animals fed on a diet partially deficient in vitamins, especially the antiscorbutic vitamins. This favors the view that a deficient diet, or diminished resistance such as is common following long residence in the tropics, associated frequently with gastro-intestinal infections such as amebic dysentery, are contributory factors in its production. Mycologic studies on twenty-one strains of monilia obtained from Manila and from cases in Boston invalidated home are in accord with the tentative classification into three subtypes—A, B, and C—as suggested by Boyd and Han-nibal.

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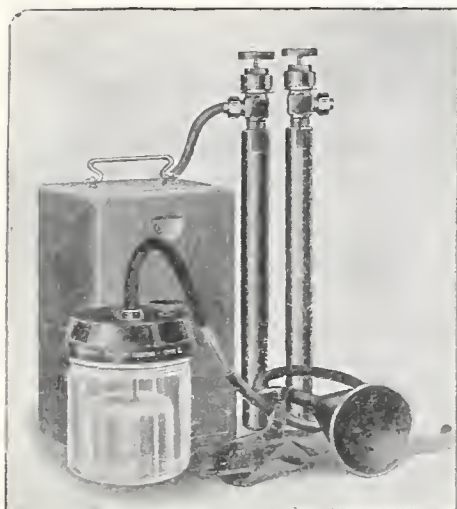
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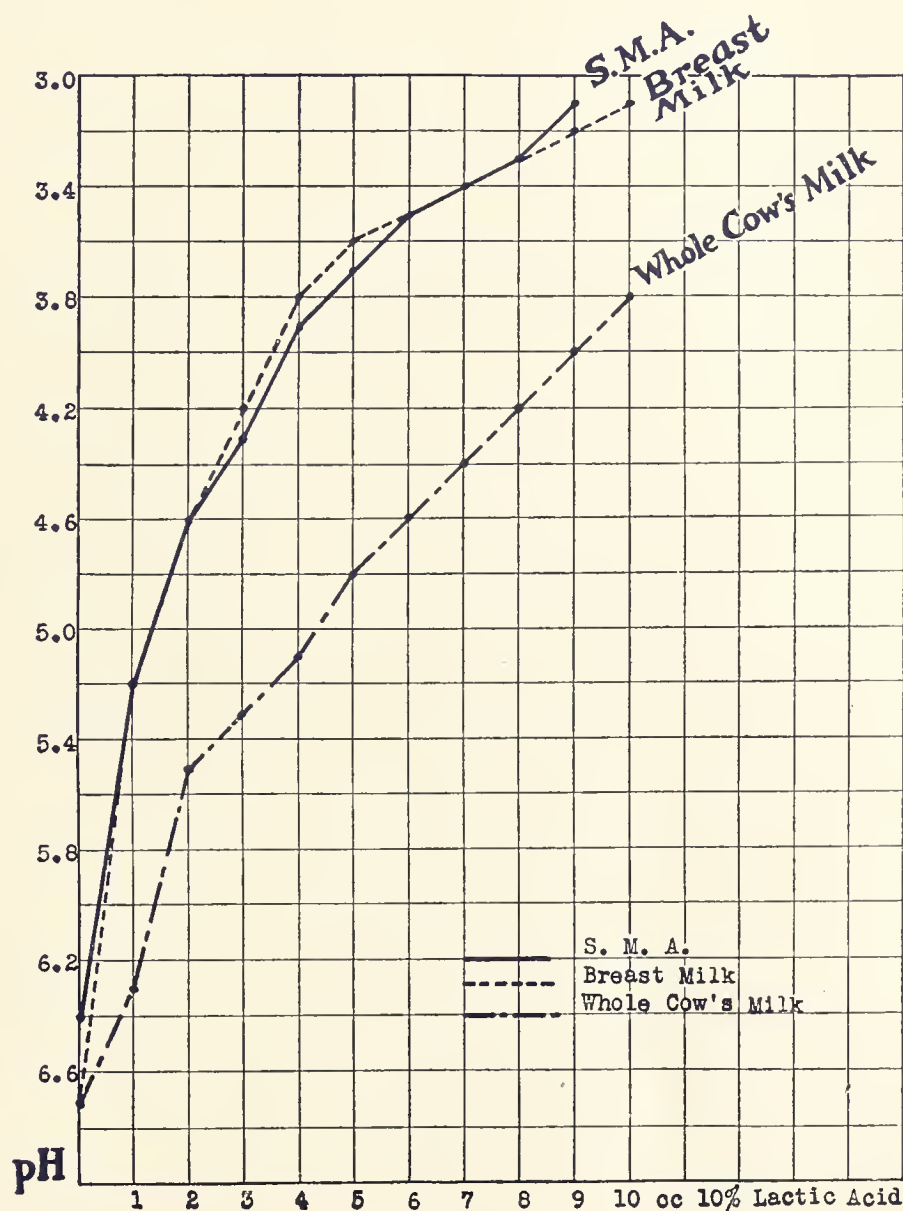


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CALIFORNIA AND WESTERN MEDICINE

VOL. XXIII

FEBRUARY, 1925

No. 2

SPECIAL ARTICLE

BLOOD AND TISSUE CHANGES IN ANAPHYLACTOID REACTIONS *

By P. J. HANZLIK, M. D.

(From the Department of Pharmacology, School of Medicine, Stanford University, San Francisco.)

WE ALL RECOGNIZE THE GREAT IMPORTANCE OF SANITY IN PHARMACOLOGY AND, CONSEQUENTLY, IN A MAJOR PHASE OF THERAPEUTICS. THE WAVE OF THERAPEUTIC NIHILISM THAT HAS DONE AS MUCH HARM AS DID THE POLYPHARMACY WHICH STIMULATED THE VIOLENT SWING OF THE PENDULUM OF MEDICAL OPINION IS AT AN END. THERAPEUTICS, BASED UPON A SOUND PHARMACOLOGY AND TINCTURED WITH A WISE PERSONALITY, IS THE BACKGROUND OF OUR MODERN OPINIONS AND PRACTICES.

PROFESSOR HANZLIK, AS AN INVESTIGATOR AND TEACHER AND AS CONSULTANT TO THE IMPORTANT COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION, TELLS US AN IMPORTANT AND AUTHORITATIVE STORY OF ONE PHASE OF THIS SUBJECT IN THIS ARTICLE.

PROFESSOR HANZLIK ALSO WRITES A SCIENTIFIC EDITORIAL ON SOME PHARMACOLOGIC AND THERAPEUTIC SUBJECT IN EACH ISSUE OF CALIFORNIA AND WESTERN MEDICINE. I WANT TO MAKE PUBLIC ACKNOWLEDGMENT OF HIS SUSTAINED CO-OPERATION.

PROFESSOR HANZLIK, ALTHOUGH ALSO DOCTOR OF MEDICINE, DOES NOT PRACTICE MEDICINE. BUT HE IS ALWAYS DELIGHTED TO BE OF ASSISTANCE TO ANY PHYSICIAN ABOUT PROBLEMS IN HIS SPECIAL FIELD.—EDITOR.

ANAPHYLACTOID reactions which are elicitable by a variety of agents chemically and physically different, are accompanied by definite histological, physical, and chemical changes in the blood and tissues.

These consist of congestion, hemorrhages, embolism and thrombosis in certain viscera, chiefly in the lungs; peribronchial edema; perivascular edemas, occurring chiefly around the small vessels and capillaries. In the blood there are darkening, rapid sedimentation of corpuscles, frequently hemolysis, agglutination, and disintegration of corpuscles and agglutination and increased number of platelets, flocculation and aggregation of plasma, tendency toward acidity, diminution in carbon dioxide and alkali reserve, increase in ammonia and lactic acid after some agents; changes in blood volume, due to altered vascular permeability, blood dilution, etc. There are also changes in blood pressure, heart and respiratory rates and body temperature, ranging from moderate to severe, and often resulting in varying degrees of circulatory depression and collapse.

All of these changes put together indicate disturbances in important physical and chemical mechanisms of the blood and tissues, and are believed to be fundamentally responsible for widespread alterations in cellular activity, and hence for the symptoms and reactions.

The results indicate something of the nature and limitations of non-specific therapy and the dangers of intravenous medication.

THE highly cultivated field of allergy rarely suffers for lack of interest. In this respect, it is a keen competitor of the endocrine glands and vitamins. Without being desirous of just promoting an idea about allergy, I venture to present a brief summary of studies pertaining to one of its branches, namely, the anaphylactoid reactions. This will serve to illustrate what I believe is the trend of modern thought in this subject, a line of thought that is receiving wider application in the medical sciences. Certain unsuspected and practical deductions may be made from these studies, and they should, therefore, be of interest to physicians. Before discussing these, it will serve the purpose better and make the subject plainer, if a brief resumé of the development of our knowledge of anaphylaxis is first presented.

I. DEVELOPMENT OF ANAPHYLAXIS

This may be thought of in three general stages.

Recognition of the Phenomenon—In 1839, Magendie, the noted toxicologist and predecessor of Claude Bernard, reported that the first injection of egg-white was not toxic to rabbits, but that the animals would not tolerate the same dose several days later. In 1894, S. Flexner observed the same phenomena in rabbits treated with dog serum. The phenomenon of hypersensitivity to a poison was indicated, though not recognized as such, being regarded by some as a paradoxical reaction, in the tuberculin experiments of Koch in 1890; in studies with diphtheria toxin by von Behring in 1893; in the repeated toxic injections of serum in man of Arloing and Courmont in 1894; in the toxicity of eel serum for dogs of Hericourt and Richet in 1898; in the toxic injections of tuberculin effusions in guinea pigs of Courmont in 1900 and in the hypersensitivity reinjections of cocaine of Adduco in 1894, though this latter work has never been confirmed. In his "L'Anaphylaxie" (1923), Richet tells us that it was the late Prince Albert of Monaco and G. Richard, who, in 1902, advised Richet and Portier

* Address before the Southern California Medical Association, November 14, 1924, Los Angeles.

to study the toxic properties of physalis. On returning to France, Richet was unable to procure sufficient physalis, and therefore decided to study the tentacles of actinia or sea-anemones, extracts of which were found to be very poisonous for dogs. Exceedingly small quantities were not toxic, but later injections of the same or smaller doses produced marked symptoms and death; in other words, a condition of hypersensitivity and the opposite of immunity. Richet coined the word "anaphylaxis" as against "prophylaxis," which he tried to, but could not, produce. Richet's studies stand out as recognizing for the first time the dependence of a hypersensitive state on a preceding injection of a protein substance and an incubation period of a number of days between injections in order that the sensitive state may develop. At this time, however, the fundamental importance of the phenomenon for biology was not yet appreciated. This came later.

Causal Factors and Hypotheses—Numerous authors extended the application of the principle of sensitization reaction to a variety of proteins and other agents; and advanced explanations based more or less on objective evidence, but unfortunately the evidence was too frequently confined to symptoms. The mechanism of the shock reaction was ascribed to some hypothetical substance as being specifically elaborated and fundamentally responsible. Among such substances were "apotoxin," "serotoxin," "sensibilisin," "anaphylatoxin," ferment action, disturbed ferment-antiferment balance, histamine, peptone, etc. It would not be profitable to discuss these, but it will suffice to state that not a single one of these substances has ever been demonstrated in, or isolated from, anaphylactic tissue. However, Bordet's famous experiment with "toxified agar," which was misinterpreted as a demonstration of the hypothetical "anaphylatoxin," led up gradually to a conception which is broader in scope than specificity and has nothing to do with hypothetical substances. This brings us to

The Anaphylactoid Reaction—This term is synonymous with idiosyncrasy, reaction, crisis, etc. By the anaphylactoid reaction is meant a symptomatic reaction to a substance without previous sensitization or injection, the symptoms and many other changes being practically indistinguishable from those of anaphylactic shock. Among various agents, chemically and physically unrelated, causing such reactions are agar, starch, arsphenamine, histamine, kaolin, serums, vaccines, peptone, organ extracts, metallic salts, etc. In patients, hypersusceptibility to antipyrin, iodoform, acetylsalicylic acid, orris root, and certain dyes is well known. Proteins are not necessary, and the best responses are obtained on intravenous injection, which is also true of anaphylactic shock. These reactions have been studied especially by Loewit, Milian, Stokes, Nolf, P. Schmidt, Abderhalden, Lumière, Kopaczewski, Widai, Novy, and others. Novy showed that injections of trypanosomes and dead bacilli give similar reactions. One of the most striking effects is seen with "toxified agar," first demonstrated by Bordet. (Bordet's experiment is carried out as follows: Four or five parts of serum of the same untreated, or another, guinea pig are incubated at 38 degrees C. with one part

of 0.5 per cent melted agar for two hours. The mixture is then centrifugalized and this removes most of the agar, leaving a clear supernatant fluid which is removed and incubated at 38 degrees C. for fifteen minutes. Three to five cubic centimeters of this fluid are then injected intravenously into a 300 gm. guinea pig. In from three to five minutes marked symptoms, indistinguishable from those of anaphylactic shock, develop and death may occur. At autopsy, the lungs are found distended, congested and hemorrhagic, and histologically they show emboli and thrombi composed of agglutinated erythrocytes, platelets and fibrin.) Practically the same changes were found by Karsner and myself with forty odd different agents injected in several hundred guinea pigs, by De Eds in pigeons and by De Eds, Tainter and myself in dogs. Typical results will be illustrated presently.

In this connection it is interesting to note that V. Behring ascribed the cause of the symptoms of anaphylactic shock to platelet agglutination in cerebral vessels, liver, etc. Richet speaks of anaphylaxis in vitro, which really means the formation of precipitin, or the occurrence of precipitation when antibody (serum of sensitized animal) and antigen are mixed in vitro, and on injection the precipitate causes immediate and typical symptoms of shock. Changes in physical constants (viscosity, surface tension, refraction, hydrogen-ion concentration, coagulation) of serum in anaphylactic shock and after agar-serum have been demonstrated by Zunz of Brussels. What does all this suggest? According to Widai, there is a hemoclasia, or colloidoclasia; that is, a disruption of the blood elements, its colloids, etc., as the mechanism of both the anaphylactic and anaphylactoid reactions. In fact, many authors have come ultimately to some physical-chemical conception of the nature of these reactions, and there is more to be said for this than for the elaboration of toxins, or specific substances. We should look for something more tangible and definite than such hypothetical substances as have been proposed, and obtain, if possible, a clear demonstration of the objective changes. Therefore, before going further, I wish to invite your attention to some blood and tissue changes that have been demonstrated in different species.

II. BLOOD AND TISSUE CHANGES

Our object at first was to observe and describe fully the effects of a variety of agents which were alleged to cause reactions indistinguishable from those of anaphylactic shock. As stated previously, the reports of many observers dealt merely with symptoms. We took note of these and also made histologic sections of organs, determined whether there was muscular hyperexcitability, attempted analysis by means of pharmacological agents, tried preventive measures, and studied changes in vitro. It was found that the phenomena could be produced by a variety of agents unrelated physically and chemically and that suggested the nature of the mechanism. Finally we have made chemical analyses of blood and observations of physical changes in various ways. The work has been done on several different species, namely, on guinea pigs, dogs, cats, and pigeons. Enough has been done to give

a fairly good idea of the changes. A part of the work I am presenting here has not been previously published. A good part of the work has been done in collaboration with Professor Karsner of the Western Reserve University and during the past three years with Doctors De Eds and Tainter and other workers in the Stanford laboratory. (At this point a brief description of methods used was given and twenty lantern slides were demonstrated, illustrating the results with intravenous and intraperitoneal injections, perfusion experiments, excised organs, agglutination, prevention with epinephrine and atropine; chemical analysis of blood for hemoglobin, carbon dioxide and alkali reserve, hydrogen-ion concentration, lactic acid, ammonia, urea; changes in erythrocyte and platelet counts and conditions of pigeon's blood in vivo and in vitro; darkening, hemolysis and agglutination of dog's blood by a color photograph; blood pressure and respiratory changes, etc., after such agents as agar, arsphenamine, copper sulphate, histamine, peptone, chloroform plasma, hypertonic solutions, Tyrode solution, and in anaphylaxis.) Many of the details have been previously published; others will appear in papers soon to be published. Certain changes produced by arsphenamine, phosphate and hypertonic solutions have been confirmed by Jean Oliver, Denis and V. Meysenburg, and others. The recent studies of Dale and Kellaway show that, after injection of agar-treated serum, there is an increase in the number and agglutination of platelets followed by disappearance of them, the effects being explained by an action on the blood such as would occur from its sudden exposure to an extensive and mildly injurious foreign surface.

III. EXPLANATION OF, AND DEDUCTIONS FROM, THE RESULTS

The fundamental cause, or basis, of the anaphylactoid reactions is suggested from the emboli, thrombi, precipitates, agglutination or aggregation, and disintegration of erythrocytes, agglutination and increase in thrombocytes, hemolysis, etc. All of these changes indicate disturbances in cell surfaces. The alterations in chemical composition and in appearance of the blood (blood dilution, increase in hydrogen-ion concentration, reduced carbon dioxide, reduced hemoglobin, increase in lactic acid, and darkening, agglutination, increased sedimentation and hemolysis of blood, etc.) indicate disturbances in important physical and chemical mechanisms of the blood and tissues. The perivascular and peribronchial edemas indicate alterations in capillary and cellular permeability. As a result of all these changes there are alterations in equilibrium of ions, in differences of electrical potential, in surface tension, in osmotic pressure, in viscosity and in imbibition, and probably other changes in the cells. I have already stated that changes in physical constants have been demonstrated by Zunz in serum of animals shocked with agar serum. The net result of these changes is stimulation and depression, or, in other words, the mediation of functional changes in cells, recognized in part as symptoms, reactions, etc. There is nothing unexpected about this. In fact, such physical-chemical changes and alterations in cellular functions would be expected. This is due

to the universal phenomenon of adsorption, resulting from the contact of substances with surfaces; in our case, of course, with surfaces of corpuscles, endothelium of blood vessels, plasma proteins and cells of the tissues. By adsorption is meant the well-known tendency of substances to accumulate at or on surfaces. As a result of this accumulation, energy is expended at the interface where the substance is in contact with the surface, and from this is derived a change in surface tension. Sometimes surface tension is defined as the tendency to the exposure of the smallest surface possible. The working of this force is nicely illustrated by the formation of rain water into droplets, oil into globules in an emulsion, the darting of a camphor granule on water, etc. Furthermore, it is well known that, by changing the surface tension, the contour or shape of objects can be altered. This is conveniently accomplished by the addition of salts, acids, etc., which increase the surface tension, and by bile, soap and most organic substances which lower it. In our case the change toward acidity and the disturbance in salt (ionic) balance would tend to operate in the same direction. By judicious selection of agents which lower and increase the surface tension it is possible to produce amoeboid motion in inanimate objects; for example, in oil droplets. In other words, contraction and relaxation, indicating changes in functional activity, and simulating stimulation and depression to a degree, can be produced by the intervention of physical forces alone.

Such phenomena illustrate the operation of and changes in only one kind of physical force. There are changes in many other forces, all probably going on at the same time. Hence, it is reasonable to expect changes in or modifications of cellular activity, the multiplicity of factors involved in the tissues being conducive, if anything, toward a complexity of symptoms and other changes. It has been suggested that the physical and chemical changes which have been described are the consequence, and not the cause, of anaphylactoid reactions. This is the view of Lumière, who nevertheless regards the flocculations, aggregations and agglutinations as fundamental physical changes which bring about the physiological. It is obvious that agglutination, flocculation, precipitin formation, etc., are tantamount to saying surface changes, involving physical and chemical changes. Hence, it appears to me that the basis of the anaphylactoid reactions is a disturbance in the physical-chemical mechanisms of the blood and tissues.

Nature and Limitations of Non-specific Therapy—Many agents causing anaphylactoid reactions are used as non-specific agents in the treatment of disease, especially of that with indefinite or unknown etiology, the aim being to induce such reactions for the sake of producing beneficial therapeutic effects, if not cure. The effects appear to be brought about through widespread alterations in cellular activity. However, sometimes the reactions are alarming and even result in death. These changes would be expected from the embolism, thrombosis, agglutination and flocculation, which occur in the blood stream and in important organs. Hence, such agents should be used cautiously.

Dangers of Intravenous Medication—The same holds true with respect to the indiscriminate use of agents and drugs intravenously. From what has been said, it follows that physical and chemical changes in the blood and tissues may always be expected under these conditions. Dangerous results may occur with relatively inert and inactive agents; for example, with agar, acacia, starch and kaolin. In fact, the results cannot be predicted from the physical and chemical properties of the agents. Again, an agent may be beneficial to one function and detrimental to others. Intravenous therapy is chiefly a fad promoted largely by unscrupulous manufacturers, and, unfortunately, also by some physicians who fail to realize the dangers involved, and to appreciate that most drugs so advocated are promptly and readily absorbed when given by mouth, hypodermically or intramuscularly. There is no excuse for administering distilled water, hexamethyleneamine, iodide and salicylate intravenously, because all of their ordinary effects are promptly and readily obtained when they are given by mouth. On the contrary, detrimental and undesirable effects may occur when they are administered intravenously. Recently, when a genito-urinary surgeon was asked to explain the urinary antiseptic superiority of hexamethyleneamine intravenously, which he advocated in preference to its oral administration, he replied by saying that he was told it was so. Unfortunately, hearsay evidence is not convincing. There are only two drugs for which, at present, the intravenous route is indicated to secure their therapeutic effects, and these are arsphenamine and strophanthine. But, even these two agents are being replaced by combinations with other drugs and by substitutes, in order that their effects may be secured intramuscularly and subcutaneously so as to avoid detrimental effects from intravenous injection. Such dyes as rose bengal, phenoltetrachlorophthalein and others, which are being exploited as diagnostic agents and injected intravenously, are not harmless. We have had considerable experience recently with these dyes in dogs, rabbits, guinea pigs, and pigeons. They cause hemolysis, impart a brown color to the plasma and even produce systemic symptoms, not to mention the local effects in veins (phlebitis). We have had no experience with mercurochrome, but scarcely a month passes without a call from a physician drawing our attention to the marked systemic reactions from this agent, and recent reports in the literature testify adequately to the occurrence of undesirable and harmful effects when it is used intravenously.

IV. CONCLUSIONS

1. Anaphylactoid reactions, which are elicitable by a variety of agents chemically and physically different, are accompanied by definite histological, physical and chemical changes in the blood and tissues.
2. These consist of congestion, hemorrhages, embolism and thrombosis in certain viscera, chiefly in the lungs; peribronchial edema; perivascular edemas, occurring chiefly around the small vessels and capillaries. In the blood there are darkening, rapid sedimentation of corpuscles, frequently hemolysis, agglutination, and disintegration of corpuscles and agglutination and increased number of platelets, flocculation and aggregation of plasma, tendency

toward acidity, diminution in carbon dioxide and alkali reserve, increase in ammonia and lactic acid after some agents; changes in blood volume, due to altered vascular permeability, blood dilution, etc. There are also changes in blood pressure, heart and respiratory rates and body temperature, ranging from moderate to severe, and often resulting in varying degrees of circulatory depression and collapse.

3. All of these changes put together indicate disturbances in important physical and chemical mechanisms of the blood and tissues, and are believed to be fundamentally responsible for widespread alterations in cellular activity, and hence for the symptoms and reactions.

4. The results indicate something of the nature and limitations of non-specific therapy and the dangers of intravenous medication.

Stanford Medical School.

REASONS FOR A CHILD GUIDANCE CLINIC

By ROBERT LEWIS RICHARDS, M. D., *San Francisco*

This neglected problem is truly a medical problem in its widest service, as well as scientific sense, but it is not a medical education problem as medical clinics basically are, and it has relationship to schools, courts, and social agencies, which are more than the accepted medical facts.

MEDICINE began in the dim past as a form of health service to man. Medicine remains in high esteem when she continues this function. People are not so much interested in medicine's scientific erudition as in what benefit medicine is to them individually. Research of itself is valued and praised when it is of medical service to people. We are presenting today not only a field of service where there is great opportunity for the growing formative stage of human behavior, but also among those in whom people are most interested, viz.—the young; the adolescent.

University clinic meetings are noted for their scientific interest and lack of positive conclusions along treatment lines. Practicing doctors' hospital meetings are noted for their stress upon diagnosis and the effect of treatment upon the individual. In child guidance clinics, we have not only the study of stages of mental as well as physical growth with all its trends and determining factors, but also the results in the individual child in its relation to the family, to the school, to the courts, and to the various social agencies. It is medicine in its broadest, most appreciated aspects.

Unsettled post-war families are finding themselves inadequate for the child problems of the present day. The schools estimate a cost of \$4,000,000 for back-graded scholars in California for the biennium, in spite of physical examinations, dental examinations, and a school program far in excess of the supposedly essential needs of a few years ago. The juvenile courts are crowded, and the institutions for delinquents are admittedly inadequate. The worst crimes are committed by those under 24 years, and are increasing in numbers. The many organizations for those financially dependent have grown until we have organized community chests of large proportions, and even call for state and federal aid in addition.

More specifically, detailed surveys have been made of schools, courts, and dependants in six large cities, in several smaller cities, and in rural communities. There is striking unanimity in the findings. From back-graded, misfitted pupils in the grammar grades come later the juvenile delinquents, and later still the violent criminals or the chronically dependent. There are abundant evidences of at least partially remediable mental growth deformities. While physical defects, economic handicaps, lack of sympathy, and lack of sufficient intelligence are found, the paramount difficulty is found in the qualitative mental side, and has to do with the mental growth and behavior problems. The problem is twice as big as the mentally defective alone. Indeed the moron properly placed is a happy, effective member of the community. The problems remain after you have remedied all the physical ills and have increased all the weights, and given proper ventilation, light, and play to all the children. The teachers may be well paid and sympathetic, the judges without legal restraint, and abundant funds for all dependency organizations; and you still have your problem largely unsolved. All this is known from experience.

The mental hygiene value in preventing the socially disturbing psychoses and psychoneuroses is so evident that all organizations and institutions having to do with mental conditions are vitally interested in child guidance work. State hospitals alone cost California in round numbers about \$10,000,000 per biennium, and that is a tax directly or indirectly of \$1.50 per inhabitant per year. If you add to this the cost in schools, courts, and dependency organizations, you have doubled and trebled this amount. If to this financial loss you add the cost in family life and the loss in good citizenship, you have a staggering loss, demanding consideration and action by the California Medical Association.

Since the beginning of the problem of the best child development is, of course, the selection of the proper parents for the children, the lessons of a child guidance clinic will do more to secure this than any number of idealistic talks on eugenics. But the element of chance in heredity is not removed by Mendel's laws, and you cannot definitely foretell a child from a knowledge of the parents. You can learn its possible trends for good and bad; its probable strength and its probable weaknesses. Heredity is a vague chart of an unknown country, the undeveloped negative, the seed for planting—but results depend upon remembering the general landmarks, developing the negative properly, and growing the plant in the appropriate conditions. In the present day of individual indulgence and halting group action, we can expect only an academic interest in the principles of eugenics and child guidance work is more needed now than it may be later. Also I am heartily in sympathy with "self-expression" and "children's crusades" against arbitrary parental prohibitions, but guidance is necessary, and in practical experience, the child guidance clinic is most appreciated by the child itself. It was not established to support authority, but to see that children may have every chance to grow, to develop, to have their rights as far as their origin or heredity will permit, and also while they are not fixed, but

formative. Child guidance searches the hereditary factors as no other effort does. It is not content with the history of disease incidence, but goes on to the behavior records, the personality trends, and the mental capacity and quality of the child's forebears.

Besides the data of origin of the child, there is the record of growth of the child, of epochal periods successfully or unsuccessfully passed, and why, of favorable and unfavorable conditions of growth and of the developing life pattern. There is a vast difference between the stage of purely sense perception and self-interest with jealousy and fears of the first years, and the dramatization of life in the next or pre-school stage, or stage of interest in the family as well as himself. The epoch of school with passing from the family protection to a wider, more impersonal, unsympathetic group is a stress too little recognized. It is not without reason that this has been called "the prickly stage," the "urchin stage," "the big injun stage," "the stage of pirates and robbers." The schools devote four years to this period, and serious school work begins in the fifth grade. It is a period of sorting, but unfortunately not a period of especially remedying defects, favoring growth in certain directions, establishing mental habits commensurate with individual possibilities. The tendency to regard all children as alike grows largely out of the adult transferring his own mental processes to all children, and not regarding the child as a growing different individual.

With the advent of puberty, a new element of growth enters, viz: an interest or relationship to another individual of the opposite sex. This looks to the establishment of a new family group and a repetition of the human cycle. The old family must pass and the new family be established. Mentally, this is the greatest transition of all, and is difficult or easy, depending less upon the hereditary trends than the previous environment favoring or opposing normal mental growth. Experience shows that few pass this stage without deformities and scars, which seriously interfere with subsequent life growth. The characteristic tendencies show earlier than 12 to 14 years, but are usually recognized then, because of the startling physical changes, which can be seen by anybody. It is a physical maturing, but a mental infancy. It requires mental guidance as much as infancy required physical guidance, but by both father and mother, because the bisexual is now to the front. Teachers deal with too large numbers of individuals: courts with only the socially delinquent; other organizations with dependent failures; some doctors with the established failures of growth or deformities; the Church is limited in its field—none of these can take the place of father and mother. It requires a patience unbounded, a supervision unrelenting, and a confidence never obtainable by other than father and mother. It does, however, require the knowledge and co-operation in their respective fields of the schools, the courts, dependency organizations, doctors, and the Church. There is work for all, if we expect the success of group organization or democracy and mental health or fruition. It is not a single situation met and adjusted or failed in. It is a growing something that progresses, and is normal or stunted or deformed for the balance of life in a

social organization not now so much dependent upon leaders as upon co-operation of the units. It is the continuance of efforts that distinguishes this problem from the other problems of the various agencies mentioned, and leads to the conception of a child guidance. Medical clinics, courts, social agencies, etc., deal with concrete situations and adjust limited set problems. Child guidance service deals with a growth, a continued effort at mental hygiene favoring proper mental growths.

The factors of infectious diseases, malfunctioning organs, internal glands, or body chemistry, which are handled by physicians, may delay the rate of growth, but none of them attempt to determine the direction of growth, and others are only secondary factors in the problems of human behavior.

Neither does the school organization take into consideration the growth factors of the family environment or the emotional side of the child. Roughly, the school allows about four grades for growth differences, but is not equipped and cannot make the necessary search for the factors retarding mental growth. Waiting for four lost or back grades to show mentally retarded growth in the public schools is not economical or wise. We should not forget that investigations have shown that these back grades produce dependents and delinquents. Individually, it produces tragedy and despair in the pupil stamped as an inferior.

The courts and social agencies are fully occupied with the end-results. Primarily, they repress by punishment or aid temporarily by money. They are vitally interested in preventing such end-results, but their function is not treatment and prevention. A delinquent or a dependent with them is an individual for emergency management, but the treatment and prevention belongs to another co-ordinating organization. Frequently, in lunacy courts, I have, with the authority of the judge, outlined a plan of treatment promising success, but at that point we were blocked, and the continued application of the details of treatment was out of our reach. I have frequently been asked for advice by social agencies, and they have thereby acquired a better insight into the details of the problem, but they were limited in time and finances, and it was fully recognized that we were dealing with an emergency. In psychiatric medical clinics I have again performed the same functions in a diagnostic way, but the treatment end failed in continuance of application of details. The more recently established health centers have also practically been diagnostic and emergency treatment centers, but with no continuing treatment relationship. Psychopathic hospitals are valuable parts of this program, and perform a great purpose in their in-patient and out-patient services, but they cannot offer the continued effort or co-ordinate the efforts of agencies needed in the problems as a separate child guidance clinic can. The psychopathic hospital has also still the unmerited but real prejudice of mental disease to hamper it in any wider relationship at the present time.

This neglected problem is truly a medical problem in its widest service, as well as scientific sense, but it is not a medical education problem as medical

clinics basically are, and it has relationship to schools, courts, and social agencies, which are more than the accepted medical facts. Child guidance service is by no means confined to the individual patient. The patient is studied from every known angle. Where there is an equipped medical unit to determine or treat any medical angle, the patient is sent there for that medical purpose, and no new machinery is installed. In the school management every existing school agency is given the data and advice as to how that particular phase can be managed, in view of all the known accumulated facts. The court is furnished in the same way with information and advice from the mental hygiene point of view and practical experience. The family, as the special nurturing soil in which the plant grows, is studied from all angles and aided in every way to place this child so that it can best grow as God intended. Every young child is overwhelmed with the authority and power of those about it. Every adolescent is overwhelmed by his own personality, which he understands only partly, guards jealously and mistrusts as we mistrust any untried machine. Either the young child or the adolescent responds quickly and fully to an intelligent approach in which he feels that he is understood. The medical clinics will give generously and largely in this plan, but they will receive in return in many ways. The expensive problem of the repeater and the one who does not co-operate in treatment will be further solved. The medical prejudice of the present day will be much broken down by the wider contact and practical service. The popular trial and error method of trying now this treatment out, and now that treatment, will disappear through the methods of such practical service as the child guidance clinic. Medicine will advance into a new field of preventive medicine comparable with asepsis, immunology, and various existing public health measures, not by a spectacular laboratory discovery, but by an extension into the field of mental hygiene. It will be a co-operative group including the family, the schools, the church, the courts, the social agencies, as well as medicine, and the group will stand together. At the same time this work will be under medical guidance and initiated by medicine. This is not socialized medicine, but medical leadership in the mental field which medicine has long neglected too much. Inasfar as medicine has always been social as well as scientific and altruistic, the child guidance clinic will also be social under medical guidance. What psychiatric problem can be solved in the clinic will be solved there, but no new machinery will be installed. Each existing agency will receive the same rewards it now receives, but there will be a co-ordinating center doing the psychiatric work not now done, and making preventive medicine operative in this stage of human life where success is most largely rewarded and failure is so woe-fully costly. There would seem to be no reason why a demonstration of these facts in Los Angeles and San Francisco should not be accepted and urged by the California Medical Association.

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Scientific infant-feeding and pseudo-scientific feeding are not synonymous; but some people make themselves believe so.—Nebraska Medical Journal.

LOS ANGELES' EXPERIENCE IN CHILD GUIDANCE WORK

By AARON J. ROSANOFF, M. D., *Los Angeles*

The aim of the child guidance clinic is preventive work along the lines of mental hygiene.

It is obviously difficult, if not impossible, to demonstrate fully the effectiveness of such work.

It has been estimated that during the first year of its work the child guidance clinic can handle about five hundred cases.

The clinic procedure contains nothing that is new in mental science, except perhaps as it involves a more complete organization for the carrying out of all that we know has to be done.

IN MAY, 1923, Miss Mildred C. Scoville, a representative of The National Committee for Mental Hygiene, came to Los Angeles in order to consult with persons in this city who are interested in mental hygiene, concerning the feasibility of introducing child guidance work here.

She brought information to the effect that the Commonwealth Fund had placed at the disposal of The National Committee for Mental Hygiene financial means for the purpose of organizing demonstration child guidance clinics in various cities in the United States. Twenty-five cities, besides Los Angeles, had already been negotiating for the purpose of securing such a demonstration clinic. All requests for such demonstrations could not be granted, and it was understood that only a small number of cities would be selected on the basis of possessing the most highly developed social agencies, which would work in co-operation with the demonstration clinic.

One of the requirements of The National Committee for Mental Hygiene was that local authorities undertake to organize and finance, to the extent of a minimum annual budget of \$25,000, a permanent child guidance clinic to be maintained along the lines of the demonstration clinic. In the event of this city being chosen to receive the demonstration clinic, the latter would operate here for one year.

Great interest in this project was aroused in this community, and, when a few months later Dr. V. V. Anderson of The National Committee paid a visit to this city, in order to investigate the local situation and to proceed further with negotiations, a new organization was created, the name of which was Mental Hygiene Organization of Los Angeles County.

I need not enter here upon the discussion of the full scope of activities which this organization has planned. It was understood that during the first year of its existence it would concentrate its efforts almost exclusively on the problem of securing for this city a demonstration clinic, to be financed for one year by the Commonwealth Fund, and to be conducted under the auspices of The National Committee for Mental Hygiene.

The organization succeeded in attracting a number of prominent and influential persons in this community and securing quarters for the demonstration clinic in the Anita M. Baldwin Hospital for Babies, with the addition of an adjoining building and part of another building also adjoining, on the grounds of the California Lutheran Hospital. The local

mental hygiene organization succeeded in securing not only funds for meeting its own expenses, but also pledges for funds necessary to maintain a permanent child guidance clinic, according to the requirements of The National Committee for Mental Hygiene.

The work of this organization resulted in Los Angeles being chosen from among twenty-six cities in the United States as the location for the demonstration clinic, which was then available. The clinic staff arrived, preliminary organization work was quickly accomplished, the quarters were prepared, and the new clinic was formally opened for the reception of patients on February 12, 1924.

The plans of the Commonwealth Fund involved the expenditure of between fifty and sixty thousand dollars during the year of demonstration. The demonstration clinic staff consists of a director, chief of staff, two psychologists, a chief of social service, six psychiatric social workers, a clinic manager, a statistician, and stenographers.

A local volunteer staff was then secured for work in connection with the child guidance clinic, the time given for such work by each member of the volunteer staff varying from one-half a day per week to full time. The volunteer staff consists of between thirty and forty members, including neuropsychiatrists, physicians and surgeons representing other medical specialties, psychologists, and social workers connected with various social agencies in the community, such as the Juvenile Court, Probation Department, Bureau of Catholic Charities, Federation of Jewish Welfare Organizations, the city schools, etc.

While the work of the demonstration clinic was to consist mainly of investigation and diagnosis, that of the local social agencies was to consist mainly in referring cases to the clinic and carrying out therapeutic recommendations resulting from the investigation and diagnosis.

The aim of the child guidance clinic is preventive work along the lines of mental hygiene. The theory is that such work is feasible; that is to say, that the prevention of mental disorders and of severe social maladjustment occurring on the basis of such mental disorders can best be prevented by taking cognizance of behavior abnormalities and evidences of beginning maladjustment in childhood.

It is obviously difficult, if not impossible, to demonstrate fully the effectiveness of such work. In a given case it may be judged, from the behavior and psychic abnormality presented by the child, that such child, if not taken in hand and properly treated, is threatened with development of grave, perhaps chronic and deteriorating, mental disorders; and it is not so difficult to show that measures of treatment in the given cases have been effective, insofar as they have removed the difficulties observed before the treatment was instituted. But it is never possible to say that, had the child been left without such attention, it might not have found a readjustment spontaneously and would surely have drifted toward the bad ending of which it was judged to be in danger. On the other hand, it can easily be shown that under conditions of the best possible management and mental hygiene measures the readjustment sought in some cases fails to materialize, and the bad

ending anticipated happens, in spite of all that is done.

The work of child guidance must and will be carried on by those who, in the absence of positive demonstration, have faith in the proposition that the problems of childhood maladjustment, and of all that it leads to later on, will not take care of themselves as well as they would be taken care of with the aid of careful and thorough investigation, diagnosis and treatment of each individual case.

It has been estimated that during the first year of its work the child guidance clinic can handle about five hundred cases. When one considers the amount of money and energy expended in order to take care of this number of cases, it will readily be thought that this work is expensive. It is true that during the demonstration year much of the work of the clinic is work of education, organization, developing a system of co-operation between the clinic and various social agencies, introducing mental hygiene functions in the operations of the social agencies themselves, and developing local machinery for the carrying out of a standard technic. It is probable that after the year's demonstration the child guidance clinic will be in a position to do its work more quickly and at lesser expense. Nevertheless, a careful selection of clinical material will always be in order.

The Child Guidance Clinic can never afford, for instance, the spending of much of its energy and time upon cases of marked mental deficiency, or upon other cases in which the problem obviously would be met only by permanent institutional custody. It is hoped merely that a too ready resort to institutional custody, which may prove detrimental rather than beneficial to a child, may be avoided in many selected cases.

In this connection it may be pointed out that social maladjustment in childhood, as well as in later life, arises on the basis of both constitutional and environmental causes. It is the opinion of many who have studied these problems that probably in no case are either the constitutional or environmental causes alone responsible for the maladjustment, but always a combination of the two. The most difficult task in any given case is to measure exactly the relative importance of each of these two groups of causes. Constitutional causes are probably not susceptible of much modification, and cases in which these causes may be judged to be of the greater relative importance are those which the clinic would not select for its most intensive work. The clinic proposes to select rather those cases in which the more modifiable environmental causes are of the greater relative importance.

It follows from what has been said that no cases can be rejected outright by the clinic. The clinic must and will undertake at least that amount of investigation of every case that is brought to it, which would suffice for a fairly reliable judgment, to the effect that the less modifiable constitutional factors are relatively of such great importance that further expenditure of time and energy on the part of the clinic would not be justified. In such a case the clinic would proceed to recommend the taking over of the case by an institution or such other social

agency which may be properly charged with its further management.

The clinic procedure contains nothing that is new in mental science, except perhaps as it involves a more complete organization for the carrying out of all that we know has to be done. A child, upon being brought to the clinic becomes the object of the following steps of investigation and treatment: 1. Social investigation, which includes history-taking and home investigation, investigation of its school record, etc. 2. Physical examination. 3. Psychological examination, which includes measurements of intelligence, educational achievement, and of special abilities and disabilities. 4. Psychiatric examination. 5. Plan of treatment, which may include medical, psychiatric, educational or social measures, or any combination of these.

It would be impossible for an individual, however expert, to carry out such a procedure. Every phase of the work requires years of specialization, and for that reason becomes a problem for a group of workers, such as a child guidance clinic is made up of.

The data that are gathered by the various members of the group, in the study of the case, are brought together and discussed at staff conferences, which are held daily; and at these conferences further investigation or special diagnostic procedures may be suggested, such as x-ray, lumbar puncture, or any other measure, for the clearing up of doubtful points. At these conferences also the treatment is outlined and decided upon.

The problem then remains of following up the case for the study of its progress and modifying the treatment from time to time, according to indications as they may arise.

The Child Guidance Clinic has now been in operation in Los Angeles three months. In the meantime the local mental hygiene organization became the Southern California Society for Mental Hygiene, because some adjoining counties in Southern California became interested in the progress of mental hygiene, have expressed a desire to participate in the movement, and in some instances have gone so far as to take steps towards the organization of child guidance clinics in their own community.

The Mental Hygiene Society has taken upon itself to provide publicity not only through the daily press and by means of public lectures, but also through the medium of a monthly publication known as the Mental Hygiene Bulletin of the Southern California Society for Mental Hygiene.

This publicity has resulted in bringing not only a sufficient number of cases to the clinic to furnish work to full capacity, but has resulted in a waiting list of patients.

A few days ago the director of the clinic kindly furnished me with a statistical statement of the work of the clinic up to date. I learn that 252 applicants have appeared at the clinic. Of these, 106 were brought by parents, 79 referred by schools, 41 by physicians and other clinics, and 26 by various social agencies.

The clinic has not been in existence a sufficient length of time to afford instances by which the results of its work might be demonstrated. However,

the director has furnished me with abstracts of two cases which will be of interest as illustrating rather common types of difficulty.

The first case is that of a girl, 7 years 9 months of age, referred to the clinic by her grandmother because of unmanageable behavior at home and temper tantrums. The maternal grandmother had suffered from a nervous breakdown. A great-aunt had had a manic-depressive psychosis, and an aunt suffered from goiter and was nervous and irritable. At home she was constantly the witness of psychotic and hypochondriacal symptoms exhibited by various members of the family, and her brother teased her and frightened her frequently. The grandfather told her ghost and other fear-inspiring stories. The great-aunt who was suffering from a manic-depressive attack was seen by the child continually weeping and complaining of various physical symptoms and even observed by her in a suicidal attempt.

When she was a mere baby of fifteen months she began to have temper tantrums, during which she would hold her breath, turn purple, and grow quite limp. These were occasioned by trifles, such as the brother taking bread and butter away from her, and they were treated by dashing cold water over her and on one occasion by holding her under the faucet. She constantly complains of headaches, stomachache, and pain in the heart. These complaints are much like those of her great-aunt and grandmother. At night she frequently has nightmares. Her imitation of the symptoms which she had observed in the grown-up people in the house has gone so far as to lead her to make suicidal threats, and her nightmares were apparently repetitions of the ghost stories which she had been told.

The treatment consisted mainly of changing the family's methods with her. A plan was outlined for the family in specific detail, and her symptoms almost completely disappeared with surprising promptness. There can be no question that immediate and direct beneficial results have been secured in this case, in which symptoms had persisted from infancy. Would she have been destined to become definitely and permanently psychoneurotic if not thus cared for? Has she now been secured against such an outcome? It is in the nature of things that these questions cannot be positively answered, but if there is anything at all in mental hygiene it would seem that the results already accomplished are unquestionably worth while.

The second case is that of a boy, aged 13 years 4 months, who was referred to the clinic because he had never been able to learn to read well, in spite of the fact that he had been rated as of superior intelligence on the basis of a mental test given him at school. Investigation revealed that he had a mental age of 15 years 9 months; that is to say, 2 years 5 months above his chronological age, while his educational age was only 11 years. In reading and spelling he had about a nine-year rating, and it was clear that his special reading disability had stood in the way of his general educational progress.

He was compelled to repeat the low second grade twice and the low third grade once, whereupon he was for five semesters in an opportunity room. At the time he was brought to the clinic he was in an

upper remedial adjustment room, but had not been making satisfactory progress there. Being intelligent and ambitious, he was keenly conscious of his difficulty and humiliated by his failures. This had apparently resulted in the development of an inferiority complex, which was heightened by an overcritical attitude on the part of his mother.

As is well known, such a disability as this boy has can be readily removed by special methods of training, which make use of motor processes. The removal of his reading disability by such a method will remove the only existing obstacle to his educational progress, and will take away all occasion for any inferiority complex. Such treatment has been recommended in his case and will, of course, take several months to carry out.

Those of us who have taken part in the mental hygiene movement in Southern California, and have had to do with the organization of the child guidance clinic here, feel encouraged with the work so far accomplished. We feel that this community cannot afford to get along without child guidance provision, and we propose to do all in our power to help establish such provision in Los Angeles on a permanent basis.

2007 Wilshire Boulevard.

How to Prepare and to Deliver a Paper to a Medical Society—In an interesting discussion of this subject, E. S. Moorhead (Canadian Medical Association Journal) emphasizes the obvious truth that: "No speech and no paper was ever spoiled by being too short, but many have suffered from prolixity. My ideal is to leave my audience with a lingering regret that I had not gone on a little longer. Prepare your papers, prepare as long a paper as you like, and then revise it. Revise it with a blue pencil, and with two mottoes before you: 'Brevity is the soul of wit,' and 'Precise knowledge puts an end to all conversation.' When you have got your paper to this stage, proceed to revise the English; see that your sentences run smoothly; if similar terms have to be used frequently, consult that most valuable aid, Roget's Thesaurus, in order that the same word may not be used time and again. You must then read your paper aloud. Do it at home. Read it until your delivery is fluent and punctuation correct. Note whether you come within the time limit or not; if you exceed the limit, cut again. Never apologize for your address, either at the beginning or at the end. To me there is nothing more offensive than to be told by the speaker that he had hurriedly prepared his paper a short while before. IF A GROUP OF INTELLIGENT AND EDUCATED MEN PAY YOU THE COMPLIMENT OF COMING TO LISTEN TO YOU, THE LEAST THAT YOU CAN DO IS TO OFFER THE VERY BEST CONSTRUCTED MATERIAL THAT IS AT YOUR COMMAND."

"The State Journal"—"The journal of a state medical association should be something more than a periodical that prints the proceedings of the state association and perhaps an occasional report of a county medical society meeting," says Albert E. Bulson Jr., editor Indiana Medical Journal (Bulletin A. M. A.). "It ought to be a live, up-to-date medical journal, with departments devoted to original articles of the best type obtainable, news and personal notes of interest to the medical men of the state, society proceedings, a monthly report from the Council on Pharmacy and Chemistry of the A. M. A., and should reflect the doings of medicine everywhere. The editorial department should be full of pep, and always in support of the highest ideals of personal and professional conduct on the part of medical men. The editor should not be afraid to speak in disparagement of duplicity or unethical conduct, or to offer constructive criticism of conditions that concern the practice of medicine."

ADULT DELINQUENCY

ITS PREVENTION BY MENTAL HYGIENE IN
CHILDHOODBy JOSEPH CATTON, M. D., *San Francisco*

The neuropsychiatrist finds that maladjustment expresses itself in tendency to suicide, unemployment, criminality, or some other form of failure.

We should not constantly spend money, time, and energy on attempting to improve those not capable of improvement.

It is the attempt of the individual to adjust himself in the wrong group or at the wrong level that brings disaster.

DISCUSSION by Josephine A. Jackson, *Pasadena*, and Adelaide Brown, *San Francisco*.

OTHER speakers are telling us, in some detail, of the technique of mental hygiene care, through child guidance clinics and children's habit clinics.

My communication is related to theirs, because mental hygiene in childhood may be a powerful weapon in the prevention of delinquency in the adult.

Society has failed largely in its handling of the criminal, the prostitute, the unemployed, and the pauper. The law has proven its failure with the criminal in a large proportion of the cases. Two-thirds to three-quarters of the inmates of state prisons are repeaters. The law has protected society temporarily by keeping the prisoner in custody: it has done some punishing. Reformation of the criminal has not succeeded at all in about 75 per cent of the cases, and we know little of the result in the other 25 per cent. How could the law have done otherwise? How could it reform, guide, or treat the criminal? First, it would have to know what sort of person it had to reform, to guide, to treat: and it has not had the machinery for obtaining this information.

Medicine may help in the problem, and here is the reason. Medicine will approach the criminal as she does the patient, and, through history and examinations, may determine physical and mental defects. Further, with special psychiatric, psychological, and sociological investigation, she will discover various maladjustments of the criminal and certain factors which appear to her to be in causal relation to the conduct disorder or crime.

The neuropsychiatrist finds that maladjustment expresses itself in tendency to suicide, unemployment, criminality, or some other form of failure. He feels that heredity taint, bad influences in infancy and childhood, poor home surroundings, lack of proper training, etc., etc., are etiological of maladjustment, and that certain forms of mental disease and defect may often be the basic causes.

One has only to glance at the literature on this subject to learn that careful surveys have been made of these relationships. There one may read of the percentages of insane, defective, and the rest, among the delinquents. But one should always ask for comparative statistics on groups of norms. In any event, one learns from Glueck that, among criminals at Sing Sing, 12 per cent are insane, 28 per cent defective, and 18 per cent psychopathic (58 per cent mentally abnormal); and from Anderson that, among the juvenile delinquents in Cincinnati, 26 per cent

were psychopathic or mentally ill, 26 per cent subnormal, 8.4 per cent feeble-minded (66 per cent psychiatric problems); from Anderson that dependents in Cincinnati were 75 per cent psychiatric problems, 25 per cent being mentally ill; from Adler that 35 per cent of unemployed were "inadequates," and all the others showed paranoid make-ups, or emotional instability. Similar statistics are available for inmates in reformatories, for prostitute groups and others. Wherever surveys are made of these various delinquent types, from 50 to 70 per cent are found to present psychiatric problems.

The controls show no such high percentages of psychopathy. The mental defective averages do not show such a great difference between the adjusted and the maladjusted. In this regard, statistics of different observers show wide variations. Terman found about 22 per cent below average in the norm. In Anderson's school-children group, only 6.8 per cent were below average. A comparison of Anderson's totals on the school children on the one hand, with the totals of his delinquency group, and other delinquent groups on the other hand, is rather convincing. Only 6 to 10 per cent of his school children are problem cases and psychiatric cases, whereas 50 to 75 per cent of adult delinquents and failures are psychiatric cases. *In other words, in a group that, as a group, is getting along, less than one in ten present mental hygiene problems. In a group that in adult life is not getting along, two or three in each four are mental hygiene problems.* And medicine cannot apply to the adult what should have been applied to the child. Mental hygiene in childhood should have reached and should have helped in some degree, at least, two to three out of each four of our various adult delinquents.

Each of us has been able to trace through the childhood of "failure cases," the lack of proper habit-forming, proper guidance, proper education; pernicious home-life; and the rest. My small experience in examination of criminals in the San Francisco jails, would indicate that most of them were mental hygiene problems in childhood.

Hereditary factors have shown themselves repeatedly. Some mental defect has been found coupled with criminality in at least one in five of our cases. We have had the feeling that, had these defects been noted early and dealt with, the man might have found some adjustment at an appropriate level. These defectives might have made very good elevator boys, chore men, ranch hands, laborers, domestics, etc. They might have been more properly placed in industry and life; have been taught the satisfaction that comes with work well done, even though it is lowly; might have been prevented from developing "white-collar" aspirations with "overall" mentalities. Fernald prepared 50 per cent of his imbeciles so that after training they made good.

Without burdening you with repetition, may I state that our investigations have shown consistently the various factors which have been unearthed in more thorough and scientifically conducted surveys. At least 20 per cent of our cases show quantitative mental defect. At least 10 per cent might be diagnosed as medically insane. Another 20 per cent would be listed as psychopathic, and still another 20

per cent show marked psychoneurotic disturbance. I would say a grand total of 70 per cent show psychiatric aspects. One hundred per cent show behavior disturbance of antisocial or asocial type. But this sort of information has been available for some time. I believe the public is "sold" on that part of our problem. What the public wants now is to learn specifically our modes of treatment. The portion of the public which handles the purse-strings wants proof in the form of results. It wants to know from the *results*, and not from the *theory*, that our plans are economically sound, practical, and worth while.

I have been asked many times, in effect: Do you do more than investigate, diagnose, classify, recommend? What, concretely, have you done in the way of treatment? What are the positive evidences of results? Are the factors you find in examination of the maladjusted different from those in the adjusted?

I can answer the last question with a definite "Yes." I do not believe that the other questions can be answered so definitely at this time.

Mental hygienists have a big problem here: this problem of preparation for adjustment. It has taken nature thousands of years unnumbered to develop in man a nervous system, and hormones, and other factors beyond our knowledge. All this evolution has been towards the adjustment of each body cell to all of the others; and each of our body organs to the others. At its best, this adjustment lasts from three to five score years, at which point nature confesses its failure in death. We certainly, therefore, may approach this problem with all of humility and little of conceit. We have the right, however, to hope that something definite may be accomplished.

I believe that we ought to take stock. We ought to load our cause with every possible bit of optimism and enthusiasm. On the other hand, we ought to allow enough of common-sense pessimism to stay with us that we do not get the idea that we can buck evolution in its attempt to eliminate the unfit. We should not constantly spend money, time, and energy, on attempting to improve those not capable of improvement.

We have survey reports, statistical studies, diagnoses, and indicated recommendations. These point the way towards prevention of delinquency. We can get a clearer picture of how heredity, environment, and the personality-at-the-moment have determined certain capacities and limitations. We can contact the asocial and antisocial types early in life and prepare them for adjustment in some group and at the level where each belongs.

It is the attempt of the individual to adjust himself in the wrong group or at the wrong level that brings disaster. We must remember that it is not only the defective that needs help towards finding his level and adjusting himself to it. Many an adult delinquent gives clear evidence that during childhood he might have been detected and should have been dealt with as having an over or under-acting nervous system: as being of unstaple emotional make-up, maybe given to explosions, irritability, apathy, sensitiveness, or moodiness; as a neurotic, not unlike many of our adult types; as an incipient dementia precox, or paranoid type; as one with a disturbed sex psychology; as of asocial or anti-social tendency.

All of these individuals would at least tend towards proper adjustment if the evolution of personality, and environmental factors were controlled in some degree.

209 Post Street.

DISCUSSION

JOSEPHINE A. JACKSON, M. D. (1955 Morton Avenue, Pasadena)—Dr. Catton's approach to this subject of dominant interest is both humane and sternly practical. That men of his type are bending their energies toward the solution of adult delinquency augurs well for the unfortunate individual and society as a whole. He tells us that maladjustment, which tends to crime, depends first on heredity, which, to me, is an insuperable argument for the sterilization of the unfit, beginning first with the criminal unfit and carrying it through all such members of society as are palpably incapable of transmitting a wholesome heredity.

This is not so much for the sake of society as for the sake of the wretched individual himself who must carry this inadequate equipment as a torturing ball and chain through all the days of his years.

Maladjustment results also from the lack of the right influences—psychic and material—in childhood.

Dr. Catton calls for intelligent control of the evolution of the child's personality. One means that presents itself therefor is to impress upon parents the significance of mental hygiene, which holds the total weight of weal or woe for the coming citizen.

Not dollars, nor erudition, but the faculty of adaptation is the child's supreme equipment. There should be a recognition by the masses and by all the wearers of white collars that more brains on the average top the overalls than top the white-collared mass. Manual dexterity means brains and assures adaptation.

ADELAIDE BROWN, M. D. (909 Hyde Street, San Francisco)—The increasing emphasis on habit-training in the hygiene of childhood must make a better poised adult life.

The fears of the dark, the need of a comfort to go to sleep with, of someone in the room, or of rocking to sleep—all these portend restless sleeping, an emphasis on the emotional and self-indulgent tendencies of the mind. The bad habit should not start, avoidance is easier than eradication.

Social adjustments can be taught early. Common courtesies of greeting, good-by, and thank you, mean self-control, appreciation of fellow-beings and social relations, and are thus far more than manners.

General physical and mental training, rather than specializing during adolescence, gives a control of brawn and brain on which body and mind may be developed later.

A social child, respecting his own and others rights, indicates mental guidance from birth. Of perfect specimens few grow, but many may be cultivated.

Ovarian Therapy—Emil Novak, Baltimore (Journal A. M. A.), emphasizes the fact that, rational as ovarian therapy appears to be in some conditions, the results are rarely striking and often nil to the level-headed observer. It cannot be assumed that a commercial extract can replace the normal ovarian secretion in the patient's body, or, for that matter, that it originally contains any of the active hormones of the ovary. Here lies the crux of the whole problem, whose solution will depend in large measure on the work of the biochemist. Until this day, the physician who uses ovarian therapy should keep his feet on the ground and not let himself be carried away by the exaggerated claims of those who have something to sell or the ill-advised and premature reports of honest but deluded professional colleagues who have not yet learned the dangers lurking in the "post hoc propter hoc" method of reasoning. As I once heard a wise man say, "Ought we to assume, if the administration of cascara relieves constipation, that the constipated individual had been a victim of hypocascarium?" There can be little question as to the future importance of ovarian therapy—as regards its present importance there is considerable room for discussion.

THE HABIT CLINIC FOR THE PRE-SCHOOL CHILD

By SYDNEY KINNEAR SMITH, M. D., *Oakland, Calif.*

There is, of course, no deep mysticism or any subtle psychiatric procedure employed, but only an attempt made to dispense common sense in small doses.

FROM what has been said by Dr. Richards and Dr. Anderson, one does not need to dwell further on the work of mental hygiene as touching childhood, its history, and recent manifestations in this country. Nor does one need to emphasize more fully to a group such as this the real need for such work. However, granting the need for juvenile mental hygiene advancement, we feel that in a symposium of this nature it is pertinent that we focus our attention for a part of the time on that vastly important period of two to six. Up to quite recently this strategic period has been solely within the scope of the pediatrician and not the psychiatrist. As psychiatrists we feel that the problems of these years are within our territory, and that with a psychological background, as well as a medical one, we can be of real service in this field. We feel that it is not a problem for the psychiatrist alone nor the pediatrician alone, but for both, working together.

Our knowledge of adult psychoneuroses has given us a better understanding of the psychological twists of childhood. There is reason to think that there are conflicts present in childhood which give rise to psychoneuroses similar to those of adults, possibly more simple in their structure. In looking more especially at habits, we do not feel justified in arguing that the presence of an unusual habit in childhood bespeaks an adult psychoneurosis or psychosis, yet we do feel justified in saying that many of these habits are indications of an emotional instability, which, if allowed to develop undirected, may well make for an inefficient adult adaptation. Failure on the part of an adult to adapt himself properly gives us alcoholism, drug addiction, delinquency, prostitution, convulsions, and a variety of other abnormal modes of meeting the tasks at hand. We feel that these reactional make-shifts may often be traced back to an inefficient reaction—a habit in childhood. If these conflicts—these poor adaptations to reality—can be met and coped with at four instead of forty, what a vast amount of discomfort—personal, social, and economic—we have saved the patient, his family, and the state. We are willing to rest our argument with this superficial indication of our position, feeling assured that you are in agreement as to the vital importance of the two to six period. Also I feel sure that in Dr. Catton and Dr. Harvey's consideration of these problems the connection between childhood mal-adaptations and behavior problems of later life will be stressed.

We are bringing to you a report of work accomplished in Oakland and in Berkeley, where we are unusually fortunate in having the necessary equipment and facilities for work, and where at the present time we have a fairly satisfactory child guidance machine—a group of clinics at the Oakland Health Center, at the Oakland Baby Hospital, and at the Berkeley Health Center. Each of these clinics is provided with adequate space, proper surroundings,

social service workers, a psychologist, and close contact with an established group of specialists for reference work. We feel that we may be justly proud in being able to present a working organization to the National Mental Hygiene Committee, and I believe the first real effort of this sort in Northern California.

We are modeling our work largely along the lines of the work done in the state of Massachusetts by Douglas Thom, where the name "Habit Clinic," to the best of our knowledge, was employed for the first time. The beginning was made in the city of Boston in a most unpretentious manner about two and one-half years ago. A large part of the work at first was done personally by Dr. Thom, later junior workers were drafted from the Boston Psychopathic Hospital, including a psychiatrist and a psychologist. The work has spread from this rather inconspicuous beginning and is now reaching well into the state. The ground for this work has been especially well broken in Massachusetts by a very complete and carefully executed program of mental hygiene. The first habit clinic in Boston included, as Dr. Thom points out, "a psychiatrist one afternoon a week, a pad of paper and pencil, a chair and table in the nursery, and the necessary equipment for making a complete physical and neurological examination."

Work not dissimilar to this had been done earlier in New Haven with Gessell, and I believe also in New York. But I think that we are correct in saying that the term "Habit Clinic" was employed in the Massachusetts undertaking for the first time.

What is the scope of a habit clinic? The province of such a clinic is to consider and treat improper modes of dealing with childhood problems—that is, within the period of two to six years. Also, we should include within this scope an attempt to aid in the formation of habits which will be of use in developing a well-rounded adult personality. To be specific, what are typical situations to be dealt with in a habit clinic for pre-school children? First, we have faulty adaptation to the feeding situation—vomiting when certain foods are given, rumination, regurgitation. Then we have faulty sleep habits—night terrors, sleep-walking, sleeplessness, bed-wetting. Masturbation is one of the most frequent of our problems. Dirt-eating, thumb-sucking, lying, cruelty, speech defects, day-dreaming, tics, undue affection for a member of family mannerisms, are but to mention a few of our situations.

To be more specific, I can summarize a few cases recently encountered.

Case I—Boy, aged 5. Complaint: Bed-wetting, running away from home, facial and nasal tic. As to the bed-wetting, we find that he is given water and tea in abundance at a late supper, is not sent to the toilet before retiring, and is scolded continually about this shortcoming. We try to cut out the scolding and to change the dietary and sleeping situation. As to the running away, we find that the child has an excessive fear of the father, induced by too frequent punishment, often considerably delayed after the offense. Due to this delay, the child has stored up a fear and a resentment for the father, and gets away from home when the father is about. The facial and nasal tics are on a physical basis in part. The child has large tonsils—a mild rhinitis is induced, the infection ascending to the eyes where a mild blepharitis is caused, the constant irritation in the nose causing the snuffing, and in the eyes the blinking. A removal of the tonsils has largely remedied this condition. Imitation also

plays a part here, for we find that the patient's older brother had a similar habit.

Case II—Boy, aged 5. Complaint: That he soils himself in kindergarten. In this case we find physically an underdeveloped child, with poor muscular tone. As a baby, and even later, we find that the mother worked out and the boy was left to the tender ministrations of an older sister. Very little attention was given to the bowel movements, and the child was not taught to go to stool at regular intervals. Our present trouble is largely a continuation of this untidy habit developed during babyhood.

Case III—Boy, aged 6. Complaint: Masturbation. Here we find a rather long foreskin with difficult retraction and evidence of irritation. Our first step is circumcision. We changed from a nightgown to sleeping-suits, and arranged for the child to sleep alone. We have also arranged that the child is not to be put to bed until there is evidence that he is sleepy; heretofore, the youngster going to bed immediately after dinner, before he was sleepy and lying there fully an hour before he went to sleep—a golden time to foster the habit we are trying to overcome.

Case IV—Girl, aged 5. Complaint: Stammering. The child had been somewhat slow in learning to talk. This was a source of annoyance to the parents, and they constantly urged her to talk, scolding her at times for being slower than their other children. Some well-meaning teacher told the mother to make the child repeat sentences as fast as possible. This was tried and the child's defect became much more pronounced. In our clinic treatment, we changed the type of therapy to include deliberate pronunciation and breathing exercises, and tried to establish the necessary rapport between the child and the examiner.

These cases I have summarized, not because there is anything very spectacular or remarkable about them, but rather to show you the type of thing we encounter in our habit clinic work, and to emphasize the types of disorder which we feel are worth remedying. We feel that therapy along these lines can make the difference between a normal adult and an adult defective in some emotional respect, possibly a dependent on state or county.

ORGANIZATION AND TECHNIQUE OF A HABIT CLINIC

In the first place, to my mind, the setting of such a clinic should be given most careful consideration. I feel very strongly that it should be located in an established clinic or nursery. For the proper handling of a clinic one needs the constant proximity of specialists in other lines, the internist, the surgeon, the oculist, and so on. A dentist also is an essential part of the general clinic personnel. The actual clinic surroundings should be carefully considered, so that as far as possible the child is freed from the usual terror of white-walled hospitals and outpatient departments. Ordinary nursery accessories should be in abundance—sand pile, toys, books, games, and, if possible, a competent director for these activities. While I feel that to a certain extent it is valuable to keep before the child the fact that he is coming to the physician for a purpose, yet we do want him to come in to us from as near a normal environment as we can provide. Toys in the examining room are useful at times. Small chairs and a small table are worth getting. Needless to say, examination paraphernalia should be inconspicuous.

We find it more satisfactory to discuss the situation with the parent before seeing the child (leaving the child with a nursery attendant). Then to have the child in with the parent, adhering largely to commonplaces rather than going directly to the

situation in question, or giving the mother an opportunity of covering the situation before the child, emphasizing, as she all too frequently tries to do, the fact that her child is a "nervous child," how he annoys the family, how many other members of the family have suffered from nervous complaints and such-like data, which, of course, tends to make the situation worse as far as our patient is concerned. Then, after a degree of rapport has been established, we like to see the child alone for a few minutes; this is not always accomplished until the second visit. These visits alone with the child, we feel, are of real value and often give us the clue to the situation. These sessions are of real therapeutic value, and it is a satisfaction to find that your small patients come to look forward to their clinic visits, and pride in the week's attainments prove of no small value in habit correction.

There is, of course, no deep mysticism or any subtle psychiatric procedure employed, but only an attempt made to dispense common sense in small doses. Usually, the mother must be very carefully instructed in the things to do, and more important, in the things not to do. And, most important, the social service worker or the visiting nurse should make repeated home visits to see that such instructions are followed. In many of our cases the cleaning up of the home situation automatically clears up the habit situation.

After dealing with the parent, the situation is gone over in as simple a way as possible with the youthful patient, pointing out frequently that the reaction complained of is immature, and not worthy of him. We try to dispel the all too frequent belief of the child that his habit is something of dire moment and consequence. We explain to him that, although it is not entirely admirable, yet it is not of the greatest importance and that we fully expect that it will disappear. Sometimes we outline simple lines of therapy for the child, breathing exercises, co-ordinating muscle movements, simple dance movements. Then, most important, we outline a program of positive attainments and aim at the establishment of a useful set of habits. A program of helpfulness in small duties about the home, conduct in kindergarten and in the playground is covered.

In outlining these positive situations, we are keeping in mind several salient points of child psychology, which we feel are worth mentioning in passing. These are: (1) Reasoning power of the child; (2) ability to imitate; (3) ability to accept and act on suggestion; and (4) the need of approval.

The power of reasoning in young children, especially in infants, has been a source of discussion for years, and we only want to point out that beyond doubt we give a young child credit for all too little intelligence. His mental processes are far ahead of his powers of speech, as anyone can verify who has had opportunity of watching children. In the practical management of children we find that an appeal to reason is often useful before a child can express himself. For this reason, it is poor policy to feel that we can fool a child with any silly explanation that comes to mind. It is much safer to err on the side of crediting him with too much intelligence rather than with too little.

As to our second point—the ability to imitate. This ability can be used as a real aid in building up a set of good habits and shaping a satisfactory character. A cheerful, bright, alert, interested mother will, in most cases find the same sort of child, whereas a surly, scolding, nagging mother cannot complain of a nervous child. If the family clothes are thrown hit or miss about the room on retiring, one cannot be surprised if Johnnie's clothes are likewise distributed. If the sleeping and eating habits of the family are slovenly, one must look for similar habits in the small boy of the family.

Our third attribute—the ability to accept and act on suggestion—is possibly our greatest asset in dealing with the problems of the nervous child. With ordinary suggestion, tactfully applied, we can induce habits of orderliness and precision in a child without any great deal of difficulty. It cannot be done immediately, but every success makes the next attempt less difficult. Suggestion is a real factor, if well used, but without common sense is useless. By this we mean, that, if a child of four is busily engaged in pulling the cat's tail, a mere soft-voiced suggestion that he stop this fascinating sport and come to dinner will not suffice, and, if anything, makes the situation worse. If, on the other hand, when his attention can be gotten, it is suggested to him that some other pursuit—eating his meal—is just what he most wants, his attention is taken from the cat, not focused upon it as it was in the first place, and the beginning made for a new and beneficial association. As has been pointed out in the case of army orders, the men are brought to attention before the order is given, not issuing it while their attention is on some other move.

Our fourth and last outstanding point is that very prominent desire for approval that every normal child manifests. Approbation and desire to hold the center of the stage play no small role in juvenile psychology and must be taken into account. Every child craves a certain amount of credit for work well done, and a well-rounded character will not result if this is not obtained. Too free an approbation is bad, but just praise well-applied helps more than the hair-brush. No child should be given a free lease on the center of the stage, but focusing family attention on the child, in moderation, is helpful. A too frequent repetition of the adage, "Children should be seen and not heard," is the cause of no few nervous disorders, and is conducive of a seclusive, shut-in make-up, which forms a breeding place for subsequent difficulties of adaptation.

We feel that the physical consideration should be large in habit cases. To be concrete, we feel that circumcision should be advocated at the least sign that it is needed. In normal children, we may frequently disregard this necessity, but with the nervous child, even a slight source of irritation may be enough to swing the pendulum in the wrong direction; consequently, circumcision may be neurologically indicated when it is not surgically so necessary. Tonsils and adenoids must go, with an accompanying removal of a variety of facial tics. Eyes should have early attention if there is any indication of muscle trouble. The orthopedist must frequently be consulted as to posture and deformity. Focal in-

fections should not be forgotten, although we do not feel justified in cottonizing many of our diminutive patients. Nutrition, too, is to be seriously considered.

A psychologist is an essential part of our clinic. For routine—Binet's—we care not a whit, but for intelligence tests, applied by a good medical psychologist, with an ability to interpret, results in light of special abilities and disabilities we have every respect and look to as a valuable adjunct of our clinic.

Frequent conferences should be arranged to include the psychiatrist, the psychologist, and the social service worker. This point cannot be overemphasized, for, without the fullest co-operation and understanding between these three viewpoints, we cannot hope for the fullest accomplishment of our aims.

In closing, then, if we may sum up the points considered. We have looked briefly at the development of the habit clinic idea in this country, with especial reference to the work in Massachusetts. Our next consideration was a general survey of a habit clinic, with resumé of typical cases. Our final division was a view of the actual mechanics of running a clinic, and our mode of procedure. I should like to close this paper with the words of former Chief C. Macfie Campbell:

"For the nervous child two conditions are eminently salutary: First, a wholesome objective regime, and second an atmosphere of frankness, in which he can get a fair chance to discuss his troubles."

1904 Franklin Street.

A Method of Demonstrating Tubercle Bacilli in the Urine—In the method described by Stephen G. Jones, Boston (Journal A. M. A., December 13, 1924), a catheterized specimen of urine is centrifugated at lowest speed for two or three minutes, thereby removing the bulk of the pus and detritus. The supernatant cloudy fluid, containing a few pus cells and the bacilli, is poured off, one-half is discarded and the remaining half is poured into a second centrifuge tube. To this half-filled tube, one-quarter volume of 95 per cent alcohol is added, the remaining quarter being distilled water. This mixture is centrifugated at highest speed for forty-five minutes until clear, the supernatant fluid discarded, and a smear made from the sediment obtained with a flamed wire loop. The smear is allowed to dry and is then fixed by being passed rapidly two or three times through a Bunsen flame. The centrifuge must be an electrically driven high speed machine. When carrying a load of four tubes, it should make from 2000 to 2100 revolutions per minute, which produces a force 1077 times that of gravity. The Ziehl-Neelson stain is employed. A more delicate stain is obtained if a steam bath is used rather than heating the smear with the direct flame. This is easily accomplished by placing the glass slide over the open top of a can containing steaming water. In this way the stain is heated sufficiently without danger of precipitating the dye. Twenty minutes suffices. The preparation is decolorized by exposure to 30 per cent nitric acid, followed by alcohol (Czaplewski's solution) or to 20 per cent sulphuric acid. The pitfalls are that occasionally nitric acid and alcohol may not decolorize all acid-fast bacilli other than tubercle bacilli. Twenty per cent sulphuric acid will decolorize all other acid-fast bacilli, but may also decolorize tubercle bacilli. The decolorized smear is washed with water, and counterstained with methylene blue. Several hours' search will often disclose the solitary group of bacilli which otherwise will be missed.

Adam and Eve were perfectly happy and sweetly contented in the garden of Eden until Satan's prescription was taken and they beheld their naked condition and Eve began making garments of fig leaves and both of them were ashamed of themselves.—Austin Flint (Iowa Medical Journal).

THE PNEUMONIC PLAGUE IN LOS ANGELES

By EMIL BOGEN, M. D., *Los Angeles*

A story of the recent epidemic which demonstrated the effectiveness of intelligent health work.

ON OCTOBER 29, 1924, a physician called up the Los Angeles General Hospital to say that he had just seen a Mexican patient who appeared to be critically ill of some malady which he could not definitely diagnose, but which he thought might be highly contagious, since several others in the neighborhood were similarly affected, namely, with a very high fever and pains in the back and chest. Accordingly the ambulance was sent to a Mexican settlement on the outskirts of Los Angeles, where a group of people were found clustered in front of a one-story frame building with a little porch and a single front room.

In the middle of this room an old Mexican woman was lying on a large double bed, crying between paroxysms of coughing, while along the wall was a couch on which was seen a Mexican man of about 30 years of age, restless and feverish, but not coughing. There were several other persons of both sexes in the room, one of whom volunteered to act as interpreter. With his aid, it was learned that the man had been stricken the preceding day with a severe pain in the front of his chest and along the entire spine, and had had a fever, which at that time was 104 degrees, and a few reddish spots on his chest, but no other symptoms of note. The old woman had apparently been previously stricken in the same manner, but she had been coughing for the past two days, expectorating a profuse bloody sputum, and had loud, coarse rhonchi in her chest.

While these two patients were being placed in the ambulance, the interpreter led to a house nearby, where he said there were some other patients with the same disease. Here a young man was found in bed, suffering with a high fever and pain in the chest and back, but no other symptoms. In an adjoining room his wife, also feverish, stated that she was feeling better than previously, while in the front room a young girl sitting in a settee, with her head in her hands and with a flushed face, insisted that she was not sick, only a little tired. (Three days later the man was dead, and the two women were dying in the hospital.) The interpreter remarked that four other boys, relatives of our patients, were ill at this time in their home a few blocks away. He added that the father of the man we had come for had died in the hospital a week ago of what was thought to be pneumonia, and that the mother had died a week before that with similar symptoms.

The four boys were brought to the hospital that same night, and during the following day six more cases were admitted from that neighborhood. Soon after admission they developed signs of a severe pneumonia, with bloody expectoration and marked cyanosis. During this day three of them died, and that afternoon the diagnosis of pneumonic plague was first suggested. The following morning Dr. George D. Maner performed an autopsy on one of the patients who had succumbed, and reported that smears from the lungs of the patient showed Gram-

negative bipolar staining bacilli characteristic of plague.

During the next six days twelve other Mexican patients were admitted with the same condition, but deaths followed so rapidly that, by the end of the week, out of the entire group there were only two boys left alive, and one of these passed out during the next week. Seven other patients have been reported to have died of the same disease without entering the hospital, making a total of thirty deaths from the pneumonic form of plague during the two weeks in Los Angeles.

On October 31, the day that the organism was first found, a nurse who had been caring for the first victim during his few hours in the pneumonia ward the previous week was admitted to the hospital, suffering with a severe pain in the chest and back and a fever which she said had been coming on for two days. Soon she developed difficulty in breathing, coughing and expectoration, which on the following morning was blood-stained, and a large, painful swelling of the glands of the neck. As a desperate resort, she was given 30 cubic centimeters of a 1 per cent solution of mercurochrome intravenously, and during the week received several additional injections, with noticeable improvement in her condition, and appears at the present time to be proceeding towards convalescence. As yet, however, no bacteriological confirmation of the diagnosis has been secured in this case.

As soon as the disease was recognized steps were taken to prevent the spread of the epidemic. The district within which the cases originated was placed under quarantine, and all persons known to have been in contact with patients were observed carefully for the next ten days, the maximum expected incubation period. An organized campaign was inaugurated against rats. At first everyone in the hospital wore a clean gown, cap and gauze mask whenever he entered a room in which a plague patient was being cared for, but this was deemed insufficient protection, and so masks were made consisting of a pillowslip which was placed over the entire head, a small piece being cut out for the eyes, which was replaced by a piece of transparent celluloid attached by means of adhesive plaster. Procuring and working in these masks was a matter of considerable exertion, and also of considerable comment and diversion.

Meanwhile about a score of patients had been placed in the contagious building, with a diagnosis of "suspected" plague which could not be confirmed. A number of these were proven at autopsy to have died from some other condition, while the subsequent clinical course of the others tended to clear up the diagnosis. One case of pestis minor, however, with a bubo which proved on aspiration to contain organisms of plague which were confirmed by animal inoculation experiments, was found in this group.

On account of the prostrated condition of most of the patients and the difficulties incident to caring for such an unexpected and dangerous disease, the histories and records are necessarily incomplete and inadequate, but the following data regarding the twenty-four patients who died of pneumonic plague

at the Los Angeles General Hospital may be of interest. In every case a history of close contact with a case previously stricken could be secured. The average duration of the illness before admission to the hospital was between three and four days. The average length of hospital treatment was less than two days, but one case was proven plague at autopsy after twelve days of hospitalization.

The chief symptoms complained of, in the order of frequency of occurrence, were fever, ranging from 100 to 106 degrees on admission, expectoration with blood-stained sputum, cough, pain in the chest, headache, generalized pains, vomiting, pain in the back and upper abdomen, malaise, epistaxis and chilliness without rigor. The main findings on physical examination, in the order of frequency, were large, coarse rales in the chest, thickly coated tongue, reddened throat, dyspnoea, impairment of percussion note over the chest, restlessness, prostration, delirium, weak rapid pulse, cyanosis, a systolic murmur, localized adenopathy, conjunctival injection, increase in spinal fluid pressure, with signs of meningismus in the children, jaundice and a macular rash.

Unfortunately, only nine of the bodies were autopsied before cremation, all of whom showed typical findings of a confluent bronchopneumonia in widely varying degrees, with the signs of a very severe infection, and the recovery of the bacillus of plague from the lungs and other organs, as proven by guinea pig inoculation. Blood cultures from nine other patients, however, also yielded this organism. In the remaining cases no bacteriological studies were made, but the clinical history and course of the disease, as well as the evidence of transmission through them to other patients, leaves no doubt as to the diagnosis. Smears from the sputa in a number of instances showed Gram-negative bipolar staining bacilli, with comparatively few pus cells.

In addition to repeated stimulation and other symptomatic treatment which all of the patients received, more than half of them received intravenous (or intraperitoneal) injections of mercurochrome, including the nurse and the boy who still survive, but fresh anti-plague serum was secured only in time to be used in one case. Since no new cases of pneumonic plague have developed for four weeks, it is believed that the epidemic is over, though sporadic cases of the bubonic type may still be expected to appear occasionally.

What's in a Name—Occupational therapy is now a classical remedy for ennui. It used to be called "work." The new name makes it more effective. An unfriendly dame suggests the installation of an old-time tread mill in every home as an economic proposition. It would serve both as a domestic power plant and an efficient substitute for cow pasture pool.—Kansas Medical Journal.

As an Editor Sees It—"Doctors who specialize are valuable. They push the science ahead. They do things that non-specialists could not do. But progress in one direction is paid for by loss in another. We are losing the first-rate all-around general physician and consultant. Properly speaking, the specialist should only be an assistant to the general physician, called upon when required."

ADENOMA OF THE THYROID *

By VINTON A. MULLER, M. D., Reno, Nevada.

A clinical study for clinicians.

The treatment of adenomas is surgical. Iodine is contra-indicated.

The use of the x-rays in this type of goitre is to be condemned.

DISCUSSION by W. W. Washburn, San Francisco; M. R. Walker, Reno, Nevada; Raymond St. Clair, Oakland; Thomas Wilbur Bath, Reno, Nevada.

THE adenomatous goitre, which is the most common type of goitre, produces thyroid enlargement by the growth within the substance of the thyroid gland of encapsulated adenomas, which may be either single or multiple, and which give rise to the condition frequently spoken of as nodular goitre. The true etiology is as yet unknown, though it is quite commonly believed that some of these adenomas take their origin in cases of long standing colloid goitre, whereas others are believed to develop from foetal rests.

Adenoma of the thyroid ordinarily makes its appearance between the ages of 15 and 20, although some of these growths are first noted later on in life. The average age of first appearance is 22. Clinically, it is characterized by an asymmetrical or nodular enlargement of the thyroid gland caused by the presence of single or multiple growths, which may be confined to one lobe, both lobes, or any portion of the gland. At times these goitres may be retrosternal and not particularly visible in the neck or, in addition to the enlargement in the neck, one may find that one or more of the adenomatous masses descend behind the sternum and into the mediastinum. Asymmetry, though usually present, may not be marked, and occasionally only the most careful palpation will reveal the presence of a tumor mass or multiple masses within the gland. To the palpating finger the consistency of an adenoma is usually harder than normal thyroid tissue, but where degeneration has taken place the consistency may vary from the fluid of cyst formation to the hardness of calcareous deposits. Degenerative changes are prone to occur and are usually the result of hemorrhages within the capsule of the adenoma, and give rise to the various clinical varieties, such as hemorrhagic goiter, cystic goitre, calcareous goitre, etc. Myxomatous and hyaline changes also occur. In case of sudden enlargement, one must always think of hemorrhage; in case of rapid growth, malignancy.

In the early stages of their development these goitres do not produce symptoms except when their location is adjacent to an important structure whereupon pressure symptoms may develop. These pressure symptoms will depend upon what structure is involved, and are commonly manifested by difficulty in breathing or swallowing. Large retrosternal growths may interfere with circulation, produce a caput medusa or other signs of mediastinal obstruction.

About sixteen years after the appearance of the adenoma within the thyroid symptoms of hyperthyroidism may develop. The average age of appearance of these symptoms is thirty-six and one-half

* Presented before the Twenty-first Annual Meeting of the Nevada State Medical Association.

years, though at times young patients twenty-eight and thirty will come in mildly toxic. The cause of this hyperthyroidism is due to the secretion of normal, or nearly normal, thyroid hormone in excessive amounts by the adenoma. In 1916, Goetsch believed that the mitochondria in the adenomas were increased when hyperthyroidism was present, and offered this as a means of differentiating pathologically between adenomas with and those without hyperthyroidism, but his work has not been confirmed. In 1920, Boothby stated that, pathologically, there was no difference between an adenoma with and one without hyperthyroidism. In 1922, Wilson found that in the adenomas with hyperthyroidism there was evidence of increased activity of the parenchymal cells, which was indicated by moderate degrees of cell hypertrophy and hyperplasia which was not present in adenomas without hyperthyroidism. He concludes that the symptoms of hyperthyroidism occurring in these adenomatous glands are caused by the absorption of complete thyroxin in previously stored colloid, which is being manufactured more rapidly than in a normal gland, but much more slowly than in the gland of exophthalmic goitre.

These symptoms of hyperthyroidism are evidenced by nervousness, tremor, tachycardia, loss in strength and weight, with a tendency to hypertension and, in the later stages, myocardial degeneration. This type of goitre has a more pronounced selection for the cardiovascular system than exophthalmic goitre, and the changes produced are gradual, progressive, and certain. These patients appear for examination on an average of nineteen years after the first appearance of the goitre, and three years after the onset of their symptoms of intoxication. Nervousness and tremor are always present, but to a less degree than in exophthalmic goitre, whereas the cardiovascular symptoms are more pronounced; and it is not especially infrequent to see patients with oedema of the feet and ankles with all the symptoms and signs of cardiac decompensation who have been treated for cardiac decompensation "and the small, nodular goitre, which has been there for years without causing any trouble," overlooked. The tendency to hypertension is greater than in Grave's disease. Both systolic and diastolic pressures are greater than in Grave's disease, and this is true both for office readings and bedside readings, although in my own personal experience cases of Grave's disease seem to have higher systolic pressures than toxic adenomas. The basal metabolic rate is increased in the toxic adenomas, but this increase is to a less degree than in Grave's disease. The average B. M. R. in 201 cases studied by Boothby was plus 28.

The treatment of adenomas is surgical. Iodine is contra-indicated. Its use exerts no influence in causing the adenoma to disappear, but, to the contrary, it may cause symptoms of hyperthyroidism to develop; a condition which was often called by our predecessors "iodine heart."

The use of the x-rays in this type of goitre is to be condemned. They do not relieve the patient of her adenoma, but may relieve her of what normal thyroid tissue she has left and thus give rise to symptoms of hypothyroidism. The adenomas often crowd out and obliterate the normal thyroid tissue until

there remains only a thin layer of it adhering to the capsule of the gland which might be just enough to care for the patient's needs after her adenoma is removed. In some of the adenomatous goitres that appear diffusely enlarged, an x-ray treatment will cause the adenomatous nodules to become apparent by its selective action on the extra adenomatous tissue.

Cleaning up of foci of infection seems to have a beneficial influence in Grave's disease, but will not exert any effect in causing an adenoma to disappear.

To remove the adenoma surgically is to remove abnormal thyroid tissue, which, by its presence, produces all of the patient's symptoms. Its surgical removal will put a stop to the disease, but whatever permanent damage to vital organs has occurred will always remain. Even the extreme cases, however, will show some improvement after operation. Removal of the goitre before symptoms arise preclude their possibility; removal after they appear, arrests the disease, prevents further degeneration and allows for some recuperation. The B. M. R. returns to normal limits within two weeks following removal of the adenoma. In contra-distinction to Grave's disease, these patients do not require the pre-operative preparation that those suffering with Grave's disease do—the advanced cases with myocarditis, auricular fibrillation and hypertension, naturally require pre-operative rest in bed and digitalis, until such time that they may be able to withstand thyroidectomy. Preliminary ligations are never done. It is essential that we recognize adenoma of the thyroid and remove them surgically before permanent damage to vital organs takes place. It is not good judgment, however, to advise surgery in young people from 15 to 25 years of age without symptoms, on account of the possibility of new adenomas developing after operation or very small ones being overlooked at the time of operation, to subsequently grow and give trouble. A frequent site of such "recurrences" is the pyramidal lobe, and for this reason it should be removed at operation, providing there is enough normal thyroid left without it.

A further, but also important, reason for advising surgical removal of adenomata of the thyroid gland is that 95 per cent of cases of carcinoma of the thyroid occur in glands with pre-existing adenomas, and, although carcinoma of the thyroid gland is rare, we can readily see that it may be made rarer by curing our patients of adenoma.

Gray-Reid Building.

DISCUSSION

W. W. WASHBURN, M. D. (380 Post Street, San Francisco)—I am glad that Dr. Muller has chosen to speak upon a distinct type of goitre rather than attempting to cover a large field. He is to be commended for this excellent paper, treating with adenoma of the thyroid.

The importance of first establishing an accurate diagnosis cannot be too strongly emphasized, for upon the diagnosis depends proper treatment. We still continue to see altogether too many goitres treated in a sort of "routine" manner. If iodine doesn't help, X-ray is tried, and when medical measures fail some of these patients are told that nothing more can be done except a "dangerous" operation. And, too often, I am sorry to say, the general practitioner attempts treatment of these too long, before referring them to one familiar with goitre problems. One still continues to see a great many adenomas of the thyroid treated along medical lines, especially the x-ray. This is because either an accurate diagnosis has not been

made, or else the physician is not aware that adenomas are neither cured nor benefited by x-ray therapy.

When seeing a young woman in the second decade of life presenting definite adenomas of the thyroid and symptoms of hyperthyroidism, before attributing this hyperthyroidism to an overfunctioning adenoma, one should suspect an associated hyperplasia in the remaining gland, as ordinarily the adenoma does not put out increased amounts of thyroxin until it has existed a number of years. True exophthalmos does not occur with toxic adenoma, and when present means a hyperplasia. A definite bruit heard over the thyroid gland proper, especially in the upper poles, is pathognomonic of hyperplasia. Toxic and non-toxic adenomas do not give a bruit upon auscultation, nor a thrill upon palpation.

The importance of exposing the entire gland at operation and palpating same cannot be too strongly emphasized. The full Kocher collar incision should be used in all cases, particularly when operating for adenomata. Recurrences after operation are generally due to overlooking small adenomas at the time of operation.

In reference to pressure symptoms from adenoma, I wish to call attention to the fact that we should not overlook some of the pressure signs. Chief among these is unilateral laryngeal palsy, which may have come on so gradually as not to have caused distinct voice defects, due to compensatory reaction of the opposite vocal chord. A pre-operative laryngoscopic examination will readily disclose the presence of such conditions, and relieve one of the embarrassment of having a voiceless patient, in case the opposite laryngeal nerve is accidentally injured in the course of operation.

As pointed out by Dr. Muller, why not operate upon these patients in the earlier stages, when the operative mortality is practically nil, rather than wait until they become poor surgical risks, due to a badly damaged myocardium?

M. R. WALKER, M. D. (Gray-Reid Building, Reno, Nev.)—We all enjoyed this paper; it is brief and to the point. In our state, goitre is very common; apparently, at least, on the increase, although we have no reliable statistics to refer to. Diagnosis is not always easy, yet absolutely essential, if we expect to benefit our patients with any line of therapy.

While there is no question that surgery is the choice, there are numerous patients that, for one reason or another, will not submit to an operation. With such I have found that radiation will give at least symptomatic relief; especially is this true for relief from toxicosis.

Again, I observe that operation is by no means always satisfactory. I have recently had two patients who are now regretting that they submitted to an operation; one of them, within forty-eight hours after the operation, developed severe tetany. It is now over two years and no indications that we may stop treatments for tetany. This operation was performed by an able surgeon. The other patient has become asthenic and has developed a marked irritability of the heart, and, in spite of all I have been able to do, she has not regained sufficient strength to do her housework with any comfort—only two in the family at that. I have found that often the giving of thyroid or parathyroid is of advantage.

I feel that we should urge prophylactic measures more strenuously than we are in the habit of doing.

RAYMOND ST. CLAIR, M. D. (Medical Building, Oakland, Calif.)—Dr. Muller is to be congratulated on his paper.

In the simple adenomatous goitre, it has been my experience that the diagnosis is comparatively easy. It is in the mixed type that we have difficulty in arriving at the right diagnosis. I believe that in the majority of colloid goitres small adenomas are present in the gland. These on account of absence of symptoms are overlooked in the histories. In many of my patients who have come to me with adenomatous goitre with hyperthyroidism, I obtained a history of greater enlargement of the gland in the first years of their disease. In my experience the adenomatous type of goitre is not overlooked as often as the exophthalmic type, as many doctors who served in the late war will bear witness. In our organization there were three doctors who were suffering with exophthalmic goitre who had not previously been diagnosed.

I quite agree with Dr. Muller that surgical treatment, if done properly, is the one indicated in adenomatous

goitre, and if done early, soon after the toxic symptoms are noted, before permanent damage has occurred, one's results are practically 100 per cent cure. There has been a great deal learned about treatment of goitre in the past fifteen years, and our results are much better now than at that time.

The pre-operative care of the patient suffering with adenomatous goitre with hyperthyroidism is extremely important. It is my practice to get patients in the best possible condition for the operation, which is similar to the preparation in exophthalmic goitre; that is, rest in bed, good nutritious food, and a competent, quiet nurse, and digitalization. In the extremely bad cases I use the Crile method, with which you are all familiar. I can recall at least two or three patients with extremely bad symptoms in which this method was entirely successful.

It is not necessary to say very much regarding the post-operative treatment in simple adenomatous goitre patients who have suffered but a short time from hyperthyroidism, as they usually regain normalcy very quickly; but in those patients who have suffered permanent injury to their heart, kidneys, etc., it is necessary to keep them under observation for a longer period of time.

In patients who have come to me after having received x-ray treatment I have found difficulty in operating, on account of adhesions about the capsule. In some instances the patients have claimed that their symptoms had increased following its use. I am not prepared to say whether there is or is not a possibility of destruction of the small amount of normal gland which we find in these long-standing cases of adenomatous goitres producing a hypothyroidism, which is not a pleasant thing to have.

THOMAS WILBUR BATH, M.D. (Reno, Nev.)—It is always a privilege to listen to a discussion which affects public welfare. Formerly, appendicitis was discussed at nearly every medical meeting. Result: Today, most of the intelligent laity believe that the best place for a troublesome appendix is in the pickle-jar of the pathologist. Likewise, the public is becoming educated on such subjects as cancer, focal infections, and the better care of women in childbirth. Just now our efforts are directed along the line of goitre. Continuous discussion will increase our knowledge. For, as it has been well said, in a multitude of counsel there is wisdom.

Medical surveys that have been made in the United States and abroad have been illuminating, in that we have learned more concerning past geologic conditions, community inbreeding and localization of areas where goitre is endemic.

It is well to begin with a clear definition of the term goitre. Goitre means a diseased thyroid gland. There are many types of disease of this gland, but in the subject under discussion, as is well pointed out by Dr. Muller, the adenomatous is the most common of all. Just how many people in the United States have goitre we cannot say. But it is safe to assume that the number must be up in the tens of thousands. Every goitrous person is likely to become, unless aided, a serious deviation from normalcy. Why the disease is more preponderating among women we cannot say, unless it is the incidence of sex. There is an old saying in England concerning the child-bearing woman, that for every child she loses a tooth. That we would term a sex incidence. To the sex incidence we might ascribe the invasion of infection in women, which accounts for them having the first honors in goitres and bad gall-bladders.

In this connection, also considering the more underlying causes of goitre such as the deiodinization of endemic areas, we must always bear in mind the aggravating effects of such focal infections as bad teeth and tonsils. And especially that type of the shining sepulchre of bad dentistry known as the gold crown. The gold crown truly covers a multitude of evils. The constant drainage from the mouth into the cervical areas directly or indirectly affects the lymphatics of the thyroid, greatly contributing to heighten the pathology of the gland.

I think it will bear investigation that another contributing cause of enhancing goitrous conditions is child-bearing. Every wife is a possible mother. Parturition increases every normal function, and likewise sets in motion any abnormalcy. Repeated child-bearing will eventually wreck the frail life bark of the goitrous woman, and she will be lost upon the rocks of a destructive pathology. To her husband and friends who fail to correctly inter-

pret her condition, she is a neurotic; and she receives no sympathy because of her peculiar actions, when in reality the poor woman is traveling that vague borderland where illusions are real and distress is actual.

In summing up the treatment for this condition, as was well said by some of my confreres, the only treatment is surgical. The technique for this operation is now standardized. The mortality is much less than in appendectomies. The results, in the main, are quick and gratifying. Other therapy has been proved a failure. When the thyroid has become adenomatous, nature displays for common gaze her danger signal so that he who runs may read. And the interpretation thereof is removal.

DOCTOR MULLER (closing) — I shall endeavor to make my closing remarks brief, and will dwell only on a few of the points brought out in the discussion. One of the most important things, I believe, is the laryngoscopic examination, as mentioned by Doctor Washburn. In fact, this is of sufficient importance that it should be recommended as a routine procedure in the examination of all patients with adenoma.

The question of radiotherapy being contra-indicated in adenoma of the thyroid has been generally agreed upon. In those patients wherein relief has been afforded by this method of treatment, I would be inclined to believe that the symptoms of hyperthyroidism had come from an associated hyperplasia rather than from an overactive adenoma. It is a well-known fact that radiotherapy may exert a beneficial influence in toxic hyperplastic goitre.

Occasionally one does see poor results following surgery, but these instances are today so rare that they should not in any way influence the practitioner against advising surgery. If the adenoma is broken into and only partly removed, or if adenomata are overlooked and left in the gland to give rise to subsequent "recurrences," the result of operation will not be satisfactory. If all, or nearly all, of the normal thyroid tissue is removed with the adenoma, the characteristic symptoms of hypothyroidism will follow. Where we have large adenomata there is often very little normal thyroid tissue present. The adenoma is always encapsulated, and in operating one should exercise care to remove it wholly and intact with its capsule, but care should also be exercised to prevent the injury or removal of normal thyroid tissue. In those cases with small adenomata there may be quite an abundance of normal thyroid present, and this danger, therefore, becomes less. Injury to the recurrent laryngeal nerves and parathyroid bodies should not occur if one keeps within the capsule of the thyroid gland posteriorly, as these structures lie posterior to the capsule. Removal of the parathyroids or destruction of their blood supply which comes from the inferior thyroid arteries will result in tetany. Where tetany occurs, 10 cc. of a 5 per cent solution of calcium lactate in 100 cc. of normal saline should be given intravenously at once.

It is generally believed that focal infection or child-bearing does not play any part in the etiology of adenoma of the thyroid gland. However, they are very important factors in some of the other types of goitre with which this paper does not deal. The foetal adenomata undoubtedly arise from Wolfer's rests, which are laid down in intrauterine life, whereas the adult type most probably arise from cases of long-standing colloid goitre. Although it is always desirable to clean up foci of infection, one should not expect to see any change in his cases of adenoma following this means of treatment.

"A matter that is neglected to a very large extent by all our medical associations and our medical colleges is that of ethics. We need more preaching and more influence that will bring about right thinking in the practice of medicine. We are altogether too prone to overlook breaches of ethics and propriety on the part of some of our members; and bad conduct on the part of a few reflects on the whole medical profession. Oftentimes unethical conduct is due to ignorance. Our colleges, societies, and journals devoted to medical practice," says A. E. Bulson (Bulletin A. M. A.), "should emphasize the importance of adhering to the code of ethics as laid down and accepted by the American Medical Association."

SURGICAL TREATMENT OF CHRONIC PEPTIC ULCER

By J. H. BREYER, M. D., Pasadena

Review of recent literature.

An attempt to determine the relative value of medical and surgical treatment.

Many ulcers heal without any treatment.

Recent ulcers should be treated medically; all other types should be given the benefit of thorough medical treatment until cure or chronicity is established.

After failure of medical treatment, surgical interference should be resorted to without further delay.

After convalescing from operation, patient should be turned over to physician for management.

Successful treatment of peptic ulcer requires combined judgment of the physician and the surgeon.

DISCUSSION by Walter B. Coffey, San Francisco; Frederick A. Speik, Los Angeles.

THERE is still wide difference of opinion between some physicians and surgeons, as to the value of surgical treatment in peptic ulcer. Much of the older literature written has become obsolete. A review of the more recent literature may help us to arrive at some definite conclusions. From it and my own experiences I shall attempt to determine the relative value of medical and surgical treatment, and the indications for each.

Our knowledge of ulcer has been greatly increased in the past ten years by the study of living pathology in the operating-room and by developments in the radiology. Autopsy studies have revealed that many peptic ulcers heal without any treatment whatsoever. Experimental ulcers in animals usually heal very promptly, in spite of the presence of one or more producing causes. Why some ulcers become chronic in man is still not definitely understood. The following explanations perhaps carry us as far as any toward the solution of the problem.

When the gastric or duodenal mucosa, lowered in vitality from any cause, is exposed to the digestive action of gastric juice the surface becomes eroded. The degree of erosion depends on the vitality of the mucosa and upon the general powers of resistance of the individual. The lowered local resistance may be due to some circulatory disturbance of the gastric or duodenal mucous membrane, to a trauma, or to a general or local infection. The lowered general resistance of the patient may be due to anemia, poor nutrition, or to some nerve strain, such as worry, that may influence the high acid content of the gastric juice and thereby be a factor in producing pylorospasm. The eroding action of gastric juice is nil in the absence of hydrochloric acid, but the mere lowering of the hydrochloric acid content does not diminish the peptic activity of the gastric juice. When the stomach does not empty itself in normal time, we have a prolonged contact of the acid gastric juice with the eroded area, as well as the irritating action of decomposing gastric contents. A true vicious circle is often established, the ulcer maintaining all the conditions that caused it.

The following conditions have a natural bearing on the history of an ulcer. Rebellious chronic ulcers are more frequent in males than in females. In young subjects there is less tendency for the ulcer to become chronic; in older individuals the reverse is true. The location of the ulcer has a distinct bear-

ing on chronicity. A pyloric or pre-pyloric ulcer is apt to be tenacious because of the spasm which it produces. Duodenal ulcer is about four times more frequent than gastric ulcer. One report states that, out of a total of 262 duodenal ulcers, 242 were located within five centimeters of the pylorus. Out of 633 cases of gastric ulcer at the Mayo Clinic, the ulcer was located on or around the lesser curvature 534 times, 85 were in the posterior wall, 9 involved the greater curvature, and 5 were in the anterior wall. Of those on the posterior wall, 8.2 per cent were in the pyloric third, 73.3 per cent in the middle third, and 16.5 per cent in the cardiac end. Seventy per cent of gastric ulcers, when healed, produce contractions which result in some degree of stenosis.

Healing takes place by proliferation of the connective and glandular tissues. The muscularis never regenerates. The continuity of the muscle fibers is interrupted by fibrous tracts, and the stomach wall loses its pliability. These connective tissue fasciculi eventually contract more or less. When the wall of the stomach has been perforated, or when the inflammatory process has reached the subserous layer, the peritoneum becomes irritated and protective adhesions with adjacent viscera result. Chronic gastric ulcers nearly always have craters; the majority of duodenal ulcers lack this characteristic. The old callous ulcer of the stomach, with hard indurated margins, is very apt to recur.

What is known of the etiology and pathology of ulcer indicates that all that medical or surgical treatment can accomplish directly, toward promoting the reparative process, is to remove such hindrances to healing as may exist. In the majority of cases where the ulcer is active the main object is to control the acidity and to place the stomach at rest by avoiding all causes of irritation. The general condition of the patient must be studied and improved. Food traumas are lessened by proper diet. Intra-gastric tension, fermentive processes, and prolonged gastric juice contact are reduced by abolishing stasis. All foci of focal infections must be cleared up. Efforts to reduce the nervous tension of the patient must be made by advising him as to errors in his social habits and daily routine. Psychic rest is as important as physical rest, in reducing secretory and motor disturbances.

A careful analytical study of the Sippy medical treatment compels one to admit that it meets all of the above conditions. It is rational and logical. It goes without saying that all recent ulcers should be treated medically, and all other types should be given the benefit of thorough medical treatment until cure or chronicity is established. Each ulcer case must be considered individually. Treatment should not be carried out with an empirical routine. A definite knowledge of all the facts must be obtained. The history should be very carefully gone into. A case that is of long standing, with a history of many recurrences, should be investigated as to the extent of the pathological process. It should be determined whether or not the ulcer is of the indurated, callous type, which experience has shown does not yield to medical treatment; whether the ulcer is situated at or near the pylorus, causing obstruction and deformity, which type, as a rule, cannot be

completely healed by medical treatment alone; or whether any of the complications of ulcer, such as acute or chronic perforation, repeated hemorrhage, hour-glass stomach, or perigastric adhesions have already taken place.

If the diagnosis of ulcer can be made early a higher percentage of cures will result, but care must be exercised not to misinterpret the symptoms of a diseased gall-bladder or appendix for those of ulcer. The interrelationship between ulcer of the stomach or duodenum and disease of the appendix or gall-bladder should never be forgotten. It is as important to clear up the focal infection of appendix or gall-bladder as those located elsewhere.

With the above points in mind, the physician and the surgeon will get closer together in their treatment of ulcer. The cases will be classified, with regard to treatment, into more definite distinct groups. It is only after failure of medical treatment that surgical interference should be proposed, in which case it should be resorted to without delay, otherwise its benefits will be gravely compromised. Likewise, after convalescence from the operation, all cases should be turned over to the internist for thorough dietary management.

The most frequently employed operation for chronic duodenal or gastric ulcer is posterior short loop gastro-enterostomy, the stoma being placed at the most dependant portion of the stomach. In the absence of an organic obstruction, it is probable that a more or less immediate spasm of the pylorus follows the operation of gastro-enterostomy. This pylorospasm prevents the gastric contents from passing into the duodenum, and as a result the gastric juice and food pass in the direction of least resistance through the new opening. After healing of the ulcer is well under way, the spasm probably relaxes in the majority of cases, and more or less of the food again passes through the pylorus. The safety-valve action of the new opening prevents excessive intra-gastric tension. Food fermentation is prevented by freer emptying of the stomach, and the regurgitated bile and pancreatic juice bring about a neutralization of the gastric contents. In properly selected cases the percentage of cures has been augmented by further surgical procedures. The removal of the ulcer seems ideal and logical; the risk, however, is increased. The Balfour cautery method is the operation of choice when it can be done without too great danger or chance of resulting deformity. In ulcers of the callous type, situated near the pylorus, and in which the possibility of carcinoma must be considered, Billroth's No. 2 excision for ulcer, with posterior gastro-enterostomy, is the method of choice. Moynihan and others are extending this operation to all ulcers in the region of the pylorus, with very good results. The Billroth excision operation definitely accomplishes three things. It removes the ulcer, thus abolishing secretory reflexes as well as a potential cause of cancer; by removing the pylorus it eliminates pylorospasm; and by lessening, to a considerable extent, the secreting area of the stomach it diminishes the free hydrochloric acid. Excision of the ulcer, together with pyloroplasty, is an operation that is also in high favor. To carry out either of these last-named procedures, the patient

must be sufficiently strong to withstand a long and possibly depressing operation. Too much emphasis cannot be laid upon this point. When the patient's condition will not permit of a more radical procedure, a secondary operation at a later date may be necessary to produce the best results.

There is no doubt that ill-advised surgery has been performed, with disastrous results, upon patients who did not have either duodenal or gastric ulcer, and also that these patients had previously been treated medically for ulcer. However, it is often very hard to find evidence of an existing ulcer, even when the stomach and duodenum are exposed at operation. After the abdomen has been opened, and before doing any gastric surgery, a thorough general intra-abdominal examination should be made for other pathology, such as disease of the appendix or gall-bladder, especially when the presence of a definite ulcer is in doubt.

W. J. Mayo, in 1922, gives the operative results at the Mayo Clinic, as follows: Ninety-five per cent of duodenal ulcers are treated satisfactorily by surgery, 1 or 2 per cent requiring secondary operation. The operative mortality for duodenal ulcer is less than 2 per cent. In gastric ulcer, satisfactory results are obtained by a single operation in 85 per cent. By secondary operation the surgically satisfactory results are increased to above 90 per cent. The average operative mortality in gastric ulcer is about 3.5 per cent. Of the surgical failures, 50 per cent obtain satisfactory results by post-operative medical treatment, and the other 50 per cent he classifies as due to faulty mechanics requiring secondary corrective surgical procedures.

Gastro-jejunal ulcer is a complication which occurs in from 1 to 3 per cent of all gastro-enterostomies. The location of the ulcer may be on the suture line or in the jejunum near the stoma. The cause of the formation of these ulcers following gastro-enterostomy is still unsettled. They have generally been ascribed to errors in technique. The use of silk or linen sutures and the production of a hematoma by needle-pricks, clamps, or finger-bruising is to be avoided. Oschner believes these ulcers may be caused by placing the stoma at a place other than the most dependant portion of the stomach. However, these ulcers occur in the practice of surgeons whose technique cannot be questioned. W. J. Mayo treats jejunal ulcer following gastro-enterostomy by disconnecting the gastro-enterostomy and doing a Finney pyloroplasty.

Obstruction of the pylorus may be an end-result of ulcer. Ulcers located in the pyloric region, duodenal or gastric, may produce narrowing by cicatricial contraction, by inflammatory infiltration of the walls, by reflex spasm from irritation of the hyper-sensitive ulcer, or by adhesions, resulting from pyloritis or perigastritis, which may cause bends or kinks. Most writers agree that operation is imperative when an organic stenosis is recognized clinically. Vomiting and other signs of stenosis, due to pylorospasm and inflammatory swelling associated with an unhealed ulcer, must be differentiated. The hyperfunction caused by organic stenosis ultimately ends in atrophy of the mucosa and in decreased motility. This decrease in motility is followed by gas-

tric dilatation. When gastric atony is present, the operation becomes more dangerous and convalescence will be prolonged. The power of recuperation of the individual has a definite relation to the age of the stenosis. One surgeon had thirty-six patients with stenosis sent to him for operation by two internists who believed in early surgical interference. In these thirty-six there was only one death, a mortality of 2.8 per cent. Twenty-four cases sent to this same surgeon, by other physicians who had temporized, were operated upon with nine deaths, or a mortality of 37 per cent. Gastro-enterostomy gives the best results in these cases of organic stenosis. It is the only procedure that can always be resorted to, no matter how marked the induration of the lesion or how extensive the peripyloric inflammatory process may be. The advantages claimed by some surgeons for pyloroplasty, gastro-duodenostomy, and pylorotomy are clearly counterbalanced by the rapidity of execution and the lesser danger from gastro-enterostomy. When malignant degeneration is suspected, then excision of the ulcer, combined with one of the plastic methods, should be done. Statistics show that 78 per cent of gastro-enterostomies for cicatricial pyloric stenosis have resulted in permanent cure; 16.5 per cent of the patients show marked improvement, being able to return to their usual mode of life, although requiring a more or less strict diet and some medical care; and 5.5 per cent show no remote benefit from the operation.

Hour-glass stomach often is the end-result of an ulcer which has been active over a long period of time. The great majority of these ulcers are situated on the lesser curvature or on the posterior wall. X-ray findings have verified the view that after the ulcer has perforated there is often a tendency to heal spontaneously, and it is in this effort at healing that contraction takes place. Contraction usually takes place in the transverse direction and at the expense of the greater curvature. Because of the extensive scar tissue and perigastric adhesions, the type of operation must be mechanically adapted to the situation and to the recuperative powers of the patient.

Hemorrhage is a frequent symptom of ulcer. It occurs in about 25 per cent of cases. Hyperacute hematemesis may occur in an acute ulcer or during the course of a chronic ulcer. Extensive hemorrhage is best treated by rest and medication. We have two valuable remedies in thromboplastin and in sodium citrate used intramuscularly. Surgeons generally maintain that serious repeated hemorrhage is a definite indication for operation. Gastro-enterostomy is the operation of election, either alone or combined with the use of the Balfour cautery when the ulcer can be definitely located. By gastro-enterostomy distention is overcome, allowing the musculature of the stomach to contract. The condition of the patient is usually such that any more prolonged procedure is contra-indicated. In a case of serious hemorrhage, Bevan has advised a jejunostomy for the purpose of placing the stomach and duodenum completely at rest. Chronic hemorrhage should invariably raise the suspicion of gastric carcinoma or malignant transformation of an ulcer. The treatment

of choice in a case of suspected malignancy is resection.

Perforation is the most fatal complication of peptic ulcer. In the majority of cases perforation overtakes the patient in apparently perfect health. The diagnosis of the resulting peritonitis is easy, but an etiological diagnosis is often impossible. A differential diagnosis between a perforated gastric ulcer, appendicitis, and gall-bladder disease may be difficult; surprises at operation are not rare. All writers agree that operation is urgent; the results are infinitely better when operation is done within the first twelve hours. In the great majority of cases perforation produces collapse, probably due to reflex action. When the patient is examined at this time, the general condition will be found to be serious. The pulse is rapid and weak, respiration is superficial, the expression is one of distress, and the patient complains of severe abdominal pain, usually high up, although not invariably so, with other symptoms of peritonitis. This is the stage of shock, and is not a good time to operate. It is followed by a period of fallacious improvement which has been the cause of numerous mistakes in diagnosis and the loss of very valuable time. The period of remission is the time to operate successfully, and it usually lasts only a few hours. During this time the danger of peritonitis is slight, because usually a very small amount of gastric content has escaped into the peritoneal cavity. This period of remission is followed by the earlier disquieting symptoms. The face is sunken, pain becomes more and more acute, vomiting begins, the pulse is weak, and the signs of peritonitis are fully established. The pain is now often referred to the ileocecal region and is, therefore, mistaken for evidence of acute appendicitis. The purpose of the operation is to treat the peritonitis, as well as the ulcer with its perforation. Murphy stated that in case of peritonitis one should get into and get out of the peritoneal cavity as quickly as possible. This precept should be followed to the letter if possible. Closure of the perforation should be done as well as is possible, considering the very friable nature of the ulcer edges, to be reinforced by a piece of omental graft. If the perforation is at or near the pylorus, with a partial stenosis already existing which would be exaggerated by the sutures used in closing the perforation, a gastro-enterostomy is indispensable, unless a pyloroplasty is performed, following the method of Dr. H. H. Sherk. If the perforation is located on the anterior wall, simple suture alone will suffice. No extensive cleansing of the peritoneal cavity should be attempted. The peritonitis should be treated by drainage, local and suprapubic, by Fowler's position, and by saline injections.

CONCLUSIONS

Recent ulcers should be treated medically, and all other types of ulcer should be given the benefit of thorough medical treatment until cure or chronicity is established.

After failure of medical treatment, surgical interference should be resorted to without delay.

After convalescing from the operation, the patient

should be turned over to the physician for management.

The successful treatment of peptic ulcer requires the combined judgment of the physician and the surgeon.

414 Security Building.

DISCUSSION

W. B. COFFEY, M. D. (Medical Building, San Francisco)—My experience with the surgical treatment of peptic ulcer is that all patients with chronic indurated gastric ulcers should come to operation, and all those with duodenal ulcer should be studied by the physician for a trial period of two or three weeks, unless there are indications for immediate surgical intervention, like unusual hemorrhage, perforation or stoppage of the outlet of the stomach, evidently progressive, and recurrences of pain and bleeding, in spite of proper hygiene and diet.

Even retention of half a barium meal at the end of six hours should not be a signal for surgery, unless ten to fifteen days' trial of rest in bed and Lenhart diet have shown no change in the degree of retention. Many times the conservative course has shown that, as the ulcer heals, the retention is overcome and operation is unnecessary. When patients with recurrent history, whose ulcers break down in spite of proper living and careful observance of instructions, return a second time, surgery is considered at once, but is not carried out until it is demonstrated that there are no etiological factors likely to cause a recurrence.

Even the finding of occult blood for more than two weeks' treatment is not always indicative of the demand for surgery, as a number of cases have shown, where other factors made surgery undesirable. We have had to transfuse some cases, as many as three times before surgery was done, because of the failure of transfusion to stop hemorrhage or even slow oozing. I cannot wholly agree with the writer that there is a wide difference of opinion between good physicians and good surgeons, for the most satisfactory cases on which to operate are those in which the medical study has shown complications of a nature not to be relieved by medical treatment. Practical experience guides one to recognize the medical and surgical type of duodenal ulcer. "If the surgeon can cure 85 per cent of the medical failures, there seems to be no good reason for rivalry." All gastric ulcers are essentially surgical. Adhesions to the gall-bladder, low-grade pancreatitis, pain and retention, all make the type of complications which invite surgery.

One thing more, and that concerns the Sippy diet, which is open to two criticisms. Gastric lavage is not often necessary in ulcer therapy, and is not used in one per cent of our cases, and the use of soda and alkalis generally is absolutely unnecessary and pernicious as a routine measure. It is a poor and dangerous substitute for a proper diet which will regulate and provide for the acidity which is so frequent a symptom. Disguising pain is a doubtful method of treatment always, although at times justified.

FREDERICK A. SPEIK, M. D. (Auditorium Building, Los Angeles)—Dr. Breyer has hit the nail on the head. The physician and the surgeon should get together. There are cases which are amenable to medical treatment, and there are cases that need surgery. It is indeed very necessary that a most careful and painstaking examination should be made and backed by proper judgment.

In seventeen years of experience in this work, I feel qualified to say that the Sippy treatment is not merely giving milk and cream and powders, but that the treatment begins when the patient enters the office. We must not only diagnose whether or not an ulcer is present, but where it is located, how old it is, what complications are present.

When this is done we know what to do with the ulcer, i. e., treat it surgically or medically.

DOCTOR BREYER (closing)—The surgeon is apt to operate too quickly on his ulcer patient, and the physician is prone to hang onto them too long. By greater co-operation I believe this tendency will disappear.

I believe it is far safer to do gastric or duodenal surgery upon a patient who has been under preliminary

medical management, with rest in bed. The local condition of his ulcer will be better, and his general condition will be improved.

I think it is now generally conceded that all patients with chronic, indurated gastric ulcers should be treated surgically. However, gastro-enterostomy alone will cure only a small percentage of them. The radical resections should be reserved for those patients where the indications justify the risk of radical treatment. The last word in gastric surgery has not been said.

It is well to bear in mind the high percentage of cures achieved by well-established methods. By improving our technique, as well as by more carefully selecting our cases, we can still further increase this percentage.

AREA CHANGES IN HEARTS SHOWING DECOMPENSATION AND LOWERED CARDIAC RESERVE, WITH RE- PORT OF TWENTY CASES

By DONALD J. FRICK, M. D., ROBERT H. KENNICOTT, M. D.,
ROLLA G. KARSHNER, M. D., Los Angeles

Cardiac areas, as computed in the orthodiagram, show a fluctuation during compensation and decompensation.

In cases of lowered cardiac reserve, enlarged hearts are seen to decrease in size with clinical improvement.

In a small number of cases, subsequent enlargement of cardiac area accompanying clinical improvement and resumption of exercise would point to cardiac hypertrophy.

Correlation of cardiac areas and clinical findings give information valuable in determining treatment and indicating prognosis.

DISCUSSION by F. F. Gundrum, Sacramento; William J. Kerr, San Francisco; A. W. Hewlett, San Francisco; Harry Spiro, San Francisco; F. R. Nuzum, Santa Barbara.

THE diversity of opinion regarding the variation in heart size, which accompanies changes in compensation, has largely resulted from statements based on inexact data. We have attempted in this paper to so correlate clinical observations and laboratory findings that a clear vision of the subject may be attained. For some time we have felt convinced that the heart area does alter with changes in cardiac function. With this in view, we have selected twenty cases of enlarged hearts, without reference to their outcome, and demanding only that sufficient study had been made upon them to show what, if any, change had taken place during the course of disease. The minimum time of observation of these cases was two months. The maximum was five years and five months. The average period of observation was one year and five months.

Of these twenty cases, eleven showed clinical signs of decompensation at some time during observation. The remaining nine cases showed evidence of lowered cardiac reserve, but no symptoms of decompensation. We here determine decompensation by the clinical signs of venous stasis. In those cases classified under the heading of lowered cardiac reserve, anginal pain and shortness of breath on exertion were the most frequent symptoms.

The cardiac areas were computed from orthodiagrams after the method of Van Zwaluwenburg. Here the formula for computing the area of an ellipse was utilized; namely, the product of the long diameter drawn through the center of the figure and the short diameter erected perpendicular thereto at the widest portion multiplied by the factor 0.7854. Van Zwaluwenburg demonstrated the accuracy of this method by a comparison of areas determined by this method and by planimeter readings. More re-

cently, Karshner and Kennicott, after a study of one hundred normal and abnormal cases, showed an average variation of 2.6 per cent between areas determined by planimeter readings and those figured on a basis of the formula of Van Zwaluwenburg.

Using this very accurate method of measurement of heart areas as a standard, we have demonstrated in seven of the eleven cases of cardiac decompensation a definite decrease in area accompanying re-establishment of compensation. Two of these eleven cases showed progressive increase in size as the hearts gradually failed. One heart showed no change with clinical improvement, and one increased in area.

Of the nine cases of lowered cardiac reserve with cardiac enlargement, five showed decreased heart areas upon clinical improvement; three remained unchanged; while the one remaining heart increased in area as cardiac reserve improved.

In fourteen of the twenty cases, a change in heart area was demonstrated, while four remained unchanged and two increased in size with clinical improvement.

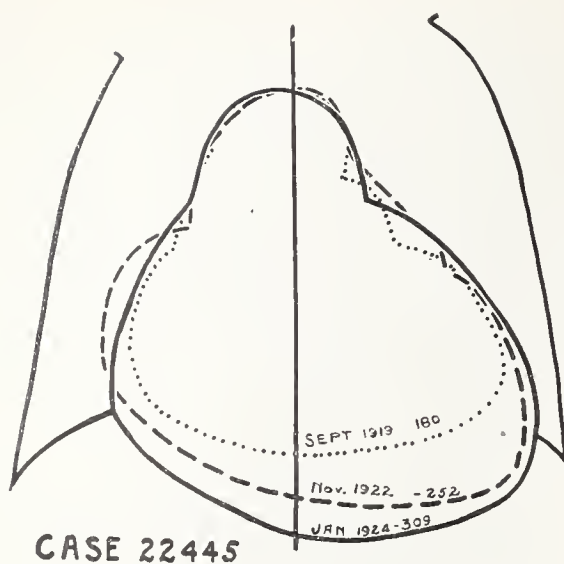
In the entire series, four cases at some time showed increase in heart areas accompanying clinical improvement. These probably demonstrate the result of muscular hypertrophy. The improved tone of the heart is readily observed during fluoroscopic study. The complete orthodiagrammatic report in such cases throws more light on the reason for the increased size than a simple statement of area in percentage would indicate. Even among those cases of cardiac decompensation where a definite decrease in cardiac size has followed compensation, there are a few cases which have shown a progressive increase in size upon a resumption of activity following treatment with rest. The area in these cases never reaches the height reached during the period of decompensation, and the tone of the muscle observed during examination shows progressive improvement.

The accompanying chart shows in detail, under the date of examination, the diagnosis, etiology, electrocardiographic and polygraphic diagnosis, orthodiagrammatic findings, and clinical observations in the twenty cases studied.

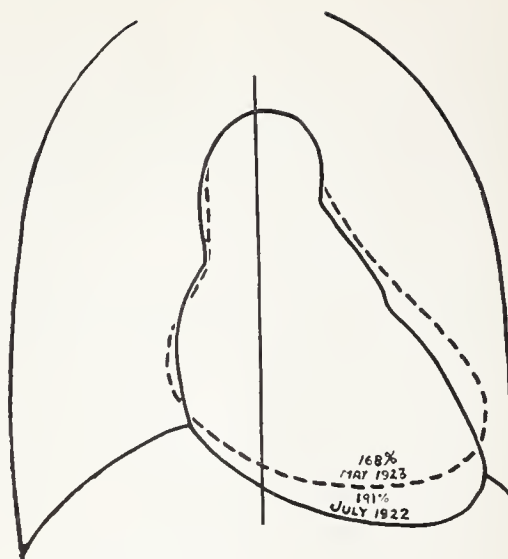
The diameters M. R. and M. L. and total diameters are included, since they are the ones commonly employed by the clinician in his study of the heart. These measurements give information of comparative value, but fall far short of measurements of cardiac area as a means of studying changes in the size of the heart.

The first diagram represents the orthodiagrammatic findings of a normal heart. In computing cardiac areas, the long diameter A. B. (in centimeters) is multiplied by the short diameter C. D. (in centimeters), and the product thus obtained is divided by the normal obtained in a similar manner based on body weight. The perpendicular line represents the anatomical center of the body. The M. R. and M. L. are raised perpendicular to this central line at the point of greatest cardiac width to the right and left.

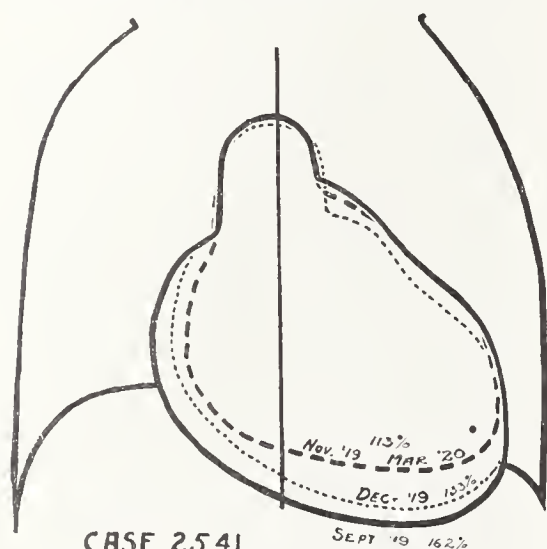
The diagrams were prepared by making a composite picture of the actual orthodiagrams. They demonstrate the changes in the cardiac silhouette



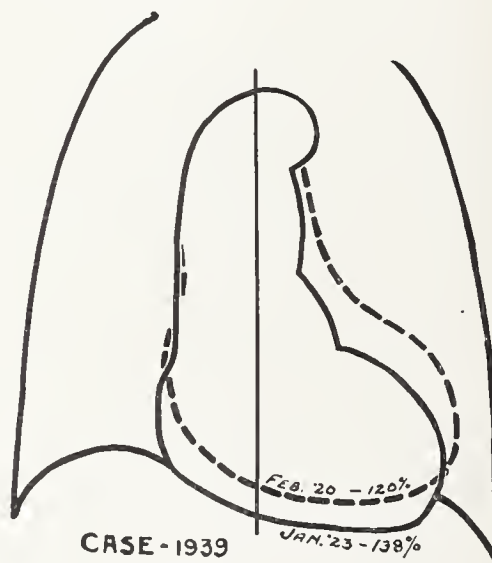
CASE 22445



CASE 22361



CASE 2541



CASE - 1939

during the course of disease. The areas computed as described above are recorded at the base of the outline in each case.

Case No. 2541—This patient was a housewife of 50. She reported September 29, 1919, complaining of dyspnoea and orthopnoea of two weeks' duration. With the exception of repeated attacks of tonsillitis and typhoid fever at the age of 34, the patient had been in good health until February of 1918, when she noted a sudden irregularity of her heart. Physical examination revealed a mitral insufficiency and stenosis with an auricular fibrillation. Her orthodiagram at this time (September, 1919) showed an area of 162 per cent, and is represented by the outer solid line in the diagram. By November 17, 1919, the patient had improved; her pulse, still irregular, was slowed and no longer showed a deficit. Her total transverse diameter was reduced 2.5 cm., and her cardiac area reduced 49 per cent (represented by the heavy, broken line). On December 23, 1919, the patient again reported, showing signs of decompensation; her cardiac area had increased to 133 per cent, shown by the small, broken line on the slide. By March 29, 1920, the patient was greatly improved, her heart had receded to its previous area of 116 per cent, which is virtually that of November of 1919, and shown as the heavy, broken line.

Case No. 1939 is one of a physician of 58. The diagnosis was luetic aortitis, cardiac dilatation and hypertrophy, chronic nephritis with hypertension, and chronic myocarditis. He presented a right bundle branch block. He had repeated attacks of pulmonary oedema, finally dying in one in January, 1924. He was first seen in March, 1917. He gave a history of having had two attacks of acute oedema of the lungs in January and March. He was complaining of dyspnoea on exertion. He had a blood pressure of 210 systolic and 165 diastolic. His blood Wassermann was three plus. After being on anti-luetic treatment, he reported much improved on June 26, 1917.

His first orthodiagram made in February, 1920, gave an area of 120 per cent (represented by the inner broken line), and his fluoroscopic examination revealed a uniformly broad aortic shadow 6 cm. wide. He was feeling well, and working at this time. His antiluetic treatment was continued. January, 1922, patient reported at office. He was definitely failing in health. His electrocardiograms showed ventricular extrasystole with right bundle branch block. His cardiac area had increased to 138 per cent (represented by the outer solid line), an increase of 18 per cent. In December, 1922, he had a severe attack of hemorrhagic oedema of the lungs. The patient grew progressively worse and died in January, 1924, with acute hemorrhagic oedema of the lungs.

Case No. 22,445—A nurse, aged 51, came to the office in August of 1919, complaining of "heart trouble." Her previous illnesses were scarlet fever, tonsillitis, typhoid fever, malaria, and rheumatism. A diagnosis was made of mitral and aortic insufficiency, chronic myocarditis, and auricular fibrillation. In September of that year her heart was compensated. Her cardiac area was 180 per cent (inner dotted line). She was on duty as a nurse. In September, 1922, she was suffering from decompensation, with ascites, oedema of legs, cyanosis, and enlarged liver. Her cardiac area was 252 per cent of the normal (the broad, broken line). The patient was improved by February, 1923, but never regained her compensation. Hers was a history of steady decline. When last seen, in January of 1924, she was able to get about a little, but was greatly restricted as compared with her former activities. Her cardiac area was 309 per cent, and is shown in the diagram by the solid line.

Case No. 22,361—A man of 42, first seen in July, 1919, complaining of cough, dyspnoea (nocturnal, and on exertion), and precordial pain. He had a decompensated heart, with mitral regurgitation and chronic myocarditis. His cardiac area was 191 per cent. In October, 1922, after

No.	Age	Diagnosis	Etiology	Dates	E. K. G. and Polygraphs	Heart Measurements			Area	Condition	Remarks
						M. R.	M. L.	Total			
2541	50	Mitral disease. Cerebral embolism.	Tonsillitis. Typhoid fever.	Sept. 29, 1919	.....	5.6	9.9	15.5	162%	Decompensation.	Dyspnoea. Orthopnea. Radial pulse 80; apex 96; deficit 16.
				Nov. 17, 1919	.....	3.8	9.9	13.7	116%	Improved.	Pulse 72, no deficit. Patient improved.
				Dec. 23, 1919	.....	4.6	10.1	14.7	133%	Signs of decompensation.	Distress after eating.
				Mar. 29, 1920	.....	5.0	9.0	14.0	116%	Improved.	
				May 14, 1920	.....	5.0	9.0	14.0	116%	Improved.	Patient able to shop.
				Nov. 23, 1920	.....	5.0	9.0	14.0	116%	Improved.	Free from cardiac symptoms.
				May 25, 1922	.....	.....	.....	.....	.....	Death.	Cerebral embolism.
1939	58	Lactic aortitis. Cardiac dilatation and hypertrophy. Oedema lungs. Hypertension. Right branch block. Chronic nephritis. Myocarditis, chronic.	Syphilis.	Feb. 27, 1920	.....	4.8	8.8	13.6	120%	.....	Wassermann ++++.
				Mar. 21, 1920	.....	.....	.....	.....	.....	.....	Reports 3 attacks oedema of lungs.
				Jan. 19, 1922	Left ventricular extra systole. Right branch block. Notched Q R S in Leads I, II and III.	4.1	9.4	13.5	138%	Failing.	Wassermann ++++.
				Dec. 13, 1922	.....	.....	.....	.....	.....	.....	Mercury and K. I.
				Jan. —, 1924	.....	.....	.....	.....	.....	Death.	Severe attack hemorrhagic oedema of lungs. Pulmonary oedema.
21362	42	Myocarditis, chronic. Heart block.	Tonsillitis.	July 20, 1921	Heart block 2 to 1.	4.2	11.5	15.7	167%	Decompensated.	Fatigue and pain in chest after exercise.
				Sept. 6, 1921	Heart block 2 to 1.	5.2	9.5	14.7	150%	Improved.	Walking 15 blocks and climbing stairs without distress. On salvarsan.
				Oct. 26, 1921	.....	.....	.....	13.6	114%	Improved.	Course of mercury succinamide.
				Dec. 16, 1921	.....	.....	.....	15.7	119%	Condition good.	
1285	62	Tonsillitis, chronic. Mitral stenosis. Auricular fibrillation.	Influenza. Tonsillitis, chronic.	Sept. 5, 1918	Auricular fibrillation. Inverted T in Lead II.	3.7	7.4	11.1	94%	.....	Precordial pain with shortness of breath on exertion.
				Nov. 25, 1919	.....	.....	.....	.....	.....	.....
				Nov. 20, 1923	Auricular fibrillation (fine). Slight right axis deviation.	4.5	8.5	13.0	120%	Exceptionally well.	Back at work.
				Feb. 19, 1924	.....	5.1	11.7	16.8	151%	Acutely ill.	Pleurisy with pericarditis with acute anginal attack. Four abscessed teeth.
				June 27, 1922	.....	.....	.....	.....	.....	.....	Abscessed teeth removed.
22267	59	Angina pectoris. Arteriosclerosis. Abscess alveolaris. Pericarditis, acute. Pleurisy.	Arthritis, 8-10. Alveolaris abscess.	Aug. 26, 1922	.....	4.6	10.4	15.0	135%	Much improved.	
				Nov. 10, 1922	Notching Q R S L. II. Left ventricular preponderance. Inverted T Lead I T opposite to main deflection in Leads I and III.	.....	.....	.....	.....	.....
				Dec. 1, 1922	.....	.....	.....	.....	.....	.....
				Feb. 8, 1923	.....	5.0	11.2	16.2	141%	Improved.	Walking one mile a day. Enjoying his work.
				Dec. 16, 1923	.....	.....	.....	.....	.....	.....
2801	31	Mitral stenosis et insufficiency. Alveolar abscess. Paroxysmal tachycardia.	Influenza. 30. Alveolar abscess.	May 13, 1920	.....	4.8	10.5	15.3	194%	Compensated.	No symptoms. Was told she had heart trouble.
				Jan. 27, 1921	Polygraph-paroxysmal tachycardia, rate 190, regular.	4.8	10.5	15.3	244%	Decompensated.	Bullness in both flanks. Attack of tachycardia.
				Dec. 23, 1921	.....	4.8	9.0	13.3	187%	Improved.	Walking short distances.
				Jan. 2, 1920	.....	.....	.....	.....	.....	Decompensation.	Orthopnea. Dyspnoea.
819 S	50	Endocarditis, chronic. Auricular fibrillation.	Arthritis, age 15.	Feb. 4, 1920	.....	4.6	9.8	14.4	172%	Improved.	Rales in both bases.

No.	Age	Diagnosis	Etiology	Dates	E. K. G. and Polygraphs	Heart Measurements				Condition	Remarks
						M. R.	M. L.	Total	Area		
21080	48	Mitral stenosis et insufficiency. Auricular fibrillation.	Tonsillitis. Alveolar abscess. Pyorrhoea. Colecystitis and coelithiasis.	Mar. 4, 1921	.....	2.0	9.4	11.4	125%	No improvement.	No loss of compensation. Tremor. Sweating. Diarrhoea. Heart 142 per minute at times.
				Feb. 8, 1921	.....	6.5	12.3	18.8	286%	Decompensated.	Dyspnoea on exertion. Orthopnea. Liver 10 cm. below costal border. Oedema of legs to thighs. Slight pretibial oedema. Liver smaller, still palpable.
				Apr. 15, 1921	.....	5.7	11.7	17.4	210%	Improved.	
21085	36	Chronic nephritis with N and NaCl retention. Myocarditis, chronic. Hypertension.	Influenza, 33. Antrum, 24. Nephritis, 35.	Sept. 2, 1921	.....	4.7	11.1	15.8	181%	Decompensated.	Precordial distress on climbing hills. Slight oedema. Dyspnoea. Death—nephritis.
				Nov. 4, 1921	.....	4.1	10.7	14.8	170%	Improved.	
				Feb. 27, 1922	.....	2.7	10.2	12.9	151%	Weak following otitis media.	Slow, irregular pulse. Hypertension. No cardiac symptoms. Patient free from symptoms.
22103	42	Myocarditis, chronic. Mitral insufficiency. Partial heart block.	Influenza, 39. Otitis media, 42. Tonsillitis, chr. Infantile paralysis, 3.	May 5, 1922	Delayed conduction time. Partial heart block. Notching Q R S Lead III.	2.2	10.2	12.4	139%	Improved.	
				Feb. 19, 1923	.....	3.2	10.5	13.7	118%	Compensated.	Tracing made in France. Compensation good. Tracings made here on return from abroad.
22111	72	Nephritis, chronic. Myocarditis, chronic. General arteriosclerosis. Herpes zoster.	Tbc. at 12.	Apr. 26, 1923	.....	2.6	11.2	13.8	118%	Improved.	
				Mar. 16, 1921	.....	5.4	13.0	18.4	201%	Decompensated.	Ten days previous had sudden brief loss of consciousness, preceded by dizziness and dyspnoea. Liver enlarged. Urea dropped from 26 to 20. Cardiac reserve good. Liver palpable.
22410	39	Hyperthyroidism. Myocarditis. Tonsillitis, chronic.	Tonsillitis. Hyperthyroidism.	Apr. 26, 1921	.....	4.9	11.9	16.8	175%	Improved.	
				June 30, 1921	.....	5.9	12.3	18.2	194%	Good.	
				Aug. 22, 1922	.....	3.9	9.2	13.1	127%	.....	Basal metabolism +44%. Rapid pulse 100-120. Loss of weight. Shortness of breath. Tonsillectomy. Basal metabolism +11%.
2261	42	Myocarditis. Mitral regurgitation.	Arthritis, 11. Influenza, 39.	Sept. 26, 1922	.....	.....	.....	.....	.....	.....	Basal metabolism +5%. 4/5 thyroid removed.
				Oct. 22, 1922	.....	.....	.....	.....	.....	.....	Cough, dyspnoea (nocturnal and on exertion). Precordial pain. Free from dyspnoea. No precordial pain. Limited activity. Four hours' work in office.
				Oct. 24, 1922	.....	3.7	9.3	13.0	121%	Improved.	Shape of heart improved. Free from signs of decompensation. Slight dyspnoea on exertion. 12 hours' activity. 2 hours' rest in bed.
2261	42	Myocarditis. Mitral regurgitation.	Arthritis, 11. Influenza, 39.	Nov. 21, 1922	.....	.....	.....	.....	.....	.....
				Feb. 16, 1923	.....	4.5	8.7	13.2	111%	Much improved.	
				July 17, 1919	.....	4.2	11.0	15.2	191%	.....
2261	42	Myocarditis. Mitral regurgitation.	Arthritis, 11. Influenza, 39.	Oct. 9, 1922	.....	4.6	11.0	15.6	165%	Improved.	
				Feb. 2, 1923	Left ventricular extra systole. Notching of Q R S in Lead III.	.....	.....	.....	.....	Improved.	
				May 16, 1923	.....	4.6	11.0	15.6	168%	Improved.	
2261	42	Myocarditis. Mitral regurgitation.	Arthritis, 11. Influenza, 39.	Feb. 1, 1924	.....	5.0	11.3	16.3	185%	Improved.	

treatment, the patient was free from symptoms and presented a cardiac area of 165 per cent. Improvement continued and the patient was allowed limited activity and four hours' work at his office daily. His electrocardiograms were negative but for ventricular extrasystoles. In May, 1923, his heart was slightly larger (168 per cent), but of definitely better tone. This heart outline is represented by the broken line in the illustration. When last seen in February, 1924, the patient was free from signs of decompensation. He had slight dyspnoea on exertion. He was active about twelve hours a day, with two hours' rest in the afternoon. His heart was definitely larger than at the previous examination (185 per cent), but his muscle tone was good.

CONCLUSIONS

1. That cardiac areas, as computed in the orthodiagram, show a fluctuation during compensation and decompensation.
2. That in cases of lowered cardiac reserve enlarged hearts are seen to decrease in size with clinical improvement.
3. That in a small number of cases subsequent enlargement of cardiac area accompanying clinical improvement and resumption of exercise would point to cardiac hypertrophy.
4. That correlation of cardiac areas and clinical findings give information valuable in determining treatment and indicating prognosis.

1136 West Sixth Street.

DISCUSSION

F. F. GUNDRUM, M. D. (Capital National Bank Building, Sacramento)—I have been very pleased with this paper. The publication of such accurate, painstaking, and continuous study of heart size will throw a very needed light upon our hitherto somewhat hazy concepts of the relation of cardiac dimensions to cardiac ability. We have long been taught that heart weakness was associated with dilatation, and I believe it was Osler who said that endurance was to be measured by the ability of the heart to resist this constant tendency to dilate. With more accurate study, as appears in Dr. Frick's paper and elsewhere, it begins to seem evident that this idea will have to be somewhat revised, and endurance may prove to be, in large measure, a function of blood-sugar. Although we are all daily seeing examples of the reduction in the width of cardiac dullness which accompanies the recovery from heart failure, increase in the ability of the heart to do work is not always associated with a decrease in heart size. It is hardly necessary to use such elaborate technique to make a clinical diagnosis of heart failure, and to get a quite accurate picture of the general outline of the heart. However, this sort of research will prove invaluable in giving us the exact relations between those very small differences in heart size and shape (if there are any) which are associated with the minor degrees of heart insufficiency, and perhaps foretell a cardiac breakdown.

WILLIAM J. KERR, M. D. (University Hospital, San Francisco)—The report by Drs. Frick, Kennicott, and Karshner is of interest to physicians in general and to cardiologists in particular, because it emphasizes the value of accurate methods of determining cardiac measurements. We cannot rely on our present methods of physical examination for the accurate sizes of hearts, particularly in those cases where emphysema is a complication or in individuals who have an unusual amount of subcutaneous fat. Here the orthodiagraphic method comes into use.

The authors have shown the variation in cardiac area over a long period of time in their series of cases, and their charts definitely show that the variations are usually associated with changes in the cardiovascular status of the patient. The value of this method in treatment and in prognosis seems to me to be very great and should be more generally employed. One should be extremely careful, I think, to have the orthodiagrams taken of the patient in the same position each time so that changes in shape and position of the heart by changes and position in the patient will be obviated or minimized.

I feel that the study of the heart with the area of the orthodiagraphic shadow and the orthodiagraphic plate be-

fore us for changes in contour give a very good idea of the conditions present, and is much more satisfactory than either method alone. These methods do not replace the other methods of physical diagnosis and examination of the patient, but are useful aids in the proper treatment and prognosis of the case.

A. W. HEWLETT, M. D. (Stanford University Medical School, San Francisco)—This paper demonstrates the value of accurately measuring the size of the heart shadow by means of the x-ray. The difficulty encountered in making accurate measurements of the heart shadows in different patients arises from the considerable variations encountered in normal persons. On account of these variations, the heart shadow must be considerably larger than the average before we are certain that it exceeds the upper limit of normal. In the present paper, comparative observations were made on the same individuals at different times, so that small changes in area are significant. These comparative measurements show clearly that, in certain patients, the heart shadow lessens as compensation improves. From my own experience with chest plates of cardiac patients, I can confirm the observation that certain patients show a decrease in the heart shadow coincident with clinical improvement, while others show little or no change. The authors report four cases in which, at some time, the heart shadow became larger during clinical improvement. They attribute this to cardiac hypertrophy. It appears to me improbable that a marked change, such as that observed in Case 1285, could be due entirely to thickening of the heart muscle. Increase of the heart shadow, especially in diastole, may be caused by a slower heart rate. It is also probable that, in some instances, hypertrophy goes hand in hand with a moderate dilatation even when compensation is improving.

HARRY SPIRO, M. D. (Flood Building, San Francisco)—The orthodiagraphic method of cardiac examination has had a hard path to travel. Popular prejudice decided that the method was too tedious, required extraordinary skill and high-priced and complicated apparatus; therefore, it has not been more in demand. But no sooner does an individual decide upon a careful and thorough study of cardiac conditions than he realizes that, for dependable work, orthodiagrams are an indispensable supplement to the radiograms.

Today the orthodiagraphic apparatus is very simple and does not demand more than ordinary skill to operate and interpret. Its value is tremendous, particularly as an aid in diagnosing borderline cases of cardiac defects. The authors have shown further that it may be a factor in preventing a cardiac breakdown because one can recognize changes in size and shape of the heart which often precede cardinal symptoms of severe cardiac distress.

While in general I do not believe that cardiac shape is dependable in judging cardiac muscle tone, still there are cardiac types which are reliably associated with certain cardiac defects. For instance, if an orthodiagraphic study has shown a certain type heart, and after a period of time investigation shows a distinct deviation from the type previously found, one could reasonably assume that the heart was not standing up to its work properly, and the treatment should be changed accordingly.

We have always believed that progressive increase in cardiac size spelled approaching trouble. On the contrary, the authors have called attention to the possibility that if a decompensated heart improves and decreases in size, and subsequently as the improvement continues, the heart is shown by careful measurements to be increased in size; then this latter increase in size is due to healthy changes and need not be feared. The proof of the above is definitely a step forward, and shows with what thoughtful judgment the authors performed their work and illustrates forcibly the great value of orthodiagraphic study.

Drs. Frick, Kennicott, and Karshner are to be congratulated in their work of blasting another stone from the path of orthodiagraphy and scoring another point for the long neglected, but faithful, hard-working heart.

FRANKLIN R. NUZUM, M. D. (Cottage Hospital, Santa Barbara)—This paper demonstrates in a very convincing manner the aid that is available by the use of accurate methods of determining the size and shape of the heart. The point has been established that the size and shape of the heart varies in the period of time that elapses between broken compensation and compensation, and that a knowl-

edge of this change is of value in diagnosis, prognosis, and treatment.

Quite aside from the object of this paper, the change of the size of the heart as a result of disease, are some observations made recently in Boston upon the change in the size of the heart in trained athletes following severe exertion. The same methods of determining heart measurements were used, and the information gained is very interesting. Heart measurements were made of these athletes before, immediately after and some days after the completion of a 25-mile marathon race. This race, being an annual event, attracts the best distance runners in the country and men who are thoroughly trained for the event. In brief, the width of these hearts decreased an average of 2 cm., as shown by measurements at the conclusion of the race. Within two to five days these hearts had again returned to the size as demonstrated before the race. This is not in harmony with what many believed would happen as the result of a severe strain such as this race must be. It demonstrates again the value of accurate methods in establishing facts.

The Clinical Teacher and the Medical Curriculum—Harvey Cushing, Boston (Journal A. M. A.), says there are fashions in teaching, like fashions in other things, and one must conform or be regarded as out of date, even though, after all, we may reach our destination whether we ride side-saddle or ride astride. Just now, for example, in our medical schools the "didactic lecture" is taboo. Who first put the taboo on lecturing was probably someone in authority incapable of holding the attention of a group of students by this method. Individuality is now submerged: our teaching, must—to use a greatly abused word—be standardized, as though our schools were factories. The personal influence of the teacher has largely become swamped, and we try vainly to atone for this by juggling with the curriculum, forgetful that no two instructors in any two schools can possibly reach students with precisely the same methods; and that no two students get their inspiration, such as it is, in the same way out of their particular school or its individual instructors. I presume the Harvard Medical School is no different from most medical schools, in that no faculty member is quite satisfied with the existing curriculum and, as a result, about every three years some one protests with sufficient energy to force on his reluctant colleagues some radical changes. Students can be well grounded through the medium of any course. In any old and established school, the curriculum inevitably becomes hidebound. Meanwhile, we have become fairly well accustomed to the view that subjects beginning with the study of morphology and ending with the clinical specialties must be taught in a given sequence. So far as the curriculum is concerned, our discussions in faculty meeting are given over largely to the struggle for elbow-room between established courses, of which there are too many. We have just been going through one of our triennial turn-overs at the Harvard Medical School, in the endeavor to find out what is wrong with the student and with our method of teaching. This time, pressure has been brought to bear by certain members of the faculty of a philosophical turn of mind, who have discovered that the trouble with the undergraduate is that he has no time for intellectual cogitation. Consequently, at the risk of not meeting our obligations to state board requirements, we have materially cut down our hours of instruction so that the students have their freedom Tuesday afternoon and Thursday afternoon and all day Saturday and Sunday. We have as yet made no statistical study of the amount of rumination they do in these free hours; nor do I think such a study will ever be made, because by the time there are sufficient data to rely on we shall probably have gone back to the old system, or new courses will have crept in to fill up these free afternoons.

EDITORIALS

RULES AND FEE SCHEDULE OF DISTRICT OF COLUMBIA MEDICAL ASSOCIATION PLEASE ORGANIZED LABOR

The reaction produced by the new published rules and fee schedule of the District of Columbia Medical Association still reverberates through the daily and periodic press of the country. Many editors constantly criticize the action, while others, and particularly that part of the press identified with organized labor, are pleased at the action taken. The majority of commentators profess to see in the action a "tightening up" of physicians' organizations and the introduction of "business ethics" into their methods and conduct. Some editors castigate the doctors for introducing the "lockout" and a scale of wages and working conditions similar to those of labor unions. Editors of papers sympathetic to labor unions welcome these innovations and predict affiliation of medical associations with the American Federation of Labor as the logical end to this movement.

Fee Schedule—The fee schedule is too long to reproduce. Fees vary from \$3 to \$5000 and upwards. The rules relating to fees are interesting. They are:

1. The following fees shall be charged for professional services, subject, however, to the several rules which are appended: . . .

2. The foregoing table contains the standard fees which *shall be demanded*; they shall be *increased* according to the judgment of the practitioner concerned, in all cases of extraordinary detention or attendance; also in proportion to the importance of the case, of the responsibility attached to it, and to the service rendered when these are extraordinary. They shall be *diminished* at the discretion of the physician when he believes that the patient cannot afford to pay the regular fees, and yet is able to make some compensation; but diminishing the fees except for motives of charity and benevolence is a violation of this regulation.

3. Medical officers connected with the staffs of the hospitals and dispensaries in the District of Columbia shall charge the usual fees for medical services rendered to persons who seek gratuitous services when they are able to pay.

4. Clergymen are not entitled to gratuitous services except when they are in indigent circumstances. Graduates of medicine are not entitled to gratuitous services unless they devote their entire time to the practice of medicine or by reason of age or infirmity have retired from the regular practice of medicine, or unless such graduates of medicine are in indigent circumstances.

5. It is not designed by these regulations to prevent gratuitous services to those who are incapable of making remuneration without distressing themselves or their families.

6. When a physician engaged to attend a case of obstetrics is absent and a second attends the patient, the latter may charge the full fee, but shall relinquish the patient to the first on his return; and in no case shall the second continue to attend except to render indispensable service during the continued absence or disability of the first.

7. When one or more physicians are called in consultation the attending and consulting physician or physicians shall charge at least the ordinary fee for delivery or other services; but when the latter are not detained in attendance they shall only charge the usual fee for consultation.

8. It is recommended that the members of this society

present their accounts for professional services at the close of the attendance; and it shall be the duty of each member to obtain, if possible, a monthly settlement from all his patients.

9. No member of this society shall make a contract, expressed or implied, to attend an individual, family, club, lodge, or other organization by the year, or on any terms other than those authorized by these regulations.

Rule 9 apparently would prevent membership of any salaried doctor, regardless of the size of the salary or the nature of his work.

OTHER RULES

In addition to those affecting fees, there are other interesting rules, from which we quote:

2. In certificates of illness concerning absence from official duties given to employes in the public service, or others, the disease shall not be specified, neither shall the name or nature of the disease be divulged by any written description or statement of symptoms, given to the patient, nor by any specification of the disorder, nor by any disclosure which may be construed as an evasion of the purpose of this regulation.

3. It shall be the duty of members of this society to discourage patients from defrauding other members, and it is expected that the members will use all just and proper means to assist one another in the collection of their fees for professional services.

4. No member of this society who has been called in as consulting physician, in a medical or surgical case, shall assume sole charge of the patient, during the same illness, unless he shall have been specifically requested to do so by the attending physician.

5. No member of this society shall offer, solicit, give, or receive any commission for recommending or referring patients for general or special treatment, diagnosis or operation; or shall solicit or accept any commission from any pharmacist or other dealer in supplies and appliances for the sick and injured on account of patients referred to them.

1. Every institution for medical charity shall require from every applicant for relief in its hospital or dispensary a written certificate, to be obtained as hereinafter provided, that said applicant is unable to pay. Emergency cases are to be excepted from the operation of this rule.

3. Members of this society shall be entitled to the privilege of attending private patients occupying private rooms in any of the public hospitals of this city.

4. The members of the medical staffs of hospitals, when attending medical or surgical cases in private pay rooms, shall insist upon proper payment for their services, except in the case of patients who are unable to pay.

5. Whenever the medical staff of a hospital or dispensary, or any member thereof, is forced to resign, and when, after due hearing, this society finds that the resignations were for unjust and insufficient cause, it shall be forbidden to any member of this society to accept a position on the staff of said hospital or dispensary.

This presumably is the rule referred to by some as the "lockout rule."

6. Whenever one or more members of the medical staff of a hospital or dispensary are dismissed, and when, after due investigation, this society finds that such dismissal was without just and sufficient cause, it shall be forbidden to any member of this society to fill the vacancy created thereby.

9. No member of the staff of any hospital, receiving patients in private rooms, shall attend such private patient sent to the hospital by a member of the society not a member of the staff, unless specifically requested to do so by the attending physician.

It is not our purpose to comment upon the action of the Washington physicians, but rather to review the parts of their action that have led to so much controversy.

GROUP MEDICINE UNDER A NEW NAME

Under the new and particularly inappropriate name of "Guidance Clinics," group medicine has again come to the fore: by group medicine, meaning grouped service by one or as many physicians and other persons as are necessary to make complete and inclusive diagnoses and render any and all indicated services to any individual person.

In the beginning, the old-time family physician was the "group," the "health center," the "child guidance" clinic. He included in his sphere all of the best knowledge then available in the supervision, advice and care he gave to his clients. Most of them still continue to render to the best of their ability all the broad services that some appear to believe to be newly discovered by them. They have guided, and are now guiding, some pretty fine specimens of children to manhood, and then they keep on guiding them until death calls.

Then knowledge increased and became more complex, and medicine, in the broad sense of that term, also became more difficult and complex. Most doctors tried to keep up with and utilize the best of that knowledge in the "guidance" of their clients. Most of them still do so.

Medical schools tried to sort theory from facts and add what was worth while to the instruction given to crop after crop of younger physicians produced annually. They still do precisely this up to a certain level of attainment, and above that level both education and practice have split the field into several essential specialties. Also some that probably are unessential. Practice and education have both then tried to co-ordinate these specialties so as to bring them to bear upon the individual in diagnosis, treatment and "guidance." Many schemes for doing this have been promoted, including clinics, health centers, partnerships, groups and others, and now we have the latest, the "Child Guidance Clinic." Tomorrow it will be some other name.

Yesteryear Doctor A practiced medicine, including "guidance" for child and adult. Last week Doctors A, B, and C formed a partnership to expand their service. Yesterday Doctors A, B, C, D, E, plus pathologist, psychologist, nurse, social worker, and others formed "groups" and corporations to do this work. Today Doctors A, B, C, etc., form a clinic, a health center, a service station, a life-prolonging clinic, a "guidance clinic," or some other form of wholesaling health service "free." Tomorrow the popular name will again change to the latest fad in nomenclature; but you will notice that all through the past, today and tomorrow, the service-givers are the same people. Will they do better work under one name than another?

On page 164, this issue, is a well-told advocacy of "Child Guidance Clinics" by Doctor R. L. Richards. It is a clear and worthwhile presentation of an old subject under a new and unfortunate term. It is an excellent health and happiness "Bill of Rights" of citizens similar to what one will find in the writings and, to a surprising degree, in the practices of the Weir Mitchells, Oliver Wendell Holmes and Oslers of other generations. In a word, it is an excellent restatement of an ideal that intelligent and service-loving people always have been, and

are now striving for, not only in the broad field of health, but in other fields of good citizenship. If there is a single item in this "Bill of Health-rights"—so-called "guidance" service—that every worthwhile physician is not doing his best, either as Doctor A working alone or as Doctors A, B, C and others working in groups, to bring about, we would like to know what it is.

Another indication that "Child Guidance Clinic" is a slogan rather than a new movement—except in one particular to be presently noticed—is in the fact that scores of Doctors A, B, C's, who previously worked under some other designation, are now coming out under the—for the movement—popular title of "guidance clinic." There will be several of them in California within a year or so, and in a few more years they will be forgotten or the same worthy ideal will be again resloganized.

There is one feature of the much-promoted "guidance clinic" movement which seems to constitute its chief motivating force, as it does so many "new" movements in health. It is, that it must spring full-panoplied as a wholesale measure under government or some national (usually non-medical) organization control and direction. Our Doctors A, B, C must, for the time being, metamorphose themselves over night into new beings with vastly increased wisdom and powers of leadership under government or some other wealthy and not too inquisitive body. In other words, the promotion of things medical and social now follows something of the same channels used in promoting a new breakfast food or a new patent medicine. The essential feature of such promotion is salesmanship, which, if well enough managed and well enough financed, will create a desire for anything.

The paper by Doctor Rosanoff (page 167, this issue) illustrates more in detail the working of the movement for "child guidance" on a large scale. *One of the chief points in this movement is that all services to all people, regardless of their financial situation, are free of direct cost to the patient.* The very large costs connected with this service are noted by Doctor Rosanoff, as well as the *present* method of meeting these costs.

Doctor Rosanoff himself, an earnest advocate of this group method of practice, says: "The clinic procedure contains nothing that is new to mental science, except perhaps as it involves a more complete organization for the carrying out of all that we know has to be done."

LOS ANGELES AND THE PLAGUE

The prompt, scientific and effective methods employed by Los Angeles in stamping out almost at its birth a threatening epidemic of pneumonic plague is a performance highly creditable to that city, and sets an example that might well form a precedent for the guidance of other municipalities in times to come:

"No visitation," says the Arizona Republican editorially, "containing more frightful possibilities ever fell upon an American city. There was never in any plague a higher percentage of fatality, and there was never one more readily communicable. A little ignorance on the part of the authorities, a little hesitation or delay, and there would have been witnessed the most frightful devastation.

"Los Angeles is not resting on its oars since this one

voyage is safely ended. Within a week it has appropriated \$250,000 for a campaign against rats and squirrels; it has passed an ordinance requiring that new construction—and old construction as well—shall be rat-proof; that old buildings to which precautionary measures cannot be applied shall be destroyed.

"There are few cities and towns in America so guarded. We suppose there is no other so worshiped by the people who live in it. Los Angeles is a religion of Angelenos. We have jibed them often for their self-assertiveness and for purloining our Grand Canyon of the Colorado, but, after this, their greatest exhibition of readiness and efficiency, we forgive them all."

And so a great city, by wise and prompt action, converted what gave promise of becoming a calamity into an asset of far-reaching consequences. Although reputed to have an unusually high percentage of anti-medical citizens and to be the home of many kinds of versatile quacks, the city's action in times of serious trouble seems to show that, at most, the quackery is but a thin veneer easily brushed aside to give their educated medical agencies a free hand and generous support.

WHO PAYS THE DEFICIT?

Persons who contribute to the support of the free and part-pay work of hospitals have asked if the hospital rates paid by the State Industrial Insurance organization (state fund) were sufficient to cover the cost of the service rendered to their policyholders, and if not *who pays the deficit?*

This is a pertinent question, the answer to which may be interesting, not only to contributors to private charity, but to other citizens, and particularly to those who are served.

We know of no instance where carriers of industrial insurance operating under the provisions of the Workmen's Compensation Act of California pay hospital rates sufficient to cover the *cost* of the class of service that the injured workman is entitled to under the law.

The airing of this question in another state led promptly to an increase in the rates paid by carriers to at least the *cost of the service to the hospital.*

Additional data are being secured, and we will discuss fully several angles of this most interesting problem and some of the consequences of present practices in an early number of CALIFORNIA AND WESTERN MEDICINE.

OF INTEREST TO OUR CONTRIBUTORS

Now that the 1925 session of the California Medical Association is approaching, it seems advisable to anticipate some of the usual questions and requests made by authors about publication of their essays.

The author of a paper presented before the California Medical Association or any of its sections, *may* offer his paper for publication in CALIFORNIA AND WESTERN MEDICINE, but he is not *required* to do so as was the case prior to three years ago. Likewise, CALIFORNIA AND WESTERN MEDICINE may accept or decline any paper from any source whatsoever. Members who wish to offer their papers to CALIFORNIA AND WESTERN MEDICINE should send them to Emma W. Pope, secretary C. M. A.

and associate editor for California, or to the editor. Receipt will be promptly acknowledged, after which the essay will be carefully examined by members of the Editorial Council and either accepted or declined.

Date of Publication—Except in a few special instances, such as the announcement of new work or invited special contributions, the exact date of publication cannot be foretold. It depends upon too many governing influences, such as the date of receipt of manuscripts, the physical "make-up" of the issue, the "balancing of subjects," the proportional representation—geographical and by specialties—the amount of editorial work required, the length of the paper, and other considerations.

Helpful Suggestions—If it requires more than 3000 words to do justice to a subject, the subject is too broad for a general medical journal. If the essay exceeds 4000 words, it is not acceptable to CALIFORNIA AND WESTERN MEDICINE.

Formal stereotyped "case reports" rarely are read by anyone but the editors, and still more rarely contribute anything to the value of an essay.

Well-made photographs or well-done india ink drawings that really illustrate add value to any paper. Poorly done photographs, roentgenograms, and most "tables" definitely detract from the value of a contribution.

It is well for authors to bear in mind, as the editor is required to do, that CALIFORNIA AND WESTERN MEDICINE is a general medical journal. Probably more than 75 per cent of its readers are in general practice, and the other 25 per cent are divided between more than twenty specialties. Specialists, in preparing their articles for publication, should bear this fact in mind, and submit to CALIFORNIA AND WESTERN MEDICINE those phases of their specialty that ought to be interesting to all physicians. The more limited and more highly technical articles, written primarily for an audience made up of specialists in their subject only, should be submitted to special journals and not to a general medical journal.

Advance copies of papers to be read before the C. M. A. may be submitted at any time. This is particularly desirable for general addresses and the annual addresses of section and other officers. Priority in publication will be accorded to all officers' addresses, addresses of section chairmen and reports of the proceedings of sections, *provided these are submitted to us in good shape promptly*. Carefully prepared reports of the proceedings of sections would be a valuable contribution to medicine if the responsible officers would take the trouble to prepare them for publication.

In all cases, please save trouble, expense, and correspondence by submitting one original, clean, double-spaced typewritten copy on standard letter-size paper, and one carbon. At the same time authors will facilitate the handling of their copy if they will submit the names and addresses of physicians whom they desire to have discuss their papers.

Like all reputable medical journals, CALIFORNIA AND WESTERN MEDICINE will not publish knowingly a paper that has been submitted and accepted

for publication elsewhere. CALIFORNIA AND WESTERN MEDICINE will publish papers declined by other publications, *provided* that, in the opinion of the Editorial Council, they are worthy of publication. However, papers submitted in the first instance to CALIFORNIA AND WESTERN MEDICINE will be given priority over such papers in publication.

No more certain cause of delay in publication can be invented than for an author to criticize his colleagues in his scientific discussion. This also often is the determining point in accepting or declining a paper by the Editorial Council. Those who wish to offer criticism of the profession as a whole or any section of it, should send letters to the editor. If they wish to criticize individual physicians, the letter should go to the secretary of the appropriate county medical society or to the secretary of the California Medical Association.

The paper that secured the widest and most favorable comment of our last year's issues was revised twice by the editors and three times by the author. Incidentally, the author "cussed us out" twice and wrote a fine letter of apology after reading the reviews on his article. The moral is, that an author should no more risk his scientific and cultural standing by sloppy, unedited copy than he would risk his social standing by attending a formal party dressed in overalls. Members of the Editorial Council like to examine clean, double-spaced, original typewritten copy. One of them recently told the editor that he believed that a medical essayist who would send in a smeary, much-interlined carbon copy of his article would operate with dirty fingernails. Perhaps he was joking, but it is well to remember that the only *permanent* background a doctor can create is his written and published word. This should represent the best that is in him.

LIFE INSURANCE WITHOUT MEDICAL EXAMINATION

We have been asked to discuss editorially the significance of the movement among some life insurance companies to do away with medical examinations of their policy-holders. We have no inside information, but certain reasons seem clear and certain consequences may be predicted.

Life insurance is a business; a big business carried out for financial gain and conducted under business ethics. Executives in the field will readily admit that the medical part of their work is the most troublesome and physicians' findings and conclusions the most uncertain element in the business as a business. This undoubtedly is a fact. Even under the most favorable auspices and with the best possible work by the best physicians, the results must be held up alongside careful actuarial tables before money can be assured of its earning.

With all the statistical and actuarial data that have accumulated through the years, it should be about as easy to estimate the hazards of life and thus fix a "safe" premium rate without a medical examination as it is with one. Therefore, when considered purely from an investment standpoint, it undoubtedly would be easy to fix a profitable pre-

mium rate without a medical examination. This rate would, however, perforce be a higher one.

There is another interesting speculation which might be offered. Many of the important insurance companies have developed and are rapidly developing great medical and nursing service departments of their own. By this method they can prolong the lives of their policy-holders by rendering them medical, hospital, nursing and "welfare" service, and they can thus control many situations not otherwise within their power. This substituting a policy-holder's medical service for a pre-policy medical examination suggests possible advantages to the investor. Whether or not it may prove of advantage or disadvantage to the welfare of policy-holders and physicians depends upon how it is to be handled. The possibilities are great in both directions.

There is still a third possible consequence to this movement: Groups of insurance carriers may support some great wholesale medical service that would handle all phases of medical work for their companies. Services of this class are now well established and others are in the making in several places. If wholesale medicine in some form is to come, as appears not impossible, at least for the majority of people, and consequently for the majority of physicians, the battle will be between great private organizations on one side and government on the other. Both are making definite tangible progress clear to anyone who cares to observe.

SUPPLEMENT

As is the editor's custom with editorial matter dealing with important problems of organized medicine, the above editorial was sent in proof form to twenty officers of the California Medical Association for advance comment or criticism. The questions raised by the advisors are all answered in the following reproduced from the Nation's Health, which is well worth careful perusal by all thoughtful physicians:

"The Aetna Life Insurance Company made the surprising announcement in September that thereafter on business examined within two years, additional insurance up to \$10,000 would be issued without medical examination. The Travelers and Connecticut General have been setting aside one month a year during which time this privilege was available to certain limited schedules, so that the principle is not new to the insurance world but, coming as it does within a month from the concession made by the Prudential on Industrial policies in writing twenty-year endowment policies up to \$2000 without medical examination, it is freely interpreted by the insurance press as indicative of a general movement toward unexamined business.

"This does not mean that the insurance to be written is to cover an unselected group, as the privilege is open only to those who have been examined within two years. The requirement of a written statement of health eliminates many bad risks, and an important factor in making the system sound is embodied in the regular health inspection feature. The object, according to Aetna officials, is not to segregate a highly superior group, but to strike the average. The Prudential limits its unexamined business to \$2000 and to endowment insurance, and the additional policies may be written only by agents who have been with the company at least one year. The Aetna accepts even convertible term insurance up to \$10,000.

"In commenting upon the possibilities of final universal acceptance of insurance under the non-medical plan, The National Underwriter says:

"The success with which British and Canadian com-

panies have written unexamined business forecasts a favorable experience. The Sun Life of London started writing unexamined business in 1902, and has improved the status of this class until the cost of insurance is the same to them as to those who have been examined. . . .

"The success of group insurance in the amount of business being written without examination is advanced to show the practicability of insurance without examination. With an inspection report required and reliable agency force, there is no reason why an average group should not be obtained, in the opinion of those advocating the plan.

"A number of states require medical examination, and in these states neither the Aetna nor the Prudential plans can be put into effect. . . .

"Some states require medical examination, even in the case of group insurance, although most of them have waived the requirement on group. In one state where this requirement was made, the group companies made the examinations, but would consider the report as a group and not on individual cases, and if the group as a whole looked satisfactory, those who were undoubtedly impaired and uninsurable on individual policies were acceptable under the group.

"It can probably be predicted that if this practice of writing insurance without examination becomes general that the law will eventually be repealed or waived in all the states. It is probably significant that in New York and Illinois and other states that are noted for the care with which their insurance practices have been protected by law, do not require a medical examination. This seems to carry out the opinion of the critics who say there really is no excuse for the law requiring examinations and that the theory on which the law is passed is faulty."

A DIFFICULT SITUATION CLARIFIED

The question of the control, operation, and personnel of medical laboratories has been a burning one for some years. Upon the recommendation of a joint committee, representing the American Medical Association, the American Chemical Society, and the American Association of Pathologists and Bacteriologists, the House of Delegates of the American Medical Association approved and endorsed the following statement, which ought to settle the matter:

"In proposing the following specific recommendations concerning the regulation of clinical laboratories, the joint committee of the American Medical Association, the American Chemical Society, and the American Association of Pathologists and Bacteriologists wishes to emphasize the importance of encouraging and insuring the adequate education of every laboratory worker in the fundamental sciences which he applies. A clinical laboratory—as that term is used by the committee—is an institution organized for the practical application of one or more of the fundamental sciences by the use of specialized apparatus, equipment and methods for the purpose of ascertaining the presence, progress, and source of disease.

"It is the unanimous judgment of the committee:

1. "That it should be illegal for any person not licensed by law so to do, to assume the responsibility of making the diagnosis or of deciding on the progress or source of disease on the basis of any results of a chemical, pathologic, serologic, bacteriologic, radiologic or microscopic observation or other laboratory examinations undertaken; and that where laws do not now restrict diagnosis or the clinical interpretation of laboratory examinations to licensed classes of medical practitioners, laws should be enacted to effect that end.

2. "That any law providing for the licensing of professional workers in laboratories devoted to ascertaining the presence, progress or source of disease should provide for the examination of members of each profession by competent authorities belonging to the same profession.

3. "That as long as an organization or individual engaged in examinations to ascertain the presence, source or progress of disease refrains from all diagnostic and

prognostic interpretation of the results of such laboratory tests, as provided for in paragraph 1, any effort to force such organization or individual to place itself under the direction of a representative of any other profession is to be deprecated.

4. "That the American Chemical Society, the American Medical Association, and the American Association of Pathologists and Bacteriologists should co-operate to establish the principles enumerated in the foregoing resolution whenever legislation in this field may be proposed, and that the co-operation of other national bodies should be solicited.

5. "That clinical laboratories be standardized in accordance with the principles laid down in the preceding paragraphs, and legislation should be enacted to insure competent personnel and suitable equipment."

CALIFORNIA MEDICAL ASSOCIATION AND THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

The California Medical Association—The present name of your state association was adopted June 23, 1923, to conform with the spirit of organization.

The Medical Society of the State of California—The former name of your state association, retained by a society voluntarily formed of those members of the C. M. A. who were unwilling to dispense with the services of your legal department when Indemnity and Legal Defense was discontinued as a society undertaking.

Dues—The yearly assessment to each association is \$10. The C. M. A. dues are paid through your county secretary. Optional Medical Defense dues are sent direct to the state office.

Alumni New York Skin and Cancer Hospital—Graduates of this post-graduate school are requested to send their present professional office address to the secretary of the reorganized Alumni Association.

DR. HERMAN GOODMAN,
15 Central Park West, New York City.

Veterans' Bureau Service Expanded—It is not very widely known that the last congress passed a law authorizing the Veterans' Bureau to extend its hospital and traveling expense service to include veterans of *all wars since 1897* for certain diseases. Under this law "*any person who served in the military or naval forces of the United States during any period after 1897*, except those persons whose discharge from the service was dishonorable, will be furnished treatment at any hospital under the jurisdiction of the United States Veterans' Bureau, when such persons are suffering from neuro-psychiatric or tuberculous ailments and diseases, paralysis agitans, encephalitis lethargica, amoebic dysentery, or the loss of sight of both eyes. The term 'neuro-psychiatric ailments and diseases' will include psychoses, psycho-neuroses, epilepsy, organic diseases of the nervous system, endocrinopathies, Raynaud's disease, sangioneurotic oedema and erythromelalgia. 'Tuberculous ailments and diseases' will include all forms of tuberculosis."

The New Jersey Medical Association, with a membership of 2300, has engaged, at the expense of about \$12,000 a year, a publicity agent or educational instructor, a full-time man. He acts as editor of the state journal, as a chairman of the welfare committee, and will spend his whole time in placing their problems and their matters of medical interest before the medical men of the state and before the people of the community.—A. M. A. Bulletin.

Medicine in the Public Press

An Effective Check to the Socialization of Health—President Coolidge, in his budget message, refers to federal subsidies by saying: "I am convinced that the broadening of this field of activity is detrimental both to the federal and the state governments. Efficiency of the state governments is impaired, as they turn over to the federal government responsibilities that are rightfully theirs. *I am opposed to any extension of these subsidies. My conviction is that they can be curtailed with benefit both to the federal and state governments.*"

In commending the President's stand, the San Francisco Bulletin says editorially that: "If the government is to build the roads, if it is to control education, if it is to be the *universal guardian against disease*, if it is to reforest our hills, and on down the line to *instructing women in the business of maternity*, little will be left to individual initiative and judgment, not to mention *state responsibility*."

Legal Restrictions Embarrass Educator—In a thoughtful editorial (San Francisco Bulletin), Mr. Will C. Wood, State Superintendent of Education, is quoted as saying that he is "getting a bit tired of this eternal saddling of all the problems that civilization can't solve on the school system."

"There are those," continues the editorial, in support of Mr. Wood's contention, "who would make the schools the universal physician, the universal dentist, the universal nurse, the universal provider, the universal entertainer of childhood. There are those who, in enthusiasm for special fads and whims, would make the school, not an agency of instruction and mental training, but a forcing house in support of propaganda in a hundred forms."

"At the next legislature I want to introduce a bill striking out twenty-seven subjects required by law. I would strike out these twenty-seven subjects and in their places insert a few fundamental objects of education, such as lay the basis for all learning that may come later, instilling patriotism and building up character. These would be less easy to tamper with, for the number of virtues is much less than the number of subjects that cranks can suggest. . . . Worst of all is the realization that most of these subjects are but mummified and petrified tributes to the persistence—or beauty—of professional lobbyists in Sacramento."

Mr. Wood ought to have more support than he is likely to get in this praiseworthy objective.

Another Germ Killer—Another professor has discovered another germ killer, according to the newspapers.

This new poison is said to consist of a sort of by-product of the ultra germs that live as parasites upon the ordinary germs that we know about. The ingenious discoverer says his toxin will not kill the tuberculosis germ, but does promptly destroy those of cholera, typhoid, and what not. The modest discoverer apparently considers his work comparable to that of Pasteur.

Let us hope that it is.

An Optimist Writes Fiction—One doctor (variety not specified), according to an editorial (World's Work) predicts that "In fifty years the world will be a world without disease. The most terrible plagues that now afflict mankind will have been conquered by modern chemistry. Even the most baffling will become only the more tragic memories of humankind. A world without disease!" The editor implies wisely that this will require speed because "It would probably be impossible to find today a single human being who is not ill in some way and to some degree."

Every Nut Has a Kernel—"The beliefs of Christian Scientists, so far as they relate to the cause and cure of human disease, are not new revelations in advance of biological science. They are really curious survivals of primitive conceptions, discarded by biologists centuries ago. All primitive people look upon disease as the result

of abnormal 'spiritual' forces. Treatment consists in attempts to expel invading demons, or propitiate angry deities. Christian Scientists have merely reworded these primitive conceptions in terms of orthodox Protestant Christianity."—The Research Worker, Stanford University.

An Important Decision—Attorney-General Webb, according to news dispatches, has ruled that persons licensed as chiropractors and osteopaths are not eligible under the law to receive credentials from the state school department to perform health and development work in the public schools.

Was Everyone Blameless for the Death of Victoria Ortiz?—Nationwide publicity was recently given to the incident in Solano County when the little three-year-old Victoria Ortiz died as a result of burns after being refused admission and service to two hospitals, one a government institution, the other a private hospital. The incident apparently has now been closed by a finding of the district attorney of the county to the effect that no one was to blame for this accident except possibly the parents. It seems that the child was burned one evening and medical attention was not asked until 10:30 o'clock the next morning. Curiously enough, most of the criticism and newspaper editorial comment throughout the country has resolved itself into bitter criticism of the medical profession as the result of this accident. This, in spite of the fact that none of the evidence shows that any doctor at any time was asked to see the child, or did see it, or knew anything about the situation at all until the child was taken into the hospital where it finally received service.

Some good will apparently come out of the incident, in that the county authorities are now negotiating with the private hospital to take care of emergency work in their locality.

Stockton Doctors Complimented—According to newspaper reports, Mrs. Thompson believes Stockton's physicians to be exceptionally competent in treating tuberculosis. Several of the doctors had their patients and diagnoses checked up at the Tuberculosis Clinic held in Stockton recently.

It is becoming quite the fashion for non-medical persons, state bureaus, and other organizations to call in outside doctors to check up on the work of local physicians in certain communities.

Nutrition Expert Holds Clinic—According to news dispatches, "mothers of habitually underweight children are urged to bring them for examination to Miss Woodward, nutrition expert of the State Board of Health, who will hold consultations in a room separate from the examination quarters of the clinic and will give advice on nutrition and dietetics."

Tulare County Health Center Taken Over by Local Officials—Tulare County Health Center, which has been supported largely by voluntary contributions for some time, has been officially taken over by the county as a municipal undertaking. It is anticipated that everyone connected with the center will now be paid except the doctors, who will be expected to continue their services for nothing.

Optometrists Official Examiners of the Eyes of School Children—Optometrist Fred Watson, secretary of the California Optical Company, claims to hold a certificate from the State Board of Education to examine the eyes of children in the public schools. Upon a recent trip to Pittsburg, Calif., he is said to have examined about 200 children. The examinations were free, so far as the children are concerned, being paid for by the association of optometrists.

Drugless Healers Given Credit for California's Health—An editorial in a California newspaper says: "The truth of the matter is that California is the most progressive state in matters of health, and the reason why

it is so healthful is because it has such an abundance of drugless healers, doctors who do not believe in prescribing drugs and serums to cure 'bad habits.'"

Old Age Pensions—An Old Age Pension bill, known as the Murphy bill, will be considered by the Forty-sixth California Legislature. The bill is modeled upon those of Montana, Utah and Pennsylvania, is fostered by the fraternal Order of Eagles, and has the endorsement of organized labor. It is a substitute for poor farms; authorizes a monthly allowance of \$30, to be allocated and disbursed by a state commission to needy persons over 65 years of age.

"Nothing so damns our civilization," says the Daily News editorially, "as the way we treat our aged. Were dependent old age written down as a felony on our penal statutes, we would hardly be more cruel than we are to the aged infirm. For no other crimes than their misfortunes we brand them paupers and herd them into 'poor farms.'"

There, instead of loving care, tender understanding and honor, we dole out a grudging three meals and shelter as forbidding and unbeautiful as a jail.

"Old age, which gave us Moses, Socrates, Epictetus, Erasmus, Tolstoy, Whitman, Anatole France, the seers of every era, must look to China for the veneration it has earned through patient years. California has nothing to offer the aged but a bare living.

"The proposed pension measure would cost no more than the 'poor farms,' and it would permit our old folks to enjoy their declining years among their friends and families."

The principle involved deserves the highest consideration, but like so many other fine idealistic principles it is difficult of practical application.

A wisely drawn and wisely enforced law surely would constitute as definite an improvement over "poor farms" for the aged and permanently disqualified of any age, as does the "home placement" over the "orphanage" for homeless children.

Success in both movements requires careful, wise sustained personal supervision. Many of our elderly dependants are not only physically, but also mentally handicapped, and to give them a cash allowance once a month without thoughtfully applied safeguards would lead to all sorts of undesirable consequences.

The bill deserves serious and careful non-political study by our legislature, and if the principle involved can be made practically workable, it ought to be incorporated into law.

Cancer Cures Below the Average—Only four "new" sure-shot "cancer cures" were given space in the newspapers during the past month.

Are "sure cures" discovered less frequently than formerly, or are editors growing more particular? The latter appears to be the answer, for several of our papers did not mention any of the last four. Other editors gave them brief notice and only a few gave them extensive write-ups.

A Doctor Answers a Patient—In answering a patient's protest against the amount of a fee, a doctor wrote:

"You make the contention that the operation required less than three hours, and that the charge of \$—— is, therefore, entirely out of reason.

"Permit me to point out to you a slight discrepancy in your calculation. As a matter of actual fact, the operation to which you refer required somewhat more than twenty-seven years. That is the period of time which I spent in studying my profession and fitting myself to successfully perform an operation in three hours. Like other medical men, I have no source of income aside from my professional services. And I am sure you will agree that it is only fair to add a certain sum which may be credited to experience, and that elusive thing known as "skill." Pro-rated over a period of twenty-seven years, my charge of —— appears ridiculously small, doesn't it?"

"People Who Live in Glass Houses"—According to "News" dispatches, Mr. Wagner, head of a state bureau, is going to put a lot of private hospitals out of business because they are "veritable fire traps." Why

pick on the private hospitals? If there are any private hospitals worse fire traps than are the majority of government hospitals, we would like to see them. Why should the government have a monopoly on the privilege of housing the sick in "fire traps"?

"Propaganda Against Optometry in Board of Health Bulletin"—Under this headline the California Optometrist says: "How widespread and insidious the propaganda against optometry is becoming is evidenced by the weekly bulletin of the California State Board of Health published on September 6, and which contains an article by Dr. Edward F. Glaser of San Francisco, a member of the State Board of Health, entitled 'Saving Eyesight.' These bulletins are given a widespread circulation, and one copy is mailed to every newspaper in the state."

The part of Dr. Glaser's article which is particularly resented by the Optometrist reads: "Be sure that your eyes or your children's eyes are properly examined by a doctor trained and capable of recognizing and diagnosing the actual conditions and who possesses the knowledge and training necessary in applying the proper remedies, whether medical, surgical, or the wearing of glasses. The public should be taught that eye-strain is a medical problem, and that no one without a definite medical education should be trusted with the differentiation between healthy and diseased eyes."

The editor of the Optometrist seems to think this statement is political propaganda directed against optometrists instead of a simple statement of scientific fact. The editor believes: "That doctors and oculists for the past few years have been viewing with alarm the rapid growth of optometry that has long been recognized by members of the profession, and recently many indications have shown that the medical association is planning to make a hard fight against the inroads optometry has been making on the medical profession."

Poor Monkeys—Four-legged and Two-legged—India is becoming so aroused over the slaughter of their four-legged monkeys to secure "glands" for the "rejuvenation" of two-legged monkeys that the Societies for the Prevention of Cruelty to Animals have entered the field. A Calcutta paper is quoted as saying that: "The European and American craze for rejuvenation is denuding India of its monkeys, the sacred animals being slaughtered so that the senile and debauched may win back a problematical youth."

The editorial warns the government that, unless it forbids this "devilish trade," it will have a terrible responsibility when the consequences of the popular indignation become manifest."

Thoroughly Disgusting—An anonymous writer calls our attention to a disgusting lot of newspaper and magazine clippings upon which he (or she) invites comment:

Case 1—Madam X says she is an "expert" upon "nerves" and that she is a "scalp and skin specialist." If she is doing only what she claims, she is practicing medicine. The Board of Medical Examiners will see if they can get enough evidence to at least make her move.

Case 2—A "specialist for ladies" says, in a San Francisco newspaper, that she has had twenty years' "experience" and has "relieved thousands." Perhaps that is one reason why only 87,000 babies were born in California last year.

Case 3—A Chinese herb company makes marvelous claims of the usual kind. The people of this concern are now under arrest, as they have been several times before. So far, it has been impossible to convict them. To publish the reasons might be libelous.

Case 4—"Doctor —, expert specialist," tells what he can do in many lines. He claims to save the patient money by preparing "medicines in office." The Board of Medical Examiners could perhaps give another reason for his not patronizing a drug store. It ought not to be particularly difficult to get evidence in this instance."

Case 5—Papers in San Diego carry the claims of —, to the effect that several serious maladies are "easily

cured." "Elegant illustrated booklet, 10 cents." The post-office people might be interested in that "booklet."

Case 6—"Cancer victims" are invited to "address physician for circular," says a card in a San Francisco newspaper. We wonder if the newspaper saw that circular before they accepted the responsibility of helping this "physician" promote his scheme.

Case 7—"Dollar Clinic," "all ailments," "medicines included" for a "\$1 fee only." Even at this rate they cannot compete with the "free clinics" nor with the Industrial Accident fees.

Case 8—"Doctor —, spine and nerve specialist," says you can get well quickly by his "soothing treatment."

The newspaper that carries this has just below it (and mixed up with several sorts of healers' conflicting claims made ridiculous by comparison as between themselves) the following:

"The (name of the newspaper) is a member of the Association of Newspaper Classified Advertising Managers, which includes leading newspapers throughout the country, and has for its aim the elimination of *fraudulent and misleading classified advertising*. The —, as well as every other member of the association, endeavors to print only truthful want ads, and will appreciate having its attention called to any advertisement not conforming to the highest standards of honesty."

Good newspapers, like good doctors, try to live up to their ethics.

Why?—"E. E. Simpson will appear before the state convention of chiropractors," says the San Francisco Daily News. "Mr. Simpson is eating tacks, broken bottles, razor-blades, and electric-light bulbs. He once won a wager by eating an automobile windshield."

Does Dancing Prevent Cancer?—According to newspaper stories, a California doctor "who has just returned from a world-wide research expedition" says that it does. As the story goes, the doctor is quite positive that: "In countries where people dance from their youth, cancer is never found!!!"

A Great Newspaper Attacks "Cancer Cure News"—It is heartening to see a great newspaper like the New York Times publishing articles condemning the propaganda that circulates as "news" about "cancer cures." In an intelligently illustrative article recently carried by the "Times," this irresponsible publicity is classed as a menace.

"This menace lies in the deluge of so-called cancer 'cures' which is flooding the country. Some of these cures are advertised with transparently evident commercial design and some are put forward with an attempt to simulate conservative procedure, almost deceiving the medical profession itself. Between the two are many varieties; some are promoted by persons who are so ignorant that their written communications are grotesque—and written communications are frequent in connection with proprietary cancer cures, for the promoters draw their patients from a large territory. . . . No one can fail to appreciate the emotional reaction of a woman who is suffering from what she believes to be a disease with only one end, when she reads in the newspapers that such and such a person has discovered a cure for cancer. She immediately seizes upon the hope that is offered to her, and believes the claims that are made; and the wish, which under such circumstances is so naturally the father of the thought, endows the cure with every virtue its promoter may have forgotten to ascribe to it. And the friends and relatives of patients look on and share in the delusion."

The business of cancer cure fakirs would be promptly reduced 75 per cent if all newspapers would refuse to publish anything about cancer not endorsed by competent medical opinion.

"A university education will be broadcast by radio in Berlin. Similar cases will become common in America later. The majority, of course, want entertainment when they listen in. But there are millions who would welcome the chance to get a college education at night, being

unable to afford personal attendance. Radio and the movies will be the greatest future educators."

United States Government Makes Huge Profits Out of Narcotic Problem—According to official reports, the federal government collected through narcotic taxes for last year \$1,057,066.33, and it cost \$709,790.66 to administer the law. Therefore, our government got a profit out of its narcotic business of more than \$300,000. Many doctors would like to know if it is because of the profits in the business that the government still refuses to modify the war tax on doctors.

Shall Doctors "Unionize"?—It may seem strange to some people that highly educated physicians and surgeons should organize a labor union and fix a scale of wages, but there is nothing either odd or wrong about it. Those Washington doctors who formed such a union merely made use of their intelligence and took a step which ought to be beneficial both to them and to the public.—San Francisco Daily News.

Anaphylactic Shock Following Use of an Organic Coagulant—Bernard E. Sayre, Chicago (Journal A. M. A.), relates a case of a severely toxic goiter in a man, aged 30, in which, after enucleation of the gland, a continual oozing on the left side of the trachea could not be stopped. As the bleeding was very close to the recurrent laryngeal nerve and ligation not practical because of danger of injury to the nerve, an organic blood coagulant (coagulose) was applied to the bleeding surface, the area packed with gauze, and the incision sutured in the usual manner. The blood pressure before operation was 160 systolic and 80 diastolic. During operation it rose to 180 systolic and 90 diastolic, and at the close of the operation the blood pressure had dropped to 165 systolic and 85 diastolic, with a pulse of 120. The patient was breathing well and appeared in good condition. About fifteen minutes after the application of the blood coagulant, the patient suddenly became cyanotic, breathing with great difficulty and inspiring in short gasps. Foam appeared at the mouth. Within a minute or so, breathing ceased. The heart became rapid and the pulse somewhat weak, but continued to beat regularly. Artificial respiration was resorted to; stimulants were given hypodermically; oxygen was administered, and breathing was finally resumed. Cyanosis lasted for ten minutes. The patient remained unconscious for two hours afterward, although ether was not given at any time during the operation, and the gas anesthetic had been stopped fifteen minutes previous to the onset of dyspnea.

The Swing of the Pendulum—It is evident, believes E. H. Oschner, that the pendulum is already beginning to swing the other way and that the older clinical methods are gradually coming back. . . . Some of the refinements in diagnosis and treatment which are now in vogue are unquestionably very interesting to the research worker and in part may ultimately be of some real benefit to medicine. But the questions which the man who actually teaches under-graduate students should ask himself are, "Have they proven their dependability and are they of sufficient fundamental importance for the student to spend his time on in the present stage of his educational career?" While a certain small number of cases require some refined diagnostic methods, in the great majority of cases such ultra-refinement is not necessary and often not desirable because it only too often tends to confuse rather than to clarify. The x-ray in gall-stones, for instance, misleads more often than it aids. Let us remember that, after all, the five well-trained senses are usually indispensable in reaching a correct diagnosis, and let the teacher ever emphasize this point and do everything in his power to teach the student the proper use of these senses; not to the exclusion of the other diagnostic methods, but with the understanding that the percentage of errors in conclusions, based upon a careful examination of a patient by the unaided senses, is much smaller than the percentage of error in conclusions based exclusively upon almost any one of the more modern ultra-scientific diagnostic methods.

California Medical Association

GRANVILLE MacGOWAN, M. D., Los Angeles..President
EDWARD N. EWER, M. D., Oakland.....President-elect
EMMA W. POPE, M. D., San Francisco.....
.....Secretary and Associate Editor for California

A. M. A. FELLOWSHIP

Fellowship and membership in the American Medical Association are often incorrectly used as synonymous. They are not identical, and members of the California Medical Association are frequently surprised to learn they have not automatically been made Fellows of the A. M. A. by reason of their state membership.

When the county secretary reports a new member to the state association, his name is forwarded to the A. M. A., and he is then listed as a member and not a Fellow of the A. M. A. Should he desire Fellowship, he must make special application for it upon a blank provided, which can be obtained from the state office, 1016 Balboa building, San Francisco. A check of \$5 must accompany the application, of which \$4 is credited to a subscription to the A. M. A. Journal and the A. M. A. Bulletin. If the A. M. A. Journal is not desired, one of the six publications listed on the back of the application blank can be substituted.

Loss of membership in the state association automatically debars from both membership and Fellowship in the A. M. A.

Only Fellows can actively participate in the program of a national meeting. The right to hold office or to vote is also contingent on Fellowship status. Delegates from the C. M. A. to the A. M. A. must have been Fellows in good standing for the preceding two years.

REAPPORTIONMENT OF DELEGATES
TO A. M. A.

(Important letter from Doctor Olin West)

September 27, 1924.

The triennial reapportionment of delegates from constituent state and territorial medical associations was effected at the Chicago annual session of the American Medical Association in June of this year. The reapportionment of delegates was on the basis of one delegate for each 950 members or fraction thereof for all constituent associations having a recorded membership of 950 or more. Under the provisions of the by-laws, each constituent association with smaller membership is entitled to one delegate.

The records of this office show that, on April 1, 1924, the California Medical Association had reported 3929 members for enrollment. The California Medical Association will be entitled to five delegates in the House of Delegates of the American Medical Association in 1925.

There are now pending proposed amendments to the constitution and by-laws providing for an increase in the voting membership of the House of Delegates. It is quite probable, therefore, that a new apportionment of delegates will be effected in 1925.

ANNUAL SESSION C. M. A., YOSEMITE, MAY 18, 19, 20, 21, 1925.

How do we get there and where do we stay after we arrive?

Those are the two big questions in connection with any convention, not excepting those held in such a well-known place as Yosemite. Both will be answered here as briefly and as comprehensively as possible for the benefit of those who will attend the annual meeting of the medical society of the state of California, May 18-21, 1925.

Yosemite National Park, most popular of all the nation's parks, lies almost due east of San Francisco, in the heart of the Sierra-Nevada Mountains, and is reached by railroad and by several good automobile roads. Main lines of both Southern Pacific and Santa Fe, in the San Joaquin Valley, between San Francisco and Los Angeles, pass through Merced, from where the Yosemite Valley railroad leads up the beautiful canyon of the Merced River to El Portal at the park boundary. A government highway that is like a boulevard extends from El Portal fifteen miles farther up the canyon to Yosemite Valley, the heart of the park. The drive from El Portal to Yosemite, as the village is known, is a matter of an hour, in the comfortable motor-cars of the Yosemite Transportation System, one of the most spectacular hours in a lifetime, for the broad road leads through a panorama of cliffs, and forests, and waterfalls that has no superior anywhere in the world.

On this ride, the visitor passes through the famous "Gates of Yosemite," where El Capitan towers 3604 feet on the left, with Three Graces making a perfect background for Bridal Veil Falls on the right, and Clouds Rest and Half Dome looming up in the middle distance.

The rail journey from Merced to El Portal is only seventy-eight miles, a trip of about four hours through famous placer mining country still scarred by the activities of '49. Detailed schedules and fares from all principal points in the state will be furnished later.

The Wawona road, ninety miles from Merced to Yosemite, paved or macadamized for thirty-eight miles of that distance, probably will be the best road for the use of those who will go to the convention in their own machines, as the Big Oak Flat road sometimes does not open until later because of snow on the higher altitudes. However, road conditions depend on the season, and the weekly bulletin of the superintendent of Yosemite Park, distributed to all agencies of the California State Automobile Association and the Automobile Club of Southern California, might well be consulted before starting the trip to ascertain just what roads are open.

Arriving in Yosemite Valley, Sentinel Hotel and Yosemite Lodge will receive the visitors. The Sentinel is situated in the village, while the Lodge is across the river, less than one-half mile distant, in a grove of pines at the foot of Yosemite Falls. Both offer accommodations and service of the highest type, the Sentinel having its living quarters in rooms, with and without private bath, in a main and annexed buildings, and the Lodge having the cabin plan of accommodations, individual houses, with and without private bath, grouped around an attractive community center.

Unobtrusive service and supremely good food have made the Sentinel favorably known to even the most jaded of globe-trotters. It is one of the few hotels in the world electrically equipped throughout, all heating, lighting and cooking being done by hydro-electric power. It also is one of those rare hostleries which are operated on an "unlimited" policy in the kitchen, the chefs being unrestricted in their use of good things, so that the Sentinel justly claims the highest per capita consumption of cream, butter and eggs of any hotel on the Pacific Coast.

Rates at the Sentinel (American plan) are \$6 a day per person in rooms without private bath, and \$8.50 a day per person in rooms with private bath. All rooms are outside rooms and nearly all rooms are equipped with twin beds.

The cabin type of resort, frequently encountered in the West, has reached its highest development in the American plan accommodations of Yosemite Lodge.

Redwood cabins with private baths, many of the cabins

also having screened sleeping-porch, may be had for \$8.50 per person per day, American plan. A generous porch gives entrance to a bedroom equipped with twin beds and other furniture of attractive design, and heated by 5000 Watt electric heaters. A dressing-room or large closet provides ample space for hanging clothes. The bathrooms are equipped in spotless porcelain.

Redwood cabins without private bath make up the second group and are furnished similarly to those having baths, except that bowls and pitchers take the place of running water, and small stoves burning fragrant pine or cedar wood are used for heating. The American plan rate is \$6 per person per day.

Canvas cabins form the third group—and do not confuse the Lodge's canvas cabins with tents. Canvas cabins here are all that the name implies, houses with canvas for walls. They are floored, of course, and electrically lighted. Entrance is by a screen door, and there are six screened windows with curtains and awnings. Furnishings are similar to those in redwood cabins without bath, and the charge is \$1.50 and \$2 per day per person on the European plan, or \$6 per day per person on the American plan.

Maid service in all classes of cabins assures plenty of clean towels and, in the cabins without baths, fresh water. Hot water for the morning toilet may be had without extra charge by those living in cabins without baths, if they will leave cabin number and hour desired with the Lodge office. Detached baths and sanitary flush toilets are located conveniently.

Reading room, writing room, dining room, broad verandas, soda fountain and curio and news shop are included in the main building of Yosemite Lodge, with outdoor dancing pavilion and theater for evening entertainments just in front. Individual service at table is a feature of the Lodge's American plan dining room, where excellent food is appetizingly served.

Both the Sentinel and the Lodge are near the village, the government pavilion, and other places where clinics and sections will meet, but for the benefit of those who do not wish to walk, a local service automobile will be operated over the floor of the valley, following a regular route just like a street-car, the fare being reduced to 10 cents, for the benefit of the medical society.

Inquiries regarding transportation to Yosemite, trips inside the park to Hetch Hetchy, the Big Trees and Glacier Point, and hotel accommodations, should be addressed to H. H. Hunkins, traffic manager, Yosemite National Park Co., 511 South Spring street, Los Angeles, Calif., who is acting as chairman of the transportation and hotel committee for the convention.

COMMERCIAL EXHIBIT AT YOSEMITE

The attention of the advertisers in CALIFORNIA AND WESTERN MEDICINE is called to the ruling of the executive committee of the California Medical Association, that, owing to the small demand for a commercial exhibit in Yosemite, no special provision for space has been made, but that advertisers in CALIFORNIA AND WESTERN MEDICINE, and *advertisers only*, are privileged to make arrangement for exhibit space direct with the Yosemite Lodge Company, should they so desire. Credentials will be furnished, on request, by the secretary of the California Medical Association.

ALAMEDA COUNTY

Alameda County Medical Association—(reported by Pauline S. Nusbaumer, secretary)—The annual meeting of the Alameda County Medical Association was held December 15, 1924.

F. B. Taylor reported a case of carcinoma of the stomach, the interesting feature being the fact that the x-ray failed to demonstrate the lesion because it was located posteriorly. The clinical diagnosis was confirmed by the necropsy.

The association is indebted to A. C. Siefert for the following symposium on duodenal diverticula: X-ray diagnosis, with lantern slides, A. C. Siefert; surgical aspect,

A. C. Dukes; medical aspect, S. V. Irwin; differential diagnosis, F. B. Taylor.

S. C. Irwin being unavoidably absent, F. B. Taylor incorporated some of the medical aspect in his talk.

A. C. Siefert, in his paper, reported six cases. He stated that diverticula are more common than is ordinarily supposed. The doctor quickly considered pathologically two general types. He claims that the diagnosis is not possible on clinical data alone, but the x-ray examination is necessary, and the fact that diverticula may become inflamed, and enlarged to a considerable size, makes them of surgical importance.

C. A. Dukes said surgery of diverticula of the duodenum differs but slightly from other surgery of the duodenum. He called attention to the difficulties encountered in trying to operate upon small diverticula, because of the difficulty of locating them at the time of operation. Although they may seem perfectly plain in the picture, in operating they are sometimes most difficult to locate, especially posteriorly.

In a recent case, x-ray showed a definite diverticulum about two inches in diameter in the second portion of the duodenum, posteriorly. At operation the diverticulum was found distended with gas to the size 8 x 5 cm., pedunculated, wall very thin, ruptured during dissection. The diverticulum was adherent and was situated under the lower border at the head of the pancreas. Because of adhesions, the diverticulum was exposed with difficulty; it was freed to base by blunt dissection. There was considerable gas, and some contents of a reddish brown-like fluid escaped during the proceedings. Purse-string of plain catgut, two layers; rubber tube drain at site of operation; usual abdominal enclosure. This man made an uneventful recovery.

The lesson we have learned on duodenal diverticula is to hesitate in operating upon all cases. He thinks that judgment should be used in the type of cases to be operated upon.

In his paper, F. B. Taylor said: "The duodenum is the most sensitive viscus in the upper abdomen. It has a richer blood supply, a faster muscular rhythm, and a more rapid chemical activity than any other part of the digestive tract. It is the segment of greatest physiologic activity in that department which is responsible for human nutrition. Furthermore, the duodenum is as sensitive as it is active, and shares the discomforts of its nearest anatomical neighbors when they are in trouble. The diseases of many of the upper abdominal viscera are characterized by one or more symptoms which are parts of a "duodenal syndrome." It is not strange, therefore, that cholecystitis, bile-tract disease, pancreatitis and partial block of the upper jejunum give a similar train of symptoms all depending upon an interruption of the normal gradient of forces present in a healthy digestive tract. The duodenum informs its owner that there is upper abdominal trouble, and collateral signs and symptoms help make the diagnosis. But when the duodenum itself is diseased, so closely is it surrounded by its anatomic and physiologic neighbors, that it may present very little differential symptomatology. That is especially true when the mucus membrane is unbroken, as in diverticulitis. The diagnosis of this condition, therefore, is not a clinical one; it is made by the roentgenologist or surgeon.

Following the scientific program, the chairman of all standing committees and the chairman of each of the commissions, the secretary-treasurer, and president read their reports, all of which were ordered filed. The tellers not being ready to report, the meeting adjourned to the lower hall and enjoyed a social time while partaking of refreshments.

The election, according to the report of the tellers, resulted as follows: President, H. B. Mehrmann; vice-president, J. K. Hamilton; secretary-treasurer, Pauline S. Nusbaumer. Councilors: L. P. Adams, G. G. Reinle, Gertrude Moore, C. A. DePuy, Guy Liliencrantz, and Sumner Everingham. Delegates: C. L. McVey, Pauline S. Nusbaumer, and A. M. Meads. Alternates: F. H. Bowles, Henning Koford, R. T. Legge, C. A. DePuy, A. H. Rowe, and W. L. Channell.

CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary) — The twenty-fifth annual banquet and election of officers of the Contra Costa County Medical Society was held Saturday, November 29, 1924, at 8 p. m. at the Berkeley Country Club. The following officers for the year 1925 were elected: President, Marguerite Deininger-Keser; vice-president, G. M. Bumgarner; secretary-treasurer, L. St. John Hely. Delegates: U. S. Abbott and Deininger-Keser.

C. L. Abbott was toastmaster. F. B. La Moine spoke on "Drugs." Rev. T. A. Boyer entertainingly responded to "the ladies"; and Mrs. C. R. Blake received a hearty response for her talk on "the gentlemen." Hiram Jacobs, Assistant District Attorney, covered the subject of "Medical-Legal" thoroughly.

The society was indebted to W. A. Clark of Oakland for the presentation of his famous views photographed in actual colors. This feature of the entertainment was worth the "price of admission." The society wishes to thank him for the favor.

The following were present: Doctors and Mesdames U. S. Abbott, Beard, Bumgarner, Clark, Cole (dentist), Carpenter, Cunningham, Hely, Horne, Lipp (dentist), O'Brien (dentist). C. L. Abbott, Blake, Belgum, Breneman, Clara Spalding, J. B. Spalding, Hall Vestal and two daughters, Eleanor Axelsen, Agnes Driscoll, R. N.; Elizabeth Redmond, R. N.; Mrs. H. K. Youd, R. N.; and Elizabeth McKenzie, R. N.



FRESNO COUNTY

Fresno County Medical Society (reported by T. Floyd Bell, secretary) — A meeting of the board of governors was held in Dr. Morgan's office December 16, 1924, at 1 p. m. The following were present: Drs. Cross, Miller, Tillman, Trowbridge, Morgan, T. Bell.

Bills were audited and ordered paid.

Dr. Trowbridge moved, Dr. Miller seconded, that the following resolutions be adopted, that publicity be given in the papers, and that the Supervisors be interviewed personally in regard to this matter. Carried.

"WHEREAS, It has come to the attention of the Fresno County Medical Society that a movement is on foot to rescind Ordinance No. 218 of Fresno County; and

"WHEREAS, Said Ordinance No. 218 contains provisions for the compulsory vaccination of dogs against rabies, and

"WHEREAS, The vaccination of dogs against rabies is the best known method for combating and preventing the spread of rabies, and

"WHEREAS, The rescinding of this Ordinance No. 218 would be a step backward in the progress of preventive medicine by doing away with compulsory vaccination of dogs against rabies, and

"WHEREAS, The rescinding of compulsory vaccination against rabies would undoubtedly lead to serious outbreaks of rabies in the future, and

"WHEREAS, Outbreaks of rabies are a serious menace to the health of the citizens of Fresno County, now, therefore, be it

"RESOLVED, That we, the Fresno County Medical Society, go on record as opposed to any legislation that will rescind the provisions in Ordinance No. 218, relative to the compulsory vaccination of dogs against rabies, and be it further

"RESOLVED, That a copy of these resolutions be sent to each member of the Board of Supervisors for Fresno County."

Dr. Trowbridge moved, Dr. Miller seconded, that the dues for 1925 be \$15. Carried.

Dr. Miller moved, Dr. Tillman seconded, that the secretary investigate the matter of associate members of the society so that such men who are qualified may be asked to join. Carried.

Dr. Miller moved, Dr. Bell seconded, that the Chair appoint a committee, the secretary being one, to make necessary changes in the by-laws and constitution to con-

form with the state society. Carried. Drs. Cross, Miller, and Bell were appointed.

A special meeting of the Fresno County Medical Society was held December 20, 1924, with luncheon at the Hotel Fresno.

Twenty-two members and six visitors were present. Members: Aller, Anderson, Bell, Butin, Goldberg, James, Kjaerbye, G. L. Long, Luckie, Madden, Milholland, McPheeters, Pettis, Pomeroy, Sheldon, Tillman, Trowbridge, and Tupper.

Visitors: Betts, Butin, Seligman, Preston, Woolf, and Mr. J. D. K. Perry of the "Republican" staff.

Dr. C. Mathewson gave a short talk about his visit recently to Los Angeles in regard to the plague situation, and asked this society to give its support to the Board of Health in asking for \$5000 for rat eradication in Fresno.

Dr. Luckie moved, Dr. Kjaerbye seconded, that this body, through its board of governors, endorse the request of the Board of Health for \$5000 for ridding the city of rats.

The following letter was sent Mayor Hart, in regard to the last-named affair:

"Hon. T. G. Hart, Commissioner of Public Health and Safety, City Hall, Fresno, Calif.

Dear Mayor Hart—The board of governors of the Fresno County Medical Society, meeting December 20, 1924, do hereby endorse most heartily the request of the Board of Health of Fresno for \$5000 for a campaign against rats, as this is the most efficient means of preventing plague in human beings, and so avoid, if possible, an epidemic of plague such as occurred recently in another city in California.

Respectfully yours, John D. Morgan, M. D.; D. H. Trowbridge, M. D.; W. W. Cross, M. D.; W. P. Miller, M. D.; E. J. Couey, M. D.; Frank Tillman, M. D. By T. Floyd Bell, secretary."

Dr. M. S. Woolf of San Francisco gave an instructive and interesting paper on "Ulcerative Colitis." He said that this is a rare disease, of non-specific etiology as far as known, but often associated with streptococci. It was just described as an entity in 1883. It is almost always fatal if no surgery is used, while almost 80 per cent are cured by surgery unless very far advanced. The ulceration usually begins in the rectum, and a sigmoidoscopic examination is invaluable. It usually ascends and involves the whole colon and stops at the caecum. Patients die from anyloid disease and perforation. The symptoms are many: watery, bloody, mucous stools, with some cramps. These patients suffer great thirst. Remissions are typical and may last for years. The diarrhoea is very severe. Differential diagnosis must be made from amebic infection and bacterial infections, such as tuberculosis or typhoid. The surgical treatment consists in an early enterostomy. The paper was well discussed by Pettis.

The meeting of the board of governors of the Fresno County Medical Society was held in Dr. Morgan's office January 5, 1925. Those present were Cross, Couey, Miller, Morgan, Tillman, Trowbridge, and Bell.

Dr. Trowbridge moved, Dr. Miller seconded, that a committee of three be appointed to confer with the City Commissioners in regard to a rat campaign and to insist that an appropriation of \$5000 be made for this work. Carried. Drs. Cross, Trowbridge, and Pettis appointed.

Dr. Miller moved, Dr. Trowbridge seconded, recommending that the secretary's annual report be accepted. Carried.

Dr. Miller moved, Dr. Tillman seconded, recommending that Dr. O. W. Steinwand be placed on the honorary list.

The regular meeting of the Fresno County Medical Society was held January 6, 1925, at the nurses' home of the General Hospital. There were twenty-six members and ten visitors present. Members: Aller, Anderson, Bell, Burks, Couey, Cross, Diederich, James, Jorgensen, Konigsmacher, Kjaerbye, Manson, Mathewson, Miller, Milholland, Nedry, Peterson, Pettis, Sciaroni, Sheldon, Stein, Tillman, Tobin, J. R. Walker, Wiese, and Willson. Visitors: Drs. Pierce, Charles Brown, Phillip, Dick, and internes at the General Hospital.

The minutes of the previous meetings were read and approved.

The application for membership of N. J. Dau of Fresno

was read and ordered placed in the proper channels for action.

O. P. Pisor of Monmouth was unanimously elected a member, having been passed on favorably by the board of censors and the state secretary.

The following officers for 1925 were elected unanimously, no offices for 1925 being contested: President, A. E. Anderson; first vice-president, W. G. Milholland; second vice-president, Charles A. James; secretary, T. Floyd Bell; assistant secretary, J. A. Montgomery. Delegates: T. F. Madden, H. J. Craycroft. Alternates: B. Lamkin, R. B. Tupper. Board of governors, W. P. Miller.

The secretary's annual report was read and adopted.

Madden moved, Tillman seconded, that O. W. Steinwand be placed on the honorary list.

George Warren Pierce of San Francisco gave an illustrated talk on Plastic Surgery. He said that plastic surgery was much advanced, due to disfiguring and incapacitating wounds of the Great War. Plastic surgery is a crude way and dates back to ancient times as far as 3000 years ago. It was done by the tile craft then. Probably two things have advanced plastic surgery more than anything else in the last few years. They are the tubular and Esser skin grafts. Dr. Pierce showed lantern slides, demonstrating the use of such grafts.

A buffet luncheon was served after the meeting.

A meeting of the board of governors of the Fresno County Medical Society was held January 8, 1925, in Dr. Anderson's office.

Those present were Cross, Couey, Anderson, and Bell.

Miller moved, Cross seconded, that the secretary be authorized to complete arrangements for a speaker to come here in regard to the plague situation and appear before the luncheon clubs; also to prepare leaflets for distributors. Carried.

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KERN COUNTY

Kern County Medical Society (reported by W. H. Moore, secretary)—The annual banquet of the Kern County Medical Society was held at the Elks Club, Bakersfield, December 18, 1924, and the following officers were elected for the succeeding year: William H. Moore, president; A. W. Moodi, vice-president; K. S. McKee, secretary-treasurer; P. J. Cuneo, censor; F. A. Hamlin, delegate; and F. J. Gundry, alternate. The society fixed the dues for the coming year at \$17.

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MARIN COUNTY

Marin County Medical Society (reported by J. H. Kuser, secretary)—The annual meeting of the Marin County Medical Society was held on December 18, 1924, in Doctor Jones' office in San Rafael. Present: Dufficy, Jones, Clark, Hund, De Lancey, Kuser. Annual dues were fixed at \$11.

Officers elected for 1925 were: President, H. O. Hund; vice-president, W. F. Jones; secretary, J. H. Kuser. Trustees: H. O. Howitt, J. H. Kuser, H. O. Hund. Delegate, R. G. Dufficy. Alternate, C. A. De Lancey.

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MONTEREY COUNTY

Monterey County Medical Society (reported by Wiley Reeves, secretary)—At the annual meeting held on December 5, 1924, the following officers were elected for the year 1925: William Rollin Reeves, president, W. H. Bingaman, vice-president; E. Wiley Reeves, secretary; T. C. Edwards, treasurer.

The delegates for the 1925 convention are: Delegate, E. Wiley Reeves. Alternate, W. N. Bingaman.

Dues of the Monterey County Medical Society were fixed at \$12 per member, which includes both state and county society dues for 1925.

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SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by G. J. Hall, secretary)—The regular annual meeting of the Sacramento Society for Medical Improvement was held December 16, 1924, President Dr. Drysdale presiding. Members present, 33.

The minutes of the last annual meeting not at hand, secretary apologized for his delinquency.

Dr. Drysdale, in making the board of director's report, touched upon the important points of the meetings of the past year. Briefly outlined, his paper reported that: 1. Business is not interesting to members. 2. Scientific papers read by local men are most productive. 3. Discussion previously programmed is most active. 4. Interesting cases were reported. 5. There was only one outside speaker during the year. 6. Meeting place discussed. 7. Annual banquet. 8. Eulogy expressed on death of Dr. J. W. James.

S. E. Simmons and George Joyce Hall were appointed to draft a resolution on the death of Dr. J. W. James, to be spread on the minutes and a copy to be sent to Mrs. James.

Secretary's report was read and placed on file.

Drysdale, Cress and Scatena, Dillon, Harris and Dunlap were elected as directors.

Drysdale and Dunlap were elected as delegates; Doctors Hale and Jones as alternates. Dr. Thomas was elected secretary.

It was properly moved and seconded that the dues for the coming year be \$15. Carried.

Letter of Dr. J. M. Hamblin, in regard to Industrial Accident fees (addressed to Dr. C. B. Jones), was read to the society and discussed by Dr. Parkinson.



SAN BERNARDINO COUNTY

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—The society met at the San Bernardino County Hospital, January 6, 1925. There were 31 members present, 55 absent, 10 guests.

B. R. Davidson of San Bernardino was admitted to membership.

The program was as follows: "Report of a Case of Abdominal Pregnancy, With Brief Discussion"—E. L. Tisinger. Discussion opened by H. W. Mills. "Ectopic Pregnancy"—C. G. Hilliard. Discussion opened by Philip Savage. "The Posterior Occiput Position"—Norman H. Williams, Los Angeles. Discussion opened by H. G. Hill.

The society will endeavor to keep on hand such sera as cannot be procured at short notice from commercial sources. These sera will be kept at the County Hospital for use by any member of this society. Through the courtesy of the Department of Health of New York, we have five bottles of Type A and ten bottles of Type B botulinus serum. Through the Mayo Clinic, we have a small supply of anti-poliomyelitis serum. Attention is directed to the necessity of using the above at the earliest moment. In March we have been promised a tube of rattlesnake anti-venene.

The president has appointed the following as a radio committee: C. L. Curtiss, C. F. Whitmer, and F. F. Abbott.

The secretary acknowledges a communication from the Sophomore Medical Class of Loma Linda, thanking the medical society for inviting them to attend Dr. Pinness' clinic.

Dues for the ensuing year are now payable and are fixed at \$15, \$10 of which goes to the state society.



SAN DIEGO COUNTY

San Diego County Medical Society (reported by George B. Worthington, secretary)—The annual meeting of the San Diego County Medical Society was held at the San Diego Hotel at dinner December 9, 1924. The meeting was well attended, and was presided over by Doctor Thornton. An invitation to hold the January meeting at Camp Kearny was extended by Major Simpson, chief of staff, and was accepted.

The following officers were elected for the ensuing year: President, G. B. Worthington; vice-president, T. F. Wier; secretary, C. O. Tanner; treasurer, W. O. Weiskotten. Councilors: Marjory Potter, H. S. Anderton, E. F. Chamberlin. Delegate, Martha Welpton. Alternate, Lillian Mahan. Milk Commission: H. A. Barclay, five years; L. R. Knorr, four years; W. W. Russell, three years; T. A. Parker, two years; A. B. Wessells, one year. Library directors: Frank Carter, Eager, Geistweit, Howard, Jennison, Jorgenson, Kyes, Murdock, Pollock, Redelings, Rees, Stallard. Secretary-treasurer, W. O. Weiskotten.

The question of the formation of a publicity bureau

was brought up by Thornton, and, after full discussion, an assessment of \$10 was levied "to cover the expenses incident to the publication in the San Diego Union of regular weekly articles, in the nature of educational propaganda, which will be able to give the people as a whole a better insight into what medicine is doing and what it is trying to accomplish for the good of the community." A full discussion of this plan appears in the bulletin of the San Diego County Medical Society of December 19.

Doctor P. B. Magnusen of Chicago gave a most interesting, instructive and practical talk, well illustrated with lantern slides on non-surgical types of backache. His paper was discussed by Doctors Fox, Harding, Churchill, and Doig.

At the conclusion of the program, Thornton thanked the officers and members of the medical society for their co-operation and help during the year 1924, and commented particularly on the great efficiency of the program committee.

Mercy Hospital—The fine new million-dollar hospital, financed, constructed, and conducted by the Sisters of Mercy, is now open and serving the people of San Diego. An illustrated description of the hospital, prepared by Doctor Robert Pollock, appears in *Better Health* magazine.



SAN FRANCISCO COUNTY

San Francisco County Medical Society (reported by J. H. Woolsey, secretary)—The January bulletin of the San Francisco County Medical Society contains the following interesting news:

Radio Medical Talks—The San Francisco County Medical Society has consummated an arrangement with the broadcasting station of the Radioart Studio, Station KFRC, to radiocast health talks and medical information.

Any member of the society may apply to the radio committee for placement on the radiocast program. The names of speakers, their introduction, the subject matter of talks, etc., are all subject to review by the radio committee two weeks before talk is to be given.

KFRC has, to date, broadcasted the following medical talks by members of this society:

September 26, 1924—Outline of health service. Joseph Catton.

October 1, 1924—How other sciences have helped medicine preserve health. E. S. Kilgore.

October 8, 1924—The doctor's biggest job (warding off old age). A. C. Reed.

October 15, 1924—Care of common skin affections. H. E. Alderson.

October 22, 1924—How to live longer. S. H. Hurwitz.

October 29, 1924—Making healthy minds in childhood. W. P. Lucas.

November 5, 1924—Getting thin. Rene Bine.

November 12, 1924—How to avoid cancer. A. R. Kilgore.

November 19, 1924—How prenatal and postnatal care make for future health. W. C. Hassler.

November 26, 1924—How child guidance clinics prevent future failures. R. L. Richards.

December 3, 1924—Why heart disease has become one of the main causes of death. P. K. Brown.

December 10, 1924—How to avoid contagious diseases. A. A. O'Neill.

December 17, 1924—Reconstruction of body parts through plastic surgery. G. W. Pierce.

These talks should take about ten minutes. They are given on each Wednesday evening at about 9 o'clock from the broadcasting station of the Radioart Studio, located at the Hotel Whitcomb.

Advertising Cards of Physicians—The board of directors desires to communicate to the members that it is against the policy of the society to place professional cards in so-called lay directories and other publications serving similar purposes.

The officers elected for the year 1925 are: President, LeRoy H. Briggs; first vice-president, J. F. Cowan; second vice-president, Adelaide Brown; secretary-treasurer, J. H. Woolsey; librarian, Leo Eloesser. Board of directors: Rene Bine, W. W. Boardman, W. R. P. Clark, H. W.

Gibbons, Sol Hyman, William Ophuls, and R. K. Smith. Delegates: W. R. P. Clark and E. S. Kilgore. Executive committee: M. R. Gibbons, chairman; W. J. Kerr, and H. G. Mehrrens. Committee on admissions: Lloyd Bryan, chairman, K. L. Schaupp, and F. H. Zumwalt.

At the meeting of the Eye, Ear, Nose, and Throat Section of the San Francisco County Medical Society on November 25, 1924, the following officers were elected for the ensuing year: Chairman, Otto Barkan; secretary, Warren D. Horner.

The program was as follows:

1. Demonstration of case of intra-ocular copper foreign body—Kaspar Pischel.

2. Paper: "Further Observations on the Use of Adrenalin in Glaucoma"—Kaspar Pischel.

Synopsis—Doctor Pischel, speaking on further observations on the use of epinephrine in glaucoma, pointed out that epinephrine is the official name of the drug; adrenalin is a proprietary name. The solution on the market contains a small amount of chloretone.

Pischel, in relating his own experience in eighteen cases, stated that, in simple and chronic glaucoma, the pupils were always dilated and the tension lowered in complicated cases. Where operation had been performed the results were not uniform.

The dilatation of the pupils is very desirable for ophthalmoscopic examination and in cases of iritis. In the latter cases the injection causes considerable pain. Dr. Pischel then showed a case of glaucoma apparently caused by a piece of copper being lodged in the ciliary body for the last twelve years. It had produced the so-called sunflower opacity of the lens. The greenish opacity of the lens is caused by deposition of copper salts between the capsule and the epithelium. Fundus showed total excavation of disc. Tension was reduced by adrenalin injection of 0.3 from 43 to 30. The pupil, 3 mm., was dilated to 8 mm. The sight was 2/30; field very much contracted. (An attempt to remove the foreign body failed. Cyclodialysis done immediately after this attempt did not reduce the tension; therefore, iridectomy was made several days later.)

Discussion by Dr. Hans Lisser—It is interesting to hear this report, which provides another example of the extraordinary pharmacodynamic powers of this remarkable drug adrenalin. It occurs to me that its action in reducing intra-ocular tension, as in glaucoma, bears some similarity to its potency in angioneurotic edema, in giant urticaria, or in the urticaria of serum sickness, where swellings are made to vanish with amazing rapidity.

This beneficent action of adrenalin does not necessarily permit the deduction that we are dealing with an adrenal insufficiency, in the endocrine sense of this term. From this therapeutic effect alone we are not justified in concluding that glaucoma, or, for that matter, asthma or angioneurotic edema, are ductless gland diseases. We could as well diagnose hypopituitarism during labor, since injection of pituitrin hastens expulsion of the fetus.

Nevertheless, an incretory participation either in the origin or sudden appearance of glaucoma is not unlikely. Indeed, such a conception has been supported by several considerations and advanced by several authors. Imre has even suggested determinations of intra-ocular tension as a diagnostic aid in endocrine diseases (this requires further study). Hertel found that patients with hyperfunction of the thyroid have low intra-ocular tension, and patients with glaucoma have signs of hypofunction of the thyroid. In a case of pregnancy, complicated by osteomalacia, Imre found an extraordinarily low tension of 5 mm. Hg., lower than that of a cadaver. Fridenberg considers glaucoma from the endocrinological point of view as an exudative or hypersecretory disturbance due to sudden failure of vagus tone under sympathetic irritation.

In any case, no final judgment is possible at present as to the role played by the ductless glands in the pathogenesis of glaucoma. Experiments are much to be desired that would forge a binding chain of evidence between such disconnected links as endocrine activity, vagotonia, sympatheticotonia, protein sensitivity, acidosis and calcium deficiency as exemplified in asthma, hay-fever,

rhinorrhoea, urticaria, angioneurotic edema, glaucoma, and migraine and epilepsy.

Dr. W. S. Franklin suggested that the injection should not substitute operative measures which accomplish their object in a large number of patients.

Dr. Otto Barkan—We have tried glandular extracts in a number of cases of glaucoma without results. In one case of glaucoma associated with a vascular neurosis, hypodermic injections of adrenalin lowered intra-ocular tension for from several hours to a day. We have found that subconjunctival injection of adrenalin is particularly useful in iritis with secondary glaucoma, inasmuch as it lowers tension and dilates the pupil at the same time.

Dr. George Hosford—We have had essentially the same results as Dr. Pischel on cases at the University of California clinic.

Dr. Pischel, in closing, stated that injection is no substitute for operations in glaucoma, but is a great help for the control of glaucoma in its different stages, and also as a preliminary to operation or to examination.

3. Paper: "Further Observations in the Use of Thyroid in Incipient Cataracts"—George N. Hosford.

Synopsis—Twenty-four patients with senile cataract of various degrees of maturity were treated over a period of from three to twelve months with thyroid substance (Armour) in doses of from 3 to 6 grains.

Fifty per cent of the patients showed improvement of 0.1 or more. Thirty-seven and one-half per cent showed no change, while 8 per cent became distinctly worse. One case improved in one eye and became worse in the other. The greatest improvement obtained was from 0.3 to 0.6. This was in a man of thirty-eight, who took large doses over a long period. In one patient not included in the above series, a man of forty-seven, with incipient cataract in both eyes, had a needling done in the left eye six months before we saw him. The absorption of lenticular material seems to have been remarkably accelerated by thyroid substance in doses of 3 to 6 grains per day. In two patients with secondary cataract, the results were negligible. We intend now to try pure thyroxin and also parathyroid substance. Discussion was opened by Dr. W. J. Kerr.

Dr. Hans Lisser stated that Hosford's admirable paper deserves hearty commendation. No flamboyant claims are made; it exemplifies a sincere effort to arrive at truth by thorough methods of study. Determinations of the metabolic rate are desirable if for no other reason than to discover in which patients an actual thyroid deficiency is being supplemented by the thyroid extract administered. In those patients with normal rate, the beneficial action would have to be interpreted as that of a tissue stimulant, a metabolic tonic. We have by no means exhausted the possibilities of thyroid therapeutics as a general tonic, in which respect it is far more potent than iron, quinine, or strychnine, though it must be used with exceeding care. I am not inclined to think that any of the improvement noted was due to a possible admixture of parathyroid material. We are only certain of one clinical entity due to parathyroid insufficiency, namely, tetany, and there are no authentic instances where this condition has been relieved by the use of any of the commercial parathyroid preparations available. Parathyroid extracts in the treatment of tetany are in the same position that pancreatic extracts were in the treatment of diabetes before the discovery of insulin. Their use was logical, but they were impotent. When an active parathyroid extract is discovered its trial in the treatment of cataract will be indicated, since cataract is an important complication of tetany, and has been experimentally produced in animals (Erdheim) by removal of the parathyroids.

It is indeed true that trophic degenerations affecting the skin, hair, teeth, nails and lens are characteristic of senility, quite in the same way as are thickenings of arteries and degenerative changes in kidney, brain, and heart. Is it sound reasoning to assume that these gradual gradations of decay are due to endocrine disease and, therefore, amenable to organotherapy? Is it not more reasonable to believe that the ductless glands are sharing in the aging process in the same degree and simultaneously with all other tissues of the body? Is it sound practice to attempt to whip the weary old horse into a ridiculous

and dangerous gallop? Might it not prove to be his last spurt when he might have walked for some time longer?

This is no criticism of the use of thyroid extract in cataract except as it may suggest a distinction between the true senile cataract of good old age and the cataract of a premature senility. And herein lies the kernel. A premature senility, a cataract between 30 and 50 years of age, is quite a different matter. Such premature decay is most likely due to disease processes of thyroid, pituitary or gonads, that have aged the glands before their time. Here most certainly do we have indication for glandular therapy. Meanwhile a judicious trial of thyroid extract in the treatment of cataract, in conservative dosage, under very careful supervision, may prove worth while, as indicated by this excellent preliminary paper. Both Dr. Kerr and Dr. Shepardson deserve credit for their important share as physicians in aiding the study and observation of these patients.

4. Paper: "Submucous Resection Without Packing"—Rea E. Ashley.

Summary—Since operation of resection of the nasal septum was first described, various methods and materials have been used to keep the flaps in apposition and to prevent hematoma.

The three most popular methods are: 1. Packing (innumerable materials have been used). 2. Use of metal clips. 3. No packing whatever.

This paper deals with the last method, giving technique and reporting eighty cases done without packing.

Summary—1. It is not necessary to pack. 2. Results are just as good or better without it. 3. Convalescent time is cut down. 4. Patient is much more comfortable. 5. There is less danger of complications.

Dr. Wallace Smith stated that he always uses Bernay Simpson tampons. He sees no particular advantage in not packing.

Dr. A. C. Gibson agrees with Dr. Ashley. For three years he has not packed a nose except in one case of an anomalous artery crossing the sphenoid. Other discussants were Drs. Pischel, Fletcher, Price, and Ashley.

St. Joseph's Hospital Staff, San Francisco, was addressed on January 14 by Sister Dionysia, directing dietitian, on "The Aims of the New Dietetic Department." Dietetics was declared a factor in preventive medicine and food idiosyncrasy discussed. Investigative methods described were dietary study, respiratory quotient, carbon and nitrogen determination and calorimetric estimation—the last being stressed—and all showed striking consistency. Two thousand to 3300 calories daily, according to muscular exercise, was declared sufficient. Construction of diet is determined by the patient's weight, height and condition, and on a maintenance diet there is some gain in weight. Preliminary laboratory examinations and a test diet are required. Special diabetic, nephritic and other therapeutic diets are ordered by the doctor and the dietitians care for it in the diet kitchen. The tray is carried to the patient by the nurse in the diet kitchen, nothing being added by any Sister or nurse. The foods are weighed before and after eating. New diet charts were explained, the principle being to individualize the dietary, as is done for each patient in any other branch of medicine and surgery. A stubborn case was quoted in which the patient could not be made sugar-free until it was discovered that he was taking sugar-coated pills.

Dr. R. M. H. Berndt presented a case history of a patient with nephritis and cardiovascular complications.

Dr. E. C. Fleischner spoke on "Indications and Contra-indications for Tonsillectomy." He divided children into two groups—those under 5 years and those over, stating that in the younger the lymphatic tissues of the tonsils are more active in developing immunity, and there should be more definite reasons for removal. Redness of the anterior pillars and small granulations at the reflection of the mucous membrane from the anterior pillars to the uvula are definite signs of disease and disappear after tonsillectomy. Simple hypertrophy is often nature's way of increasing the bactericidal power of the tonsil and, unless it obstructs breathing, should not prompt removal. Deep abscesses in the tonsil are indications for removal, as are also involvement of regional lymph glands and a

history of diseased tonsils, malnutrition without other cause, otitis media, repeated upper respiratory inflammation, chorea, erythema nodosum, acute arthritis, if teeth are good, and repeated follicular tonsillitis or quinsy. Do not operate, ordinarily, during acute diseases, even cervical adenitis. An exception is a monarthrititis—if teeth are good. When the resistance is lowered by acute lesions, tonsillar infection tends to cause septicemia, while after the resistance is regained the lesions remain localized. Endocarditis, if chronic and not due to other focus, especially with glands, and acute hemorrhagic nephritis following tonsillitis after the nephritis has subsided, justify tonsillectomy. Under 5 years tonsillectomy is in order with repeated otitis media or tonsillitis, acute arthritis (monarticular), and obstruction to breathing. Simple hypertrophy, even with lymph glands, should be delayed to a later age, when the function of the tonsil is not so necessary. Roy Parkinson opened the discussion and advised tonsillectomy for diphtheria carriers and hoarseness also, and compared the merits and demerits of the operation. Ethan Smith gave some of the failures from it in joint lesions. Harold Wright touched upon tuberculosis as an indication and contra-indication. E. C. French mentioned asthma with negative protein reaction as an indication. He also reported upon St. Joseph's Hospital clinic, and H. B. Dixon stressed the need of social service for it.

The program for February 11 follows: "Post-operative Cardiac and Pulmonic Therapy," A. W. Hewlett; and "Treatment of Surgical Post-operative Complications," C. A. Walker.

Sisters Appreciate Doctors' Aid—The Sisters of St. Joseph's Hospital deeply appreciative of the favor shown them by the hospital staff in voluntarily assisting them in giving the hospital publicity in the advertising pages of CALIFORNIA AND WESTERN MEDICINE and Better Health, wish to express their gratitude to all for their manifestation of loyalty to St. Joseph's Hospital. The Sisters hope that the doctors' work may be blessed with success throughout the year, which they feel will be a happy one for all.

Southern Pacific General Hospital Clinical Meeting (reported by W. T. Cummins, secretary)—The regular monthly meeting was held at the General Hospital, San Francisco, on Wednesday, January 7. Subject: "Diseases of the Thyroid."

1. Medical Aspect—Hans Lisser illustrated a number of cases of thyroid disease, including goiter, myxedema, etc., and spoke of specific medication in each, with especial reference to the effect of iodine in goiter. The associated pathology of other endocrine tissues was discussed. Obesity in pre-adolescent life was commented upon as being probably always of endocrine origin.

2. Surgical Aspect—Wallace I. Terry spoke of the early determination of goiter districts in consequence of the deficiency of iodine in the formation of the superficial stratum of the earth's surface. He reviewed the technique of operation and discussed the different phases of the pathology of the thyroid gland, including hyperplasia, adenoma, carcinoma, and thyroiditis. Much stress was laid upon the value of iodine, as Lugol's solution or some other assimilable iodide, in conjunction with operative procedure.

3. Projectoscopic Demonstration of Specimens—Edwin I. Bartlett demonstrated a large number of slides illustrative of the various types of thyroid disease. The importance of the consideration of the gross pathology with the microscopic was emphasized. The infrequency of sarcoma was noted.

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SANTA BARBARA COUNTY

Santa Barbara Cottage Hospital—The fourth annual clinic day of the Santa Barbara Cottage Hospital was given by the staff on Monday, January 12, 1925. The morning session, from 8 to 12, was devoted to an Eye, Ear, Nose, and Throat Clinic, and also a Major Surgical Clinic. After a luncheon, served at the hospital, the Medical Clinic held an afternoon session in the new staff room.

An interesting program, following the annual dinner of the Santa Barbara County Medical Society at the Hotel Carrillo, completed the day.

YOLO COUNTY

Yolo County Medical Society (reported by John D. Lawson, secretary)—The quarterly meeting of the Yolo County Medical Society was held in the reception room of the Clinic Building, Woodland, on January 6.

The following officers were elected for 1925: President, Thomas E. Cooper, vice-president, Moses W. Ward; secretary-treasurer, John D. Lawson; delegate, Fred R. Fairchild; alternates, W. E. Bates and M. W. Ward. Dues were fixed at \$12.

E. Eric Larson, associated with the Mayo Clinic for the past four years, is now connected with the Woodland Clinic staff, in the Department of Urology and Surgery.

The Woodland Sanitarium has just acquired a half block of property facing the present building on the south. Plans for further expansion are now under consideration.

H. D. Lawhead was reappointed County Physician and Health Officer for 1925.

At a special meeting held October 23, 1924, the following motion was unanimously adopted: "All patients are to be charged regular office rates for prophylactic smallpox and diphtheria measures, except indigent cases, which are to be cared for by county health officers, with the assistance of members of the society." There was considerable discussion on this subject, in view of the large amount of free prophylactic treatment which has been given previously, it being felt by the members that the physicians should give no more free service, except in indigent cases, than in any other type of medical practice.

Clinics have been inaugurated by the Woodland Clinic staff: Children of pre-school age, Tuesday, 2 to 4; school age, Thursday, 2 to 4; adult free clinic, Wednesday, 2 to 5.

Doctors C. H. Fairchild and Fred R. Fairchild are on a two months' leave of absence. Both are engaged in special work in the East and Middle West.

The monthly clinical conference of the Woodland Clinic was held in conjunction with the quarterly meeting of the Yolo County Medical Society. The following papers were presented: "Treatment of Sprains, Bruises and Minor Injuries"—W. E. Bates; discussion opened by E. Eric Larson. "The Use of Nitrous Oxide in Obstetrics"—N. M. Salter; discussion opened by W. J. Blevins. "An Unusual Case of Pellagra"—F. P. McManus; discussion opened by J. Edward Harbinson.

Don't wait for your county secretary to dun you for medical society dues. They should be paid now.

CHANGES IN MEMBERSHIP

New Members—Eugene H. Hull, J. A. Patterson, San Bernardino; Edgar C. Lee, San Diego; Walter E. Whalen, K. S. Davis, Zoe M. Ruth, Los Angeles; D. L. Burgeson, La Habra; Reginald F. Grant, A. M. Moody, Isabella M. Clinton, San Francisco.

Transferred—Fred W. Loring, Albert G. Bower, from Fresno County to Los Angeles County; Eugene W. Whitney, from Los Angeles County to San Diego County; William R. Dorr, from San Francisco County to Riverside County.

Deaths—Bridge, Norman. Died at Los Angeles, January 10, 1925, age 80. Graduate of Northwestern Medical School, Chicago, 1868, and Rush Medical College, Chicago, 1878. Licensed in California in 1891. Dr. Bridge was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Joseph Louis Howard. Died at Honolulu, December 29, 1924, age 55. Graduate of Cooper Medical College, California, 1900; Royal College of Surgeons, England, 1902; and Royal College of Physicians, London, 1902. Licensed in California in 1900. Dr. Howard was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Lewis, J. Perry. Died at Honolulu, December 29, 1924, age 58. Graduate of the General Medical College, Chicago, 1895. Licensed in California in 1896. Dr. Lewis was a member of the San Diego County Medical Society,

the California Medical Association, and a Fellow of the American Medical Association.

McArthur, Newbern Turner. Died at San Francisco, December 31, 1924, age 42. Graduate of Cooper Medical College, California, 1912. Licensed in California, 1915. Dr. McArthur was a member of the Napa County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Sewall, Charles Albert. Died at Los Angeles, January 7, 1925, age 75. Graduate of the University of Pennsylvania School of Medicine, Philadelphia, 1872. Licensed in California in 1899. Dr. Sewall was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

New Health Officers—John Anthony Azevedo, M.D. (Stanford, 1923) of Hayward has been appointed Public Health Physician of Alameda County. Doctor Azevedo is licensed to practice medicine in California, but is not a member of the California Medical Association.

Mr. Frank B. Wilcoxon has been appointed Public Health Officer of Pacific Grove. So far as we know, Wilcoxon is not licensed to practice.

Harry J. Willey, M. D. (Univ. Med. Coll. Mo., 1904), of Porterville has been appointed Public Health Physician of that city. Doctor Willey is licensed to practice medicine in California, and is a member of the California Medical Association.

George Parrish, M. D. (Missouri Med. Coll., 1894), of Portland, Ore., has been appointed Public Health Physician of Los Angeles. Doctor Parrish has been licensed to practice medicine in California. He is a member of the Oregon Medical Association.



J. PERRY LEWIS, M. D.
1866-1925

When word was received in San Diego during the holiday week that Doctor J. Perry Lewis had died in Honolulu, where he had gone with Mrs. Lewis and friends for

a brief vacation, it saddened the hearts of hundreds throughout Southern California, for Doctor Lewis was a popular and beloved man.

Temperamentally, he was an ideal physician and brought to bear upon the problems of a heavy practice a fund of rare qualities not acquired in college. Graduating in Chicago in 1895, he came to California the following year and has practiced continuously in San Diego since that time. Possessed of a genial and attractive personality, the outward expression of a warm Christian character, he rapidly became prominent in his profession and was soon confronted with the problem of how to take life more easily. For several years he had endeavored to lighten the burden by limiting himself to the specialty of diseases of the nose and throat; yet he had built up such a multiplicity of connections—social and professional—that this but partially lightened his load. He made time for golf—his chief recreation—which undoubtedly helped to keep him physically fit to “carry on”; but no constitution could forever withstand such demands upon it, and he died a martyr to his profession as surely as any more spectacular hero. He was an ex-president of the San Diego County Medical Society, being in office when last that organization entertained the state society. His quiet courtesy and pleasing greeting will be remembered for many a day by his fellow-members of the local profession.

R. P.

STIMULANTS, DEPRESSANTS, HUMOR

Apropos of an editorial in the last number of the Journal entitled “Doctor, Heal Thyself,” the epitaph on the slate tombstone of a Dr. Preston in the Colonial graveyard in Keene, New Hampshire, may interest you: “He healed others, himself he could not.”—Emmet Rixford.

A dorky called at a hospital the other day and said: “I came to see how mah friend Joe Johnson am getting along.”
“Why, he’s getting along fine,” the nurse answered; “he’s convalescing now.”
“Well,” said the dorky, “I’ll jest set down and wait till he’s through.”

“As an alumnus of our State Medical School I wish to enter a vigorous protest against some of the advice being given in a health service said to be conducted by a department of our school. I particularly resent the propaganda advising parents to take their children to “psychologists,” “child guidance clinics,” “habit clinics,” in preference to doctors who have been taught and licensed to practice.—San Francisco.

The Pathology of Osteopathy

“But, my dear, aren’t these osteopaths rather—I mean to say—intimate in their manipulations?”
“Oh, yes. I had to become engaged to him for the course of treatment!”—Judge.

“... I am enclosing a clipping from the so-called health column of a San Francisco newspaper. The author seems to think much of Bernarr McFadden, osteopaths, chiropractors and Christian scientists as doctors. Can anything be done about it?”—Sacramento.

Note—The important item of the clipping makes a comparison in mortality statistics from influenza as follows:

“The M.D.’s lost one case in sixteen, the osteopaths one case in 128, the chiropractors one in 300 approximately, while Christian scientists and naturopaths lost an even smaller percentage of their cases. I will not vouch for the authentic accuracy of these figures as given, but I know that these ratios obtained approximately, and I know that the more doping, serumizing, feeding and ‘treating’ of any kind given in acute diseases, the higher will be the death rate.”

No Competitors

“Who done make de best cord tire?”
“De Lord.”
“De Lord?”
“Sure! He done makc de spinal cord. Dey last a lifetime.”

“... the disgusting propaganda widely published recently as ‘news’ about the bloodless radio knife said to be so effectively employed at the U. C. Hospital is enough to make every doctor who has studied at that institution blush for shame.”—Oakland.

Utah State Medical Association

SOL G. KAHN, Salt Lake City.....President
WILLIAM L. RICH, M. D., Salt Lake.....Secretary
J. U. GIESY, 512 Felt Bldg., Salt Lake City,
Associate Editor for Utah

WHEN IS AN AD NOT AN AD?

The poor we have always with us. In that respect the poor are not unlike the doctor who tries to chase the devil of the dollar around the ethical stump. Shaving the line closely, he eschews a professional card in a daily paper with uplifted palm of horror, but he has a card on a hotel register, sandwiched between that of a laundry on one side and a popular-priced eating joint on the other. He—purely as a matter of fraternity—runs a similar card in the paper of some lodge or similar organization, and sits back to await, or at least to hope for, results. Ethically, maybe he can still get away with it. I don’t say he can’t. But in this day and age it smacks a bit of a mental state that should not characterize medicine of the highest type. And medicine should be high today, higher than ever in its aims and ideals. Long, long years ago it was said, “By their fruits ye shall know them.” And the best “ad” any medical man can use in his walk of life is *works*—the results of his endeavors to deserve the title he wears. Then may he be proud to wear it; then may it be to him a badge of distinguished service; then will he find little need to advertise in the commonly accepted understanding of the word.

PEDIGREED BUNK

Without taking a leaf out of Uncle Billy’s Whizz Bang, the phrase is not without application to the medical profession of the present day, and is largely the cause of the flourishing condition of the cults. Let us stop and take an inventory of ourselves. Barnum remarked that the public liked to be fooled. That’s bunk also, of course. The truth is that the public doesn’t like to be fooled, but that it doesn’t always know that it is being fooled, because the public doesn’t always know what it’s all about.

We as a profession are seeking to do good work. Nobody can truthfully challenge the fact, but, in our enthusiasm over our own advancements, our own investigations and endeavors, we are overlooking in a large measure the very thing that a few years ago made the old family doctor what he was—a man with a hold on his clientele, next only to that of the priest—friend and advisor as well as medical servant—wise man, kindly man, to be looked up to and given full trust.

Nowadays the average man at least tries to use his head. He likes to know what is being done to him or for him, rather than treated too much as an erudite problem in metabolism, which is a word conveying nothing to his intellect. Here it is that the cults get in their work and sell their pedigreed bunk. They at least make him feel that they are appealing to his intelligence. The assumption may be flattery, of course, but flattery is one way of selling the prospective buyer, none the less. Hence, it’s time that we as a profession got back to the old-time basis

of understanding co-operation between doctor and patient, insofar as the ideal may be obtained in the individual case.

Wise looks and reticence may appeal to the occasional man. He may be content to go forward in a childlike faith. But the majority will respond far better to an understandable explanation of what is being done for him, a brief and comprehensible exposition of what the medical profession is today actually doing for the race. Surely, we may tell of the real, the far-reaching results of our own work and progress, as well and as advantageously as the cults with their pseudo-science camouflaged in words.

Let's get back into the personal contact with our patients on the personal basis, drop the oracular attitude and sell ourselves as our grandfathers sold themselves and their profession to the multitude of loyal and trusting clients whom they served. After all, it is the personal element, the personal contact, that lies back of all real human associations from the cradle to the grave. Let's fight the pedigreed bunk of the cults with the living truth. Let's spend a few more words on the individual patient to win his intelligent, understanding confidence.

Utah Notes (reported by J. U. Giesy, associate editor for Utah)—The banquet scheduled for December 29, in honor of Doctor Salathiel Ewing, one of the oldest physicians in the state, was regrettably canceled, owing to the poor health of Dr. Ewing. He is past 90 years of age, and is in the hospital at present.

R. R. Hampton, councillor for the Second District, has resigned, on account of ill health. J. C. Landenberger of Salt Lake City was appointed by the council to fill Dr. Hampton's place.

Dr. William Rich returned from the meeting of the secretaries of the A. M. A. In his report he says:

"The program committee has asked me to give a brief report of the transactions of the last annual meeting of the secretaries of the Constituent State Medical Association held in Chicago, November 21 and 22.

"There were present thirty-seven state secretaries; twelve editors of journals and officers of the American Medical Association and board of trustees. The most important paper was presented by Frederick C. Warnsluis, secretary of the Michigan State Medical Association and speaker of the House of Delegates, who outlined a definite plan of action for 1925, which was approved by the board of trustees. Briefly, the plan was to formulate a better understanding of, first, The American Medical Association; its history and development; its plan of organization; Constitution and By-laws; its administration features, including its work and achievements; and the service it renders to the physician; and explanation in detail of its publications; of the requirements of fellowship and the benefits of fellowship. Second, the state society organization; its activities; its membership, qualifications and benefits. Third, the individual's responsibility to county, state and national organization; to fellow-practitioners; to the community and to humanity.

"To briefly review some of the things brought out in this paper and its discussion, one must begin with the unit of the national organization, the County Medical Society, of which there are 3047 in the United States. Some of these units have as few as four or five members and some as many as several hundred. But, each has certain officers; board of censors; various committees and members, and a constitution and by-laws. These units go to make up the various state associations. The state associations are organized the same as the county society, but have, in addition, a House of Delegates and councilors, representing councilor districts. The function of the council is to act as the executive body of the association between meetings of the House of Delegates.

"Its function is to aid in co-ordinating the work done by the county societies and through the work of its various committees to keep in touch with the needs of the

profession and humanity in the state. To hold annually a scientific meeting available to all members of the component county societies of the state and to transact such business as is vital to its well-being.

"In addition most of the state organizations publish a state journal, in which papers from the various county societies and the proceedings of the annual meeting, including the scientific papers, appear. The smaller states join together and two or three or four are represented by one journal, as is the case with us in Utah.

"The national organization is similar to the state organization and has its headquarters near the center of population. Like the state, it has its officers and board of trustees instead of councilors, a House of Delegates and various committees and bureaus and section officers, Fellows and members. It publishes and edits several scientific journals, owns its own buildings and equipment, which is worth over \$1,000,000. It is the largest and most powerful organization of medical men in the world. It has a membership of 90,000 members, 55,000 of whom are Fellows. It has a reserve fund of over three-fourths of \$1,000,000, and we ought to be proud of our membership in it.

"Probably the greatest piece of constructive work performed by the national organization is the work done by the Council on Pharmacy and Chemistry. Nostrums of a few years ago of the rank type have mostly disappeared. The aid of the council is now sought by investigators and manufacturers before they attempt to offer any medical product to physicians. The problem of this department is now more concerned with biologic products as therapeutic agents. This department, through the chemical laboratory, has aided greatly in the standardization of drugs. The activities of the propaganda department are far greater than at any time in its history. Thousands of letters from laymen, lawyers and doctors are received and answered by this department each year. This department has also conducted a clipping bureau and is furnishing articles to many magazines and journals whose subscriptions total over 1,000,000. It has furnished such journals with articles from Hygeia, and you will find them appearing regular every month in certain magazines. It has furnished educational posters, stereopticon slides for public health work in schools and colleges. It has also given the committees on scientific research certain grants in money to various institutions and physicians to aid in research. Sixty-one grants, amounting to \$1500 for 1923.

"The Bureau of Legal Medicine, which was created two or three years ago, is now in full running order and can give to county or state associations legal advice on medical subjects. This department, through Doctor Woodward, keeps the various state associations informed regarding national legislation affecting the profession. Like the state association, the national body holds an annual meeting in some city selected by the House of Delegates. Its scientific meetings are divided into sections representing the various specialties. All members may attend these meetings, but none but Fellows may hold office or participate in the deliberations of the assembly. It is possible some of you may not clearly understand the difference between fellowship and membership. If you join your county society you automatically become a member of the state association and the American Medical Association, but no part of your dues goes to the A. M. A. Therefore, you are not supporting in any financial way the national organization. But if you subscribe to any one of its publications a part of that subscription will go to fellowship dues, providing you make such known by filling out an application for fellowship. Many of you probably have the opinion that you must subscribe for the A. M. A. journal. That is not necessary, providing you subscribe for some other journal, such as the Archives of Otolaryngology, American Journal of the Diseases of Children, Archives of Neurology and Psychiatry; Archives of Internal Medicine, Archives of Dermatology and Syphilology, and Archives of Surgery.

"The national organization is also aiding the profession by way of educating the public through the public health journal, Hygeia. This seems to be not greatly appreciated by the profession, as only 14,000 out of 90,000 are subscribing for it. The journal has a circulation of about 30,000, and is published at a loss of over \$15,000 a year. This little journal was gotten up to fight our battles with humanity, and gives us a better standing in the com-

munity. It will help to keep away state medicine and help us to get better and more just laws. It will help us to make the cults impossible. It is excellent reading for any physician. It should be kept on the library table in every physician's and dentist's waiting-room. It should be in the hands of every school teacher, and some one of our profession should be present at every state teachers' convention to speak of its merits.

"The national organization will soon have completed arrangements to give post-graduate work to our county societies. The details have not been worked out, but the board of trustees has ordered the officers to prepare for it. Periodic health examination was urged by Dr. Albert E. Bulson. I want to say that if the county society does not perform this duty to the public, lay organizations will hire a physician for a comparatively small salary and make the examinations at a good profit for themselves. So we must keep this in mind and be prepared to take it up.

"The Utah State Industrial Commission affairs stand out as a bright and shining example to other states. You are all familiar with it, so the details will not be gone into. The board of trustees authorized the business manager of the association to provide an official automobile emblem that may be copyrighted and used by members of the A. M. A. only."

M. M. Critchlow, secretary of the Salt Lake County Society and members of the United States Veteran's Bureau of Salt Lake, has gone to U. S. V. Hospital No. 98, Castle Point, N. Y., to attend the Government School of Tuberculosis. A class of sixty men will be in attendance at this intensive course of instruction in tubercular conditions for a period of two months. During Dr. Critchlow's absence Lester J. Paul, director of the local Veterans' Bureau, will act as secretary of the Salt Lake County Society.

The state legislature is now in session. We understand that a bill is being prepared for presentation, giving the chiros the right to treat all industrial injury cases by the well-known procedure of twisting or otherwise assaulting the spine. If the legislature passes the thing, it will be one of the heaviest blows to the chiros ever dealt in the state. Time is a thing that both reveals and cures many things. In other words, it "adjusts" a great many badly adjusted affairs.

It might be of interest to the members not in the local vicinity to know that Salt Lake County Society has done much in the Industrial Commission activities, thereby helping to create a favorable feeling between the Commission and the profession in the state. The state society has been in the habit of appointing a board of three members to act as a board of review in association with the Commission for the purpose of passing on cases before the Commission for settlement. These members are necessarily drawn from the local society because of expediency due to their local residence, and all men serve without compensation, being appointed in rotation from the local society ranks. All this has resulted in a very friendly attitude, and we believe that it has done much to secure just settlements and general satisfaction during the last few years. This is a real service which those who serve on the board are rendering both to the profession and to the social structure of the community itself.

At this time the erection of an eight or ten-story professional building in Salt Lake City seems assured. The building committee has opened the books for subscriptions from the profession, and are meeting with encouraging success. Such a building is bound to come and will fill one of the greatest professional needs.

Seymour B. Young, M. D., 1837-1924—Dr. Seymour B. Young, pioneer physician of Utah, died at his home December 15, 1924. He had been in poor health for several months.

Doctor Young was born in Kirtland, Ohio, October 3, 1837, son of the late President Joseph Young and Jane Bicknell. His father was the elder brother of President Brigham Young.

He was graduated from the Medical College, New York University, in 1874, receiving the bronze medal as third honor student of his class out of a total of 208.

Dr. Young was probably the oldest college graduate in the state of Utah, a record in which he took great pride. His success as a physician is attested by the fact that hundreds of people tell of the great worth of Dr. Young

in years gone by as a man of medicine. No physician ever administered greater comfort to his sick than he did. His very spirit was one of happiness and hope.

James Monroe Dart, 1840-1925—Dr. James Monroe Dart, one of Utah's oldest practicing physicians, is dead, at the age of 85, at his old home in Roxbury, N. Y.

Dr. Dart came to Salt Lake City in September, 1881, from Elizabeth, N. J. At that time he had already been graduated for years from the College of Physicians and Surgeons in New York City, following that with studies in homeopathy, and had been practicing for a considerable time. He opened offices in Salt Lake City and soon enjoyed a large practice.

In addition to being a brilliant medical man, Dr. Dart was declared to have been unusually learned along other lines, having a vast fund of information on many subjects. Perhaps the outstanding thing about the decedent was his love for music. His hobby was collecting old violins. He was regarded as an expert on rare violins and corresponded with collectors of this instrument in all parts of the world. He always had a number of instruments in his possession and, while not a brilliant performer himself, could play creditably.

Weber County Medical Society (reported by R. L. Draper, secretary)—At the meeting of the Weber County Medical Society held at the Reed Hotel, Ogden, December 16, 1924, F. K. Bartlett presiding, the following officers and delegates were elected for the ensuing year: President, E. M. Conroy; vice-president, W. R. Emmett; secretary-treasurer, R. L. Draper. Delegates: Eugene H. Smith, Ezra C. Rich, E. P. Mills, F. K. Bartlett. Alternate delegates: Henry W. Nelsen, A. Z. Tanner, G. G. Moyes, L. S. Merrill.

Minutes of the Salt Lake County Medical Society (reported by L. J. Paul, acting secretary)—The regular meeting of the Salt Lake County Medical Society was held at the Salt Lake Chamber of Commerce, Salt Lake City, January 12, 1925, President John Z. Brown presiding. Members, present, 41; visitors, 3. Clinical cases, 2.

Burtis Robbins presented two clinical cases, showing the results of his plastic operations on the face with a unique apparatus designed to cover the defects caused by the loss of one eye. The apparatus is constructed attached to a pair of spectacles. He was assisted in its construction by Dr. Creed Hamand, dentist of this city.

The scientific program consisted of a paper by Joseph H. Peck on "Infectious Jaundice in Tooele County." He effectively outlined the subject from his own practice, showing the infectious nature, the great loss of time experienced by school children, and stated that it was endemic in Tooele County. No fatalities. Discussion by J. U. Giesy, S. D. Calonge, and H. S. Scott.

William L. Rich, secretary of the state association, gave an excellent report on the meeting of the secretaries of the constituent components of the American Medical Association. General discussion followed on the points mentioned in his report by S. H. Allen, T. F. H. Morton, E. F. Root, A. A. Kerr, S. D. Calonge, E. M. Neher, and James P. Kerby.

The subject of a full-time physician on the payroll of the state for work with the Industrial Commission was discussed at some length. It was decided, however, that our present plan of rendering free consultation and assistance to the State Industrial Commission was the most satisfactory. A motion by Fred Stauffer, to the effect that members of our society be paid for their services with the Commission, was lost.

Applications for membership were received from Alfred Blumberg and Edward Day and referred to the board of censors.

The following committees were appointed for the coming year:

Community Clinic—George W. Middleton, chairman; A. J. Hosmer, E. M. Neher, William L. Rich, Willard Christopherson, F. E. Straup.

Building—Fred Stauffer, chairman; E. F. Root, W. R. Calderwood, M. M. Nielson, H. P. Kirtley.

Public Health and Legislation—Sol G. Kahn, chairman; S. D. Calonge, T. F. H. Morton.

Library—W. R. Tyndale, chairman; B. E. Bonar, F. J.

Curtis, E. D. LeCompte, Joseph E. Jack, F. B. Steele, F. A. Goeltz, R. T. Richards.

Dr. Fred Stauffer reported on the subject of a banquet for Dr. Salathiel Ewing, who is now receiving treatment in a local hospital. It was moved by Dr. Stauffer that the money received to finance this banquet for our oldest honorary member be donated to Salathiel Ewing by the individuals contributing. Motion carried. The secretary was instructed to receive the contributions of all members willing to so divert their donations in this manner.

California Association of Physiotherapists (reported by Beret Stenvig, local secretary)—The uses of the mercury quartz lamp formed the subject of the meeting of the San Francisco branch of the California Association of Physiotherapists held on December 10 in the Medical building.

Dr. B. F. Deering spoke on its use in children's diseases, giving reports and conclusions on his work at the children's clinic at University of California Hospital. Bronchial conditions, asthma and undernourished children were among the cases which he stressed as showing interesting results from the use of the mercury quartz lamp. During the course of the treatments in all cases a close check is kept on these three points: weight, appetite, and relief of symptoms. A marked increase in weight and appetite has been gained in almost all cases. The general experience has been an improvement of symptoms after six or eight weeks of treatment. While no permanent and definite cures under the quartz lamp treatment have yet been established with asthma, there has been a decrease in the severity of the attacks and a decrease in the number of colds. His conclusion is that the mercury quartz lamp assists very materially in building up the child's resistance, a factor of great value in combating conditions of that type.

Miss Beulah Rader of the Marine Hospital, with a wide experience and a variety of patients from which to draw her conclusions, talked on quartz lamp technique and gave case reports on patients treated with the lamp.

The meeting of January 14 was devoted to a symposium on arthritis, with the discussion from three different standpoints. Dr. William J. Kerr spoke from the medical standpoint, Dr. H. H. Markel from the orthopedic, and Dr. Thomas J. Crowley from the electrotherapeutic.

Dr. Kerr gave a wide and interesting classification of the various types of arthritis with the medical treatments indicated. In addition, the treatment consists in seeking any foci of infection and removing it if possible, increasing the nutrition if underweight, and reducing if overweight.

Dr. Markel, in speaking from the orthopedic standpoint, gave detailed descriptions of all the various casts and methods of applying for inducing immobilization of a joint to relieve the pain. He also described some operative procedures where such were indicated and the methods and positions for ankylosing a joint when such was desired.

Dr. Markel and Dr. Kerr were of the same opinion, that physiotherapy, in the form of heat, massage and manipulations, was of great value in the treatment of arthritis after the stage of acute inflammation and pain had passed, to increase the nutrition of the tissues and prevent deformities and ankylosis. Dr. Markel emphasized the fact that physiotherapy in such cases should be employed with care and that manipulations preferably be given once only during the treatment and as much within the limits of pain as possible.

Dr. Crowley gave a different slant on the subject by discussing diathermy and galvanism. Both are given only after the chronic stage is reached. Diathermy is given daily for one-half hour, its benefits being in a hyperemia within the joint which results in increased metabolism. With galvanism, the effects are chemical. The positive pole is usually used because it is sedative in action and will introduce chemicals into the body at a given point. Along with this treatment he stressed the importance of accelerated elimination.

Nevada State Medical Association

W. M. EDWARDS, M. D., Mason.....President
CLAUDE E. PIERSALL, M. D., Reno.....
Secretary-Treasurer and Associate Editor for Nevada

Washoe County Medical Society (reported by Henry Albert, secretary)—The Washoe County Medical Society met in regular session in the rooms of the Chamber of Commerce January 13, 1925, President Vinton A. Muller presiding.

Program—Henry Albert presented a paper on "The Newer Knowledge Relative to the Etiology and Prevention of Scarlet Fever." He discussed especially the Dick test and immunization by means of toxin of the specific streptococcus. The paper was discussed by Tees, Morrison, Pickard, Lewis, and Robinson.

J. A. Fuller presented a paper on "The removal of Foreign Bodies From the Eye." In addition to the common forms of foreign bodies, he emphasized especially certain ones of local Nevada interest, such as sawdust and cactus spines. The paper was discussed by Robinson, Barrows, and Brown.

H. J. Brown presented a paper on "Post-Operative Treatment." Emphasis was placed on enemas instead of purging doses of castor oil. The treatment of shock, paralytic ileus and retention of urine was also considered. The paper was discussed by Lewis, Caples, and Bath.

Unfinished Business—Dr. M. A. Robison mentioned what progress was made in securing data as to the value of the work done under the Sheppard-Towner Act. He also stated that the defects in the hospital bill which passed the last legislature, but which was declared unconstitutional, had been remedied, and that the corrected bill would be again introduced in the coming session of the legislature.

New Business—The following visiting staff (to serve for one year) for the State Hospital was appointed by the president: Donald MacLean, surgeon; S. K. Morrison, physician; J. L. Robinson, otologist and rhinologist; C. E. Piersall, roentgenologist; W. L. Samuels and M. A. Robison, anesthetists.

Attendance—Members: Albert, Barrows, Bath, Brown, Caples, DaCosta, Fuller, Lewis, Morrison, Muller, Pickard, Piersall, Robinson, Robison, Servoss, and Tees. Guest: Professor Peter Franssan.

New Committees of Nevada Medical Association (reported by C. E. Piersall, associate editor)—The following appointments were recently made by the president-elect of the Nevada State Medical Association:

Membership—B. Brown, Yerington; A. C. Olmsted, Wells; C. C. Bullette, Las Vegas.

Judicial—M. A. Robison, Reno; R. A. Bowdle, Ely; A. J. Hood, Elko; A. R. Craig, Tonopah; Horace J. Brown, Reno.

Scientific Work and Program—V. A. Muller, Reno; J. C. Ferrell, Fallon; A. Huffaker, Carson City.

Necrology—Mary H. Fulstone, Smith; Donald Maclean, Reno.

Council—S. K. Morrison, Reno; A. L. Stadtherr, Reno; Hal L. Hewetson, Las Vegas; P. D. McLeod, Tonopah; J. T. Reese, Yerington; William Brennen, Eureka; William Howell, Gardnerville; Charles E. Sweezy, Winnemucca; F. M. West, Lovelock; M. J. Rand, Ely; William Riley, Gold Hill.

Entertainment—C. E. Secor, Elko; W. A. Shaw, Elko; J. R. Eby, Elko.

Public Health and Education—Henry Albert, Reno; W. A. Shaw, Elko; M. R. Walker, Reno.

Military Affairs—The president, vice-president, and secretary.

California Board of Medical Examiners

(Reported by C. B. Pinkham, Secretary)

The judgment of the Federal Court in Sacramento, which some months ago sentenced Stuart N. Coleman, M. D., to five years of hard labor in the federal penitentiary, following his conviction of a violation of the narcotic law, was upheld by the United States Circuit Court of Appeals, and as a result Dr. Coleman must serve the sentence imposed. A hearing has already been held before the Board of Medical Examiners to show cause why his license to practice in California should not be revoked, and final disposition will be effected at the February, 1925, meeting.

Gertrude Steele, licensed in California by the 1909 Act as a naturopath, reported fugitive on a Los Angeles manslaughter charge, which is alleged to have arisen following the death of one of her "beauty patients," has been served with a citation by publication, calling her before the Board of Medical Examiners at the February, 1925, meeting to show cause why her license to practice in California should not be revoked. According to recent information, she has been located in Oberhausen, Germany. The records of the board show that other deaths are alleged to have followed her "beauty treatments." Not long since, a Los Angeles Superior Court was reported to have handed down a judgment for \$2500 damages, and at about the time of Gertrude Steele's sudden departure for parts unknown a suit for damages for \$50,000 was reported filed in the Los Angeles courts, each as the result of her so-called "beauty treatment."

Leon Hurwitz, licensed to practice in this state several years ago on diploma, reported confined in the federal penitentiary, Leavenworth, Kan., November 1, 1924, under sentence of three years, has been served with a citation to show cause why his license should not be revoked at the February meeting, based on his conviction of violation of the Harrison Narcotic Act.

James W. Richards, who recently plead guilty in the Federal Court of San Francisco to a charge of violation of the Harrison Narcotic Act, and sentenced to two years' imprisonment in the federal penitentiary at Leavenworth, Kan., has been cited to show cause why his license should not be revoked at the February meeting based on his record of conviction. Dr. Richards is alleged to have forged the name of a San Francisco physician to a prescription for narcotics.

A complaint has been filed with the board, charging Joseph Sanford, D. C., licensed as a drugless practitioner, with violation of Section 14 of the Medical Practice Act, the complaint having been filed by George D. Gillespie, D. C., Clarence G. Burt, D. C., and Harry C. Bond, D. C., alleging that Dr. Sanford made misstatements in connection with his application for a drugless practitioner license to practice in California.

James Warburton, M. D., has been called before the board in connection with the diploma mill conspiracy cases.

Robert W. Renwick, M. D., alleged to have protected an unlicensed chiropodist named Roy Finney, who, operating a chiropody stand on Main street, Los Angeles, is asserted to have so thoroughly "baked" the feet of a patient that gangrene resulted and the patient later died. It is reported that, about a year ago, Roy Finney was sentenced in Department 2 of the Los Angeles Police Court to pay a fine of \$200 or serve 180 days in the city jail. Appeal pending before Superior Court Judge Carlos Hardy of Los Angeles.

The following physicians and surgeons have been called before the board at the February, 1925, meeting to show cause why their licenses should not be revoked on complaints alleging narcotic violation: James T. Fisher, M. D.; James J. Martin, M. D.; and Newton J. Rice, M. D.

Charles R. Knox, M. D., and Peter McGrath, M. D.,

have been cited on complaints, charging violations of Section 14 of the Medical Practice Act.

Unlawful use of the prefix "Dr." resulted in a fine of \$100 recently imposed on Jules Marton, following his plea of guilty in a Los Angeles court.

Petition for the release of Dr. Ephriam Northcott from San Quentin prison, on a writ of habeas corpus, has been denied.

The extradition of Dr. J. W. Peacock to the state of Georgia, granted by Governor Richardson some time since, was nullified by the Superior Court of San Diego, which ruled in favor of the physician on a writ of habeas corpus, thus denying Georgia extradition.

Public records and other matters in the office of any public officer are at all times during office hours open to any citizen of the state, according to newspaper reports of a recent opinion of Attorney-General U. S. Webb.

"Dr." J. Oscar Francis Haas, who is reported to have been sentenced to serve two years in San Quentin for obtaining money under false pretenses, and in 1919 to having been arrested in San Diego under the name of "Rev. J. O. Francis Haas, divine healer," accused of charging one of his patients \$4800 for treatments, recently plead guilty in Los Angeles to a violation of the Medical Practice Act. He was reported to be in possession of a diploma from the St. Louis College of Physicians and Surgeons, but the secretary of the college reports no record of Haas.

ACKNOWLEDGMENT OF REPRINTS

- Belt, A. E.
See Mathe, Charles P.
- Bunnell, Sterling. *Reconstructive Surgery of the Hand*. Reprinted from *Surgery, Gynecology and Obstetrics*, pp. 259-274, September, 1924.
- Culver, George D.
See Montgomery, Douglass W.
- James, Charles S. *Operative Fractures*. Reprinted from the *Journal of the Iowa State Medical Society*, September, 1924.
- Keenan, Alexander S. *Mistakes in Surgery*. Read before the San Francisco County Medical Society, September, 1923.
- Kilduffe, Robert A. *The Clinical Utilization of Leukocyte Counts, With Special Reference to the Use of Graphic Reports*. Reprinted from the *American Journal of the Medical Sciences*, October, 1924, No. 4, Vol. CLXVIII, p. 502.
- Kuhns, Ralph H. *The Significance of Meningeal Symptoms in Children, With Reports of Two Cases*. Reprinted from *Archives of Pediatrics*, Vol. XLI, No. 9, September, 1924.
- Lee Brown, R. K.
See Player, L. P.
- Mathe, Charles P. *Carbuncle of the Kidney*. Reprinted from *California and Western Medicine*, December, 1924.
- and A. E. Belt. *A Case of Bilateral Pyelitis Due to the Bacillus Pyocyaneus. An Unusual Kidney Infection Diagnosed Through Ureteral Catheterization*. Reprinted from *The Journal of Urology*, Vol. VIII, No. 4, October, 1922.
- and Player, L. P., and Lee Brown, R. K.
See Player, L. P.
- Montgomery, Douglass W. *The Itch Mite and Its Burrow*. Reprinted from *Archives of Dermatology and Syphilology*, October, 1924, Vol. 10, pp. 473-477.
- and Culver, George D. *Verruca of the Nail Fold*. Reprinted from *Archives of Dermatology and Syphilology*, October, 1924, Vol. 10, pp. 425-428.
- Perrine, J. K. M. *Instrument for Removal of Debris in Cataract Extraction*. Reprinted from the *American Journal of Ophthalmology*, November, 1924, Vol. 7, No. 11.
- Player, L. P. Lee Brown, R. K., and Mathe, C. P. *The Causative Organisms and the Effect of Autogenous Vaccines on Cases of Chronic Prostatitis*. Reprinted from *The Journal of Urology*, Vol. X, No. 5, November, 1923.
- and C. P. Mathe. *A Study of Tumors of the Vesical Neck and the Prostatic Urethra and Their Relation to the Treatment of Chronic Prostatitis*. Reprinted from the *Journal of Urology*, Vol. V, No. 3, March, 1921.
- Shuman, John W. *Hydatid Brain Cyst*. Reprinted from the *Medical Journal and Record* for July 16, 1924.
- Sutton, Irwin C. *A Concise History of Syphilis*. Reprinted from the *American Journal of Syphilis*, Vol. VIII, No. 1, January, 1924.

Too Many Rats—"There are as many rats in this country as there are people, and the total yearly damage they cause amounts to \$200,000,000. It would take the labor of 200,000 men to produce the material eaten and destroyed by these rats. It would require about 5,000,000 acres to produce the grain they destroy. They are also the perpetrators of plague."—Dearborn Independent.

Medicine Before the Bench

Findings and Comments of the Courts on Acts and Omissions of Doctors

[EDITOR'S NOTE—*The law reports contain many interesting decisions, involving the reputations and fortunes of doctors. In this column in each issue a brief summary of one or more decisions and comments of the several courts of last resort upon the cases will appear. The matter will be selected by our general counsel, Hartley F. Peart, who, with Mr. Hubert T. Morrow, attorney for Southern California, will contribute from time to time.*]

The liability of a physician for the performance of an unauthorized operation upon a patient was involved in a decision wherein the Supreme Court refused to reverse the judgment and verdict of the jury in favor of the plaintiff and against the physician for \$14,332.50. It appeared from the evidence that plaintiff consulted her physician with reference to a perforation in the lower portion of the drum membrane in her right ear, and a large polyp in the middle ear. An operation was advised and plaintiff consented to this operation and was placed under an anesthetic for that purpose. After the plaintiff was anesthetized the defendant made a thorough examination of her left ear and found it in a more serious condition than her right one. The physician then decided to operate upon the left ear instead of the right, the operation being successfully and skillfully performed. Plaintiff claimed that the operation greatly impaired her hearing, seriously injured her person, and, not having been consented to by her, was wrongful and unlawful, constituting an assault and battery.

Upon appeal, in refusing to reverse the verdict of the jury against the doctor, the court quoted, with approval, the language of a former decision, wherein a physician was held to have wrongfully removed the ovaries of a patient, saying:

"Under a free government, at least, the free citizen's first and greatest right, which underlies all others—the right to the inviolability of his person; in other words, the right to himself—is the subject of universal acquiescence, and this right necessarily forbids a physician or surgeon, however skillful or eminent, who has been asked to examine, diagnose, advise, and prescribe (which are at least necessary first steps in treatment and care), to violate, without permission, the bodily integrity of his patient by a major or capital operation, placing him under an anesthetic for that purpose and operating upon him without his consent or knowledge. . . . The patient must be the final arbiter as to whether he will take his chances with the operation, or take his chances of living without it. Such is the natural right of the individual, which the law recognizes as a legal one. Consent, therefore, of an individual, must be either expressly or impliedly given before a surgeon may have the right to operate." There is logic in the principle thus stated, for, in all other trades, professions, or occupations, contracts are entered into by the mutual agreement of the interested parties, and are required to be performed in accordance with their letter and spirit. No reason occurs to us why the same rule should not apply between physician and patient. If the physician advises his patient to submit to a particular operation, and the patient weighs the dangers and risks incident to its performance, and finally consents, he thereby, in effect, enters into a contract authorizing his physician to operate to the extent of the consent given, but no further. . . . The medical profession has made signal progress in solving the problems of health and disease, and they may justly point with pride to the advancements made in supplementing nature and correcting deformities, and relieving pain and suffering. . . . The methods of treatment are committed almost exclusively to the judgment of the physician, but we are aware of no rule or principle of law which would extend to him free license respecting surgical operations. . . ."

The Gorgas Memorial—Medical editors have been asked by the executive committee of the Gorgas Memorial to publish a lengthy appeal for support of the movement. In addition to what has already been repeatedly published, the document states that, "inasmuch as the Gorgas Memorial is primarily a medical movement, it must have the united support of the profession if it is to make the proper impression on the general public."

The directors announce the very praiseworthy idea to make of the General William Crawford Gorgas Memorial "not one of marble or bronze," but a permanent living organization in the form of a great health foundation typical of his work in "research and curative medicine."

We presume that Gorgas' really great work in preventive medicine was accidentally omitted from the publication.

"If the medical profession is to maintain the high standing to which centuries of labor in behalf of suffering mankind entitles it, it is essential that a definite organized effort be made to familiarize the public with such facts as will impress upon it the importance of medicine's contributions to human welfare.

"One of the objects of the Gorgas Memorial is to furnish a channel through which 'better health' information may be disseminated. This, says the committee, "cannot be done by individual physicians. It must be conducted by a dignified, ethical organization, controlled by the medical profession. The name of Gorgas is synonymous with 'better health.' No more appropriate name could be adopted for a movement that has for its object the development of co-operation between the public and scientific medicine for the purpose of improving health conditions by implanting the idea in the mind of every individual that scientific medicine is the real authority in all health matters, and as such should be recognized as the source of health instruction."

California physicians will appreciate such an indorsement of both an idea and a name under which they have conducted for years a magazine (Better Health); a syndicated newspaper service (Better Health Service) and have for longer years conducted a better health crusade for every citizen we could reach.

Our physicians will feel that it is rather late for any organization to be talking of "adopting" the name Better Health, already well established and protected by priority, usage and law.

"Every doctor is requested by the governing board to take a personal interest in the Gorgas program and to see that his community is adequately represented on the state governing committee. Those invited to serve as founder members of the state governing committees are requested, as they accept membership on the committee, to subscribe \$100 to the Endowment Fund, payable within two years."

The organization is controlled by a large board made up of physicians, government officials, and laymen. Doctor Franklin Martin of Chicago is chairman of the board and Doctor Ray Lyman Wilbur of California appears to be the one representative of Western America.

"Many persons think that education is something that we may give a child," says Angelo Patri (Liberty). "No power on earth can do that. Education is something that a child must take. He takes it up from the earth and transforms it into intelligence by the experiences that he gathers through his nerves and muscles—and his hands."

"We have one United States Senator who believes Mrs. Eddy was a deity," says J. E. Dildy (Texas Medical Journal). "The banker carries an Irish potato for rheumatism; the congressman signs the Tanlax ad., while the legislator votes for the chro and "totes" buckeyes for piles."

"The doctors of a community can tell the people what to do in order to prevent disease, but they are powerless to enforce their advice," says the Long Island Medical Journal.

Medical Economics and Public Health

Medical Society Dues—At the recent meeting of state medical association secretaries held in Chicago it developed that some states have medical society dues of as much as \$25 per year, and there are a number of states that have dues of \$15 per year. The general opinion from these states was that doctors do not object to dues if they really are getting something for the money expended, and in the states where the dues are \$25 per year many of the doctors have said: "Raise the dues to \$50 per year if you can do any more than you are doing now." . . . "Isn't it ridiculous for doctors to offer complaint concerning the insignificant sum asked for medical society dues for an entire year when the average doctor will spend more than that amount in one night for entertainment at the theater, and does not bat an eye to pay ten times as much as a penalty for frivolity of one kind or another."

Everyone Practices Public Health—Every citizen has his effect on the comfort, health and safety of others, and so he practices public health. Every voter practices public health when he supports or opposes the budget of the health department. Every mother practices public health when she either isolates her child who has a cold, or conceals the sickness while she makes her own diagnosis and takes the child to the movies in order to amuse it.—Frank Overton, in *Health Quarterly*, New York.

Thus Did Athens and Rome Fall—"Today we are spending on our asylums, hospitals and jails more money on the various grades of mentally subnormal children and adults, imbeciles, morons, and border-line cases, than on those of normal mentality."—The Canadian Medical Association Journal.

Does Loose Prescribing Mean Loose Thinking?—"The patient is often told to 'eat a simple diet and take care of his general hygiene,' and then he is hurried out," insists G. H. B. (The Commonwealth). "This often does not mean any more to the doctor than it does to the patient. It is surprising how varied is the layman's interpretation of the modern slogan 'green vegetables.' Some feel that it includes potatoes, rice, and even macaroni. 'Regular exercise, preferably out of doors,' may be as freely recommended to the steeple jack as to the stenographer, and probably means no more to the one than to the other. A classic example of the impossible is for the woman with seven children to 'go home and keep off her feet.'"

"Again," says the author, "how little foundation in known fact is there for much that is advised. What should we say as to the consumption of water in the obese? How about the hoary prejudice against water with meals, lest the saliva and gastric juice be diluted? Is it not better to drink at meals than not to drink at all? In one place it happened that one examiner was giving almost the identical diet to the overweights that another was giving to the underweights, and in not a few points it was impossible to decide which was right. Many sins are committed in the name of constipation from the cannon ball to the cold prune floating in the glass of water before breakfast. Just what is 'roughage' and may its use not be abused? What is the normal bowel rhythm, once in eight or forty-eight hours, or is there really any such rhythm? Is it better to pound the pavement in the fresh air or exercise in a gymnasium? Just why is hot food better than cold? How much sleep is 'more sleep'? One might go on indefinitely. But in the presence of the health examination, does it not behoove us all to take down and thoroughly inspect and dust and even selectively discard our old store of hygienic generalities?"

Are We Converting Industrial Accident Laws into Compulsory Health Insurance for Everybody?—There seems to be a spirit of active competition between the Industrial Accident Commissions of several states as to which can excel in spreading the provisions of the laws over the largest and most complete set of diseases. Addi-

tions of new diseases to the compensable list are occurring very rapidly, and at the present rate nearly all diseases will be compensable within a few years.

"Riveters' osteomyelitis," said to be an "industrial cousin" to painters' colic, was recently added to the list in California.

Newer Ideas in Health Service—One must read widely and extensively these days to keep up with the innovations designed to extend health service to humanity.

Some of these influences and ideas seem sound and are calculated to improve health service and at the same time make it more economical. Others are but indifferent gestures and some are obviously calculated to serve the promoters rather than the public.

One of the newer and apparently promising ideas is being crystallized into what is called "The Physicians and Surgeons' Institution of Chicago." A group of 200 well-known physicians and specialists have organized themselves into a diagnostic service to be operated in connection with a good hotel. Patients will reside in their hotel during the period of study unless and except for a brief period, when they may occupy space in the "Institution" for special study.

The institution "will provide for accurate and complete diagnosis through the finest obtainable equipment and physical plant. The working organization includes a staff of full-time men, and a consulting staff of specialists of recognized ability."

"*This institution is not going to treat any one,*" says the Illinois Medical Journal. "It will be merely as perfect as possible a piece of mechanism available for any physician, irrespective of location, to use in achieving the best possible results for his patients, *without having* the patient leave the *control* of his own physician. This institution will be the public servant of every qualified, honest doctor, as well as of the public, and will be pledged to the most efficient assistance in the most economical manner."

"Larger hospitals will be benefited from this new organization through referred cases. Smaller hospitals will gain appreciably because, lacking an expert laboratory staff of their own, that of this institution, will be in readiness to aid diagnosis."

"Physicians at any point in the United States will find help here. The scope of this institution will be widespread, as any doctor anywhere may refer for diagnosis any of his difficult cases secure in the knowledge that the cases will not be retained, but the case and the diagnosis will be returned to this doctor, and the treatment he sees fit to give will be a matter between himself and his professional conscience."

Sound Investments—Under this title, the Anglo-London-Paris Company, advertisers in CALIFORNIA AND WESTERN MEDICINE, have issued an attractive little booklet for persons who wish to secure quickly concise descriptions of many western, municipal, irrigation and corporation bonds.

Committee of Massachusetts Legislature Recommends Shortening Nursing Education—A committee of the Massachusetts legislature, after studying the whole question of education and licensure of those engaged in serving health, has recommended that the legal requirement for nursing education be reduced to two years and that no legal standing be given to either chiropractors or midwives.

The List of Compensable Diseases Still Expanding—The latest addition to the list is *infected mosquito bites*. The beneficiary, under the recent decision, was a mouth-breather. While asleep, he was bitten on the tongue by a mosquito and the wound became infected.

Step by step we are bringing more and more diseases into the compensable class under the Workmen's Compensation Act. The rulings of the Commission are all that delays more or less complete state medicine in California under the screen of an industrial accident law.

Are You Educating Your Patients in Health?—Almost everyone is busy "educating" everyone else about how to keep well and how to treat disease. Doctors know that fully 75 per cent of this "education," whether pre-

sented by spoken or written word, is unreliable, inapplicable, dangerous or mischievous. Increasing numbers of other intelligent people are rapidly approaching the same inevitable conclusion. We are destined to see the end of the "fad" within a few years, after which physicians and nurses will again have more to say to their patients individually about health as a peculiarly personal matter requiring personal service and publications supervised by medical men will largely occupy the field of general health advice. The time is about right for physicians to take advantage of the situation by more energetically and intelligently carrying forward a system of health instruction for their own patients than has been the custom.

As Doctor Le Grand Kerr (Medical Economics) so well says: "Your patients want health instruction; they seek it from you first of all, but failing in that will seek it elsewhere."

"Very often the patient needs particular instruction, which he or she does not seek until some suggestion is made."

Dr. Le Grand Kerr has—and so have many other doctors—printed instruction blanks, interlined for additions and modifications to meet the needs of individual patients. On these charts, in addition to general instructions, are printed a number of captions, of which the following are examples:

1. A normal, healthy childhood is the best life insurance any adult can acquire.
2. The certain thing about health is its uncertainty; guard it.
3. Do not let your good intention suffer by inattention.
4. The malnourished child may make the pessimistic adult.
5. "They say" harms more children than it helps.
6. Children do not outgrow disease; they must be helped.
7. Teething is a natural process; it may cause discomfort; never disease.
8. What helps a neighbor's child may harm yours.
9. Diet is often more important than medicine.
10. No two babies are alike; then, why not treat them as individuals.

The Pinellas County (Florida) Medical Society of St. Petersburg, Fla., carried the following advertisement in the daily papers:

"The following physicians are members in good standing of the Pinellas County Medical Society, the Florida State Medical Association, and the American Medical Association": Under this advertisement were signed the names of thirty-six doctors with their office addresses. The object of this advertisement was to counteract the influence and prestige which was being gained by certain advertising doctors, some of whom were as blatant and as unscrupulous as any that can be found in the daily press of the nation.

After seven months of this advertising—"The members of the society feel gratified with the results attained. Not only have they counteracted the prestige which they seemed to be losing, but they fixed the ethic standards of the profession clear and strong in the public mind. At the same time they established themselves individually as being physicians of the first rank, and worthy of the respect and confidence of their fellow-physicians."—Medical Economics.

The Public Services—Examinations of candidates for entrance into the United States Public Health Service will be held at San Francisco, Cal., March 2, 1925.

Candidates must be not less than 23 nor more than 32 years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President with the advice and consent of the Senate. Requests for information or permission to take this examination should be addressed to the Surgeon-General, United States Public Health Service, Washington, D. C.

Poor Chiropractors—The chiropractors apparently made their initiative law so exclusive that they cannot get themselves in under its provisions. One board of examiners appointed by the Governor under the provisions of the law has been ousted by the Supreme Court. Charges similar to those used in the first instance have been preferred against the second board. In the meantime an injunction was obtained preventing the board from issuing licenses. By some sort of understanding or misunderstanding, the board issued some 400 licenses and now there is other and more litigation. Chiropractors did not bother much about the law governing practice before, and the fact that they cannot qualify under their own law is not interfering with "business," if signs and advertisements mean anything.

When a horseman is examining a horse, he always pulls out the animal's tongue and looks at his teeth. This is for the purpose of ascertaining his age and whether or not his grinders are in good condition. . . . Many years of experience have taught our physicians that if a patient shows the results of considerable good dental work, he will as a rule pay his physician's fees. Moral: Look in your patient's mouth, not only in the interest of his health, but before you determine upon his credit.—Medical Economics.

Tell "Our Story" to the Public—"The question still remains as to how we are to gain the sympathetic understanding and energetic co-operation of the public. "Without this," believes Gordon S. Fahrni, M.D. (The Canadian Medical Association Journal), "we cannot make progress. Business and other forms of lay organizations, as well as the individuals, are waiting to be informed on the big questions of preventive medicine and of the care of the sick. Many of them have brightening mental pictures of the situation, seeing as they do the abuse of public money in the present system of administration of our charities and public health institutions. They are groping about in the dark, wondering where to begin. I consider it is the duty of the medical profession to show the way in this big question, and by so doing gain a more sympathetic understanding from the public."

Mrs. Wallace Reid Foundation—Some of our members are making inquiry about the Mrs. Wallace Reid Foundation of Los Angeles.

A recent circular letter upon the stationery of that organization shows "Dr. Nathan O. Reynolds, A. M., M. D., as medical director and Harry M. Owens, personal business representative." This letter is addressed to a physician and contains the following statements:

"Our treatment for drug addiction is now being successfully administered with little, if any inconvenience to the patient and a *complete elimination of the drug, with restitution of the patient to a very healthy and cheerful condition within two weeks.* Physicians and discharged patients are now endorsing the treatment in highest terms.

"Our plans of operation are semi-philanthropic and in consequence our charges, considering the *wonderful results attained*, are quite reasonable."

Records of the Board of Medical Examiners show:

"Dr. Reynolds is a graduate of Creighton Medical College, April 27, 1912, and the holder of California physician's and surgeon's reciprocity certificate No. C-1149, issued April 8, 1919, based upon Nebraska license issued June 12, 1912, after a regular written examination."

We would like very much to have the names and addresses of physicians who "are now endorsing the treatment in the highest terms."

All physicians would also be highly appreciative of conclusive evidence of the "wonderful results" being secured at this "Foundation."

For the information of inquiring members of the California Medical Association, it may be stated that, so far as we can find out, the "Mrs. Wallace Reid Foundation" has not been approved, accredited, or endorsed by any medical organization.

Should Fees Be a Personal Matter?—"The Louisiana Medical Society has never adopted a schedule of fees such as other medical societies in many sections of the

country have done," says the New Orleans Medical and Surgical Journal.

"Fees for house calls, as a rule, should be in excess of office charges. Night calls more than day visits. Distance to be traveled, length of time spent at the bedside, character of service rendered, and the type of patient treated, and the patient's economic condition should all be included in determining the charge.

"A flexible scale, excepting routine work, will meet all conditions, assuring to the patient the fullest and fairest treatment, and to the doctor a competence commensurate with his time, service and skill. *Medical fees should not be standardized, and popular impression to the contrary should be corrected.*"

Business Methods in Charity—Eastern newspapers are prominently featuring the Charity Services of Doctors, as expressed in money values. Calculated upon a basis of \$1 a visit, the services of doctors run into millions of dollars, even for a single group associated with a single hospital. If figured upon the basis of \$1 a visit; \$1 for laboratory examinations; and \$5 for x-ray, and even \$10 for operations, the services for which no compensation is asked or received for the citizens of California during 1924 would be in excess of \$10,000,000. It would exceed \$4,000,000 in San Francisco alone.

If we are going to set up our charity work in dollars and cents, why not be generous enough to include the figures for medical service, as is done for every other kind?

How many colds do you have in a year? The average for Americans is four apiece. It takes about three weeks to recover from a cold. So, then, most people are wretched and ineffective a fourth of their time as a result of this common ailment. A stamping out of colds would be more valuable to the world than the discovery of an elixir which would add a decade to life.

More Should Do So—"Personally," says a layman (Medical Economics), "I am through with taking advice that doesn't fit me, even if it comes by radio from high medical authorities. Twice a year now I have myself thoroughly examined and surveyed by my physician, and if there is any trouble indicated, I have it attended to at once. I keep the bridge running away from me; I do not worry about crossing it. The periodic health examination is good sense and good business. I am just as much for it as I am for regular inspection of elevators and of steamboats and factory boilers. Then, if anything is found wrong, I am convinced that an expert ought to hunt the trouble and remove its cause."

Discovery Always an Evolutionary Process—"No discovery in the basic medical sciences, no advancement in the art of healing is to be credited to any single individual," says C. M. Jackson of the National Research Council. "Even the greatest heroes of medicine, those most richly endowed with the precious gift of creative imagination, are indebted to their predecessors for instruction and inspiration, to their contemporaries for criticism, and to their successors for the final adaption and evaluation of their most original products."

"Full service to the patient calls for team work. The captain is the doctor. No team is any more worth while than its constituent members. The nurse, the social worker, the laboratory expert, the specialist, the pharmacist, the physiotherapist, and others may one or all constitute the team which the physician directs."—Medical Economics.

Medical License as Old as Medicine—In India, 600 years B. C., a student, after completing a rather hard course of study, had to petition the king and secure his permission before he could practice medicine.

After 3000 years of "progress" a fad may be substituted for a hard course of study; advertising for a petition to the king and membership in a fighting organization in lieu of permission from the government.

The Michigan State Medical Society at its last annual meeting amended its constitution and by-laws to fix the annual membership dues at \$10. This was done to

extend its work and increase its usefulness. Thus the Michigan State Medical Society has again recorded itself as an organization that refuses to stand still or even to move slowly in discharging its recognized duties to its members and its state.—A. M. A. Bulletin.

Several other medical societies are expanding their constructive programs and taxing themselves to pay for the increased service.

The Board of Education is operating a "Guidance Clinic" in Minneapolis. They are also operating a hospital as a "School for Tuberculous Children." A few doctors of medicine are on their large staffs largely as "advisors" and "consultants."

Pharmacy Advertising—Good reliable pharmacy supplies are as important to the doctor and his patient as is reliability in surgical instruments or any other equipment or service. CALIFORNIA AND WESTERN MEDICINE takes pleasure in calling attention to our growing list of advertisers of pharmacy supplies and prescription pharmacists whose products and service may be depended upon. These pharmacists are patronizing, and thereby helping to support the publication owned and published by physicians. They are entitled to your consideration. They are, Broemmel's Prescription Pharmacy, Fitzhugh building; Butler's Pharmacy, Flood building; Exclusive Prescription Pharmacies, with five stores in San Francisco and one in Oakland; H. L. Ladd, 343 Powell street; Lengfeld's, 216 Stockton street, and F. J. A. O'Ferrall, The Dispensary, 5199 Geary street.

All of these pharmacies are in the bay district, but we hope to carry, in early issues, the announcement of reliable pharmacies in Los Angeles and other cities of the state for the convenience of our many members there.

California Pollens—Through an error, the advertisement of California pollens, M. L. Austin, 3201 Fifth avenue, Sacramento, was omitted from the January issue of CALIFORNIA AND WESTERN MEDICINE, although it has been running continuously for the last two years. For this we wish to apologize. The production and use of reliable pollens is a business of growing importance, less seasonal in California, of course, than in many other places.

Transportation of the sick is an important and growing movement among many agencies that serve health. Like other services, to be of the best, it must be conducted by those experienced in the work. We are glad to note that the American Ambulance Company of San Francisco announces itself in this class in the advertising pages of CALIFORNIA AND WESTERN MEDICINE every month.

E. R. Squibb & Sons—We are particularly glad to welcome to our advertising pages again the well-known house of E. R. Squibb & Sons. This contract for a page space ought to reassure those physicians who had grown curious about whether this firm had decided to make its appeal in California exclusively to the consumer instead of inviting the endorsement of physicians as had been their previous custom.

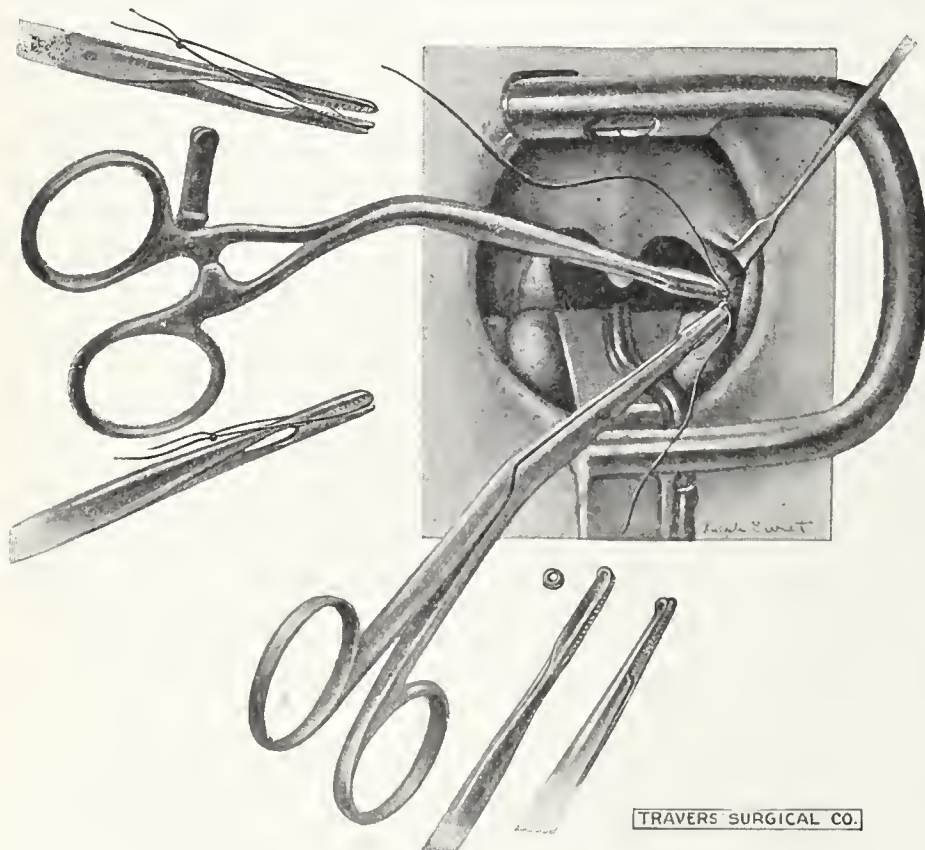
Infant Foods—It is always difficult to know just what infant foods to accept and what to reject in the advertising columns of an ethical medical journal. Many of these products are worth while; many are purely commercial, while others have both advocates and critics. We feel, however, that CALIFORNIA AND WESTERN MEDICINE is making no mistake in accepting, and thereby endorsing, the copy of the Nestle's Food Company and of the Merrell-Soule Company, manufacturers of Klim, which appear for the first time in this issue. In addition, you will find the announcements of our old friends, Denos Food Company; Horlick's Malted Milk; Knox Gelatine; Mead Johnson & Company; Mellin's Food; and SMA of the Laboratory Products Company.

One Group of Specialists Appeal to Another Group—The Wells Fargo Bank and Union Trust Company, who are advertisers in CALIFORNIA AND WESTERN MEDICINE, have issued to all physicians an attractive and unique pamphlet under the title of "There Aren't Enough Hours in the Day."

Clinical Notes, Suggestions and New Instruments

TONSIL LIGATING INSTRUMENTS

This set of instruments, devised and improved by Doctor C. R. Bricca of San Francisco, consists of two forceps and mouth gag (Davis). The forceps, as illustrated, are an angle-bent haemostat, which carries a looped ligature with a single knot, so that when any vessel is seized the ligature encircling the vessel enables the operator to tie the same, visibly, by aid of the forceps with a ring on the upper blade. One end of the ligature is passed



through the ring, and by pushing the knot over the end of the haemostat and with gentle traction on the other strand the knot is easily completed.

These instruments eliminate the use of all needles and traumatizing haemostats, and also the tying of the pillars together. The instruments being angle-bent, allow the operator an unobstructed view of the surgical field, and the hands of the operator are outside the visual line. Any size blood vessel can be visibly ligated with these instruments, regardless of location.

These instruments are manufactured and distributed by the Travers Surgical Company, San Francisco.

PERFORATIONS OF STOMACH AND DUODENUM DUE TO ULCERS

Comment by Ralph Van Vranken, M. D.,
Los Angeles, Calif.

There is probably no surgical condition that has been more often discussed or results that have been more often fatal than perforations of the gastro-intestinal tract. Early diagnosis followed by immediate surgery is, without doubt, the most adequate method to lower the mortality.

In all perforations of the gastro-intestinal tract it is of the greatest importance that the site of the perforation be determined prior to surgical interference. Too often an incision is made in the lower abdomen, expecting to find an appendix as the seat of the trouble when in reality the stomach is the focus of the condition. The increased hauling around of the viscera and contamination due to such an error is often most telling on the patient, say nothing of the embarrassment to the occasional individual that operates for an acute appendix,

sends patient back to bed, and in the morning, when the autopsy is done, the pathologist finds a perforation of the stomach.

It is with this in mind that I wish to bring out a few cardinal points that help to differentiate this condition from other acute conditions of the abdomen. The following points I have observed from about six or seven perforated cases that I have seen in the last few years.

The patients were usually about middle age. All the cases that I have seen have been men. The patients were thin, emaciated, and in a condition of severe shock. They usually gave a history of previous stomach trouble of possibly years' duration. Soda bicarbonate had previously given relief. The present trouble struck them suddenly like a knife going through them. The cases were all pictures of acute peritonitis and, if seen early, the pain was more noticeable on palpation at the pit of the stomach or over the area of the perforation. The usual case was sweating when seen, or had sweated rather profusely before. Quite frequently there was pain in the right shoulder. One case seen, this was the main complaint of the patient. Hiccough, vomiting, and markedly rapid respiration was noticeable separately or in combination in about one-half of the cases.

The temperature was usually close to normal or slightly subnormal. The pulse was rapid and thready. The blood pressure showed a decrease. It is of significance that the blood picture shows little variance from normal, save there being a slight decrease in R. B. C. and hemoglobin. The urine often showed a trace of albumin and acetone.

These cases were operated on by an incision above the navel, in the mid-line. The sight of the perforation was readily accessible in all cases, except one which was in the posterior part of the duodenum. The holes were purse-stringed and then lapped over, drains inserted under the liver, another one in the midregion, and a third drain was brought up through a stab wound just above the bladder.

Patients were put to bed in Fowler position and given nothing by mouth for three days except a mouth wash,

which was given the patient from the start. Normal saline was given under the skin, about 1000 cc. every eight hours, and drop method by rectum continuously until the third day, when Sippy treatment was started.

Five patients left the hospital alive and one died. This one was operated on about twenty-four hours after rupture, the others from six to eighteen.

As a summary, I might say that patients with perforations of the stomach or duodenum should be operated on as soon as a diagnosis is made. It is very hard to differentiate between perforations of stomach and duodenum. The abdomen should be opened above the umbilicus, so as to avoid undue handling and contamination. Cases of acute peritonitis that give a history of acute onset where pain is or was greatest in the abdomen above the umbilicus, where there is hiccough, pain in the shoulder or rapid respiration, where the temperature is practically normal, and the blood picture shows little variance from normal are usually perforated stomachs or duodenal ulcers and should be treated as such.

1039 East Vernon Avenue.

Medicine being a science of man, for man, and by man, must be learned from man through a study of man to a large though varying degree. The evil that holds modern medical education in its grip is too much theory and not enough practice; too much talk about the bedside and not enough sitting by it.—*Illinois Medical Journal*.

A great physician long ago said that a scientist who could not make any scientific fact clear to any intelligent person did not know his fact or it was not a fact.

TRUTH ABOUT MEDICINES

New and Non-official Remedies

(Abstracts from reports of Council on Pharmacy and Chemistry, A. M. A.)

Note—These do not represent all of the actions of the Council, but they do represent those remedies manufactured by firms who co-operate with CALIFORNIA AND WESTERN MEDICINE in its advertising columns, and thereby with the physicians of California.

Iletin (Insulin—Lilly) U-80—Five cc. ampules containing 80 units of iletin (insulin—Lilly) (New and Non-official Remedies, 1924, p. 152) in each cc. Eli Lilly & Co., Indianapolis.

Ampules Adrenalin Chloride Solution Rx 1, 1:1000, 1 cc.—A solution of adrenalin chloride. Parke, Davis & Co., Detroit.

Ampules Adrenalin Chloride Solution Rx, 1:2,600, 1 cc.—New and Non-official Remedies, 1924, p. 117. Parke, Davis & Co., Detroit.

Ampules Adrenalin Chloride Solution 1:1,000, 1 cc. New and Non-official Remedies, 1924, p. 117. Parke, Davis & Co., Detroit.

Thigenol—Solution Sodium Sulpho-Oleate (Roche)—A solution of the sodium salts of synthetic sulpho-oleic acid containing 2.85 per cent of sulphur. Thigenol has the actions and uses of sulphoichthyolate preparations (New and Non-official Remedies, 1924, p. 350). The Hoffman-LaRoche Chemical Works, New York.

Hypodermic Tablets Strophanthin 1/100 grain (Lilly)—Each tablet contains strophanthin U. S. P. 1/100 grain. Eli Lilly & Co., Indianapolis.

Hypodermic Tablets Strophanthin 1/120 grain—Lilly.—Eli Lilly & Co., Indianapolis.

Ampules Ouabain 0.0003 gm. (1/128 grain)—Lilly—Each ampule contains ouabain crystallized—N. N. R., 0.0005 gm. in 2 cc. of a buffered, sterile normal salt solution. Eli Lilly & Co., Indianapolis.

Antidysenteric Serum—P. D. & Co.—(New and Non-official Remedies, 1924, p. 301.)—An antidysenteric serum, also marketed in packages of one syringe containing 20 cc. Parke, Davis & Co., Detroit.

Insulin (Squibb)—A brand of insulin (New and Non-official Remedies, 1924, p. 149). It is supplied as insulin (Squibb) 10 units (5 cc. vials containing 10 units in each cc.), and insulin (Squibb) 20 units (5 cc. vials containing 20 units in each cc.). E. R. Squibb & Sons, New York.—*Journal A. M. A.*, November 8, 1924, p. 1509.

Pituitary Extract—Lilly (Obstetrical)—A slightly acid aqueous solution containing the water soluble principle or principles of the fresh posterior lobe of the pituitary body of cattle. It is tested for oxytocic action on the isolated uterus of the virgin guinea pig against a standard solution prepared from defatted desiccated posterior lobe powder and adjusted so that its strength is equal to that of a 5 per cent solution of the fresh posterior lobe of the pituitary gland. For a discussion of the actions and uses, see general article, Pituitary Gland, New and Non-official Remedies, 1924, p. 225. Pituitary extract—Lilly (obstetrical) is marketed in ampules containing 0.5 cc. and 1 cc., respectively. Eli Lilly & Co., Indianapolis.

Pituitary Extract—Lilly (Surgical)—A slightly acid aqueous solution containing the water soluble principle or principles of the fresh posterior lobe of the pituitary body of cattle. It is tested for its pressor action on the blood pressure of mammals and for oxytocic action on the isolated uterus of the virgin guinea pig against a standard solution prepared from defatted, desiccated posterior lobe powder and adjusted so that its strength is equivalent to that of a 10 per cent solution of the fresh posterior portion of the pituitary gland. For a discussion of the actions and uses, see general article, Pituitary Gland, New and Non-official Remedies, 1924, p. 225. Pituitary extract—Lilly (surgical) is marketed in ampules containing 1 cc. Eli Lilly and Co., Indianapolis.

Secacornin—Ergotin (Roche)—A solution of the ac-

tive principles of ergot in a menstruum consisting of distilled water, glycerin and 7.5 per cent of alcohol. One cubic centimeter secacornin corresponds to 4 gm. ergot, U. S. P. The actions and uses of secacornin are the same as those of ergot. It may be given by intramuscular injection. Hoffmann-LaRoche Chemical Works, New York.—*Journal A. M. A.*, November 29, 1924, p. 1769.

Harmonizing Workmen's Compensation Laws—The National Industrial Conference Board, Inc., makes the following suggestions for increasing the efficiency of industrial accident laws:

"At least one member of each state compensation board should be a physician who should also be the medical director of the board.

Each board should have a consulting staff of specialists to advise it on medical problems.

Examining physicians should be appointed by the state board on recommendation of the consulting staff on the basis of their professional qualifications.

Only licensed graduates of recognized medical schools should be permitted to treat compensations cases.

Medical fees should conform to the average charges for like work in the community.

'Medical treatment' should include all necessary medical, surgical, and hospital care and attendance and also such supplies and appliances as may be necessary.

Examination of an injured worker should be made immediately following the injury, and later examinations should be at the expense of the party requesting the same.

The choice of physician should be made by the employer or be made by the employe from a list of local physicians compiled by the employer.

Copies of the findings of examining physicians should be furnished to all interested parties, and reports and testimony of other physicians should not be allowed before the board till medical representatives of the other party have knowledge of the information to be given.

The refusal of medical treatment by the injured worker should release the employer from further responsibility in the matter.

Amputations should be made with regard to the function of the part remaining and not alone with regard to the amount of tissue removed, which latter proceeding might leave a tender appendage, useless for applying an artificial member and would, at the same time, in some states reduce the compensation of the injured employe.

Autopsies should be made at the request of the employer, the beneficiaries, or the state board, and should be paid for by the party requesting them.

Compensation for disease alleged to be due to accident should be granted only on proof of direct causal connection between the accident and the onset of the disease.

Compensation for the aggravation of latent or pre-existing disease should be limited to the degree of disability caused by the aggravation.

The per cent of reduction of vision and its economic valuation should be based on the age and occupation of the employe, and each case should be judged on its merits and not by a predetermined schedule.

Claims that hernia has been caused by employment must be made within twenty-four hours of its alleged occurrence and must be supported by proof of certain specified conditions.

Compensation should be granted for occupational diseases that are peculiar to the employment or are due to some unexpected result thereof. The term 'and sequelae' frequently used in connection with occupational disease schedules, should be eliminated.

Every one of these suggestions may be found in the compensation laws of one or more of the states; but, the conference board points out, their substantial inclusion in all the state laws would obviate much of the confusion and difficulty now experienced in the administration of these laws."

NOTE—Our readers will please note the quotation marks.

Some Phases of Rejuvenation—The role played by the gonads and the chromatin threads and chromosomes of the cell nucleus of sperm and ovum in the determination of sex is reviewed by William T. Belfield, Chicago (*Journal A. M. A.*, April 19, 1924). He states that in the number of chromosomes of the united sperm and ovum we recognize, not the immutable determination of the sex of the new being, but rather a distinct impulse toward the building of one or the other sex; an impulse that must seemingly be transmitted, as is the distinctive chromosomal structure, to every cell in the body; an impulse which early becomes manifest through the instrumentality of the endocrine glands, including the gonads. This recognition of the fertilized egg as the fundamental factor in sex is essential; it elucidates the otherwise puzzling fact that there is no group of sex features exclusively associated with testis or ovary; and other facts—including possibly homosexuality—inexplicable on the prevalent assumption that sex features emanate from gonads. Defective plans are sometimes manifest in structures deviating from the human type that cannot be explained by human embryology, but which are clearly features of earlier animals in the vertebrate phylum—the so-called arrests of phylogenetic development. The demonstrated difference in cell structure between male and female suggests the possibility that every cell in the body may contribute toward maleness or femaleness; as yet, however, only endocrine glands, including gonads, and cranial ganglions have been proved to make and unmake sex characters. Brown's work indicates that the function of the gonads requires integrity of certain ganglions at the base of the brain, which may be compressed through tumor formation of the pituitary; and that atrophy of the testes may be due to pressure on them rather than to pituitary disease. Among the organs which influence structure and function of the testes must be included certain ganglions at the base of the brain. On the traditional conception that sex emanates from testis or ovary is based the idea that the two sex complexes are essentially antagonistic and immutable. The biologic conception of sex is, on the contrary, not that it comprises two antagonistic entities, but rather that it is a single entity presenting various—and variable—degrees of femininity. There are known many instances in which the female—bird, quadruped or human—has matured normally, and later has assumed in marked degree the features and functions of the male; there is no instance known in which a mature male vertebrate has through intrinsic forces exhibited the corresponding change toward the female type; once a male, always a male; once a female, later a near-male, seems the natural course. Transmutation of females toward maleness, apparently anomalous, is such only in degree; for in all warm-blooded species the heavy burden of reproduction imposed on the female is transitory; and cessation of ovulation is often accompanied by some exchange of feminine for masculine features. Despite the wealth of pertinent observations, clinical and experimental, the influence of gonads on sex character is not yet exactly defined.

Homotransplantation of the human testis should, on biologic data, be more promising than that of the ovary; for these data indicate that the somatic tissues, inherited through the fertilized egg from the entire vertebrate phylum, are in harmony with the ancient maleness, but not with the new femaleness of the placental animals—that they are homologous with the testis, but heterologous toward the ovary. And since, for the structure and maintenance of sex characters, somatic tissues—the endocrines at least—are as essential as are the gonads, the male castrated before maturity may develop partial maleness—thanks to his somatic tissues—while the spayed young female lapses—thanks to those tissues—from femaleness toward maleness. Hence it seems possible, a priori, that a testis transplanted into an otherwise normal young man deprived of the testes might reinforce the maleness of the host's somatic tissues, even though the ovarian transplant into the female fails to do so.

Belfield asserts that Steinach's method of rejuvenation merits little attention; for it is founded on error and refuted by experience. Steinach's theory of rejuvenation—for men at least—falls to the ground. The experimental work of careful investigators on rejuvenation by testis implantation seems to have established these results on animals: Testis transplantation succeeds often in young, rarely in old, animals; success meaning merely the maintenance of vitality for a period of months. Though the transplant never produces sperms in its new host, it may function to the extent of preserving the masculinity of a castrated young male for a limited time, or of causing in a spayed young female hypertrophy of the clitoris and distinctly masculine behavior. The life of the transplant is much shorter than that of the native testis; within a few months its elements are replaced by connective tissue, and its physiologic effect on its host ceases. Stimulation of erection sometimes follows testis transplantation in old men, appearing within a few hours and ceasing within a few days. This is apparently the effect of preformed substances contained in the transplant and absorbed therefrom by the host's tissues. Similar effects have followed the injection of milk. A lasting recovery of lost erectile power in old men through testis transplantation is yet to be demonstrated. The future of testis therapy seems to depend on the isolation of the activating substance produced in the testis corresponding to thyroxin or insulin. Until this shall be accomplished, the injection of an emulsion of testis tissue seems the most promising form, though such a mixture of unknown proteins must be a tentative remedy. It seems probable that gonad therapy begun as an irrational attempt at an impossible "rejuvenation," may emerge from the disrepute of its infancy, and develop into a valuable means for relieving ailments that are not now associated with gonad deficiency; for it is demonstrated that the gonad does not originate sex; that it is less essential to the maintenance of sex than is the thyroid or the suprarenal; and that it is indeed one of a chain of interacting endocrine glands, efficiency in every link of which is essential to normal function, sexual or somatic.

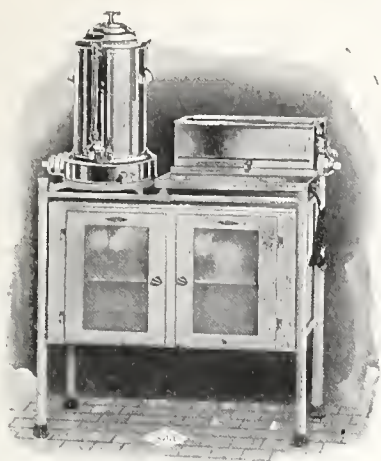
"A Rapid Method for the Determination of Gastric Acidity by Means of Test Papers."—W. Denis, Ph. D., and D. N. Silverman, M. D. (*American Journal of the Medical Sciences*, Jan., 1925, conclude a study of this subject with the statement:

"It is suggested that the customary titrations of gastric contents with Topfer's solution be replaced, at least at the bedside or in the busy clinic by the determination of the hydrogen-ion concentration by means of test papers for which the only equipment needed is a small vial of these papers which may be carried in the pocket."

Specialists have come in for much criticism on the part of the public and even on the part of the general medical profession, as faddists. Yet it must be admitted that specialization has contributed enormously to the advancement of medicine as a whole. It is important, of course, for the prestige of our calling that specialists shall not lose their sense of proportion, and shall base their particular work on as broad a foundation as possible.—DAVID RIESMAN, *A. M. A. Bulletin*.

"The Physical Basis of Unrest—With civilization have come opportunities for the frequent escape from physical labor of those either clever or stupid enough to evade it. Civilization, in fact, expects the clever to dodge it, while the weaklings among the lower orders necessarily escape yet receive considerable paternal care on the part of the society."—*Medical Times*, Jan., 1925.

Properly restricted newspaper publicity of medical meetings, in which personalities are kept in the background, helps to educate the public, and if and when newspaper editors once realize the importance of having medical news carefully edited by a medical co-editor, much of the disturbing misinformation in which our papers now abound, will be avoided.—*A. M. A. Bulletin*.

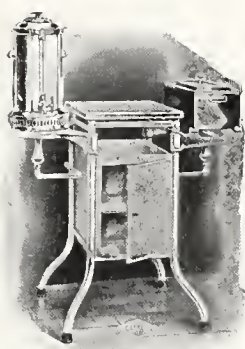


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MEDICAL STRAWS

By THE EDITOR

Experience is fallacious and judgment difficult

Maternity Mortality Increasing—"More women died in childbirth during 1923 than during 1922," says the United States Census Bureau. Later figures are not available. These are discouraging.

J. J. Sippy, M. D., in discussing what a nurse may and may not do, says (Pacific Coast Journal of Nursing) that a doctor "will leave standing orders for hypodermic administration of morphine and strychnia to the student nurse in the hospital and criticize the better-trained public health nurse for administration of toxin-antitoxin, far less dangerous. It causes one to wonder at our inconsistencies."

DOING things for people is harmful misdoing unless it increases their independence, energy and initiative."—Henry Ford.

"Today, the doctor takes the helpful point of view that nervous patients are not office nuisances, but are men and women in trouble: suffering, hoping, thwarted, groping, and crippled," says George K. Pratt (Hygeia). "And because he realizes that a special kind of treatment is needed he refers them to his colleague, the psychiatrist, just as he refers operative cases to the surgeon."

Over 90 per cent of the 100 per cent of people who need a physician's advice are walking about and attempting their duties. If they were adequately and efficiently cared for, our hospitals would be half empty.

THE successful physician is a counselor of health as well as a purveyor of pills.—Henry Shaw (Nation's Health).

DISCIPLINE is the mainspring of action and operation, the first price of successful achievement in any field or forum.—Russell.

Apply it upon yourself in the interests of your patients as thoroughly as you do in your golf.

I SHOULD like to emphasize the fact that even the ordinary practitioner in the smallest village, far from hospital, laboratory or library, can, if he will, make some contribution to medical progress."—C. M. Jackson (National Research Council).

A "sectarian," as applied to medicine is one who, in his practice follows or claims to follow a dogma, tenet or principle based on the authority of its promulgator to the exclusion of demonstration and experience.—House of Delegates, A. M. A.

Quite a satisfying definition.

A physician is one who has acquired a contemporary education in the fundamental and special sciences comprehended in the term "medicine" used in its unrestricted sense, and who has received the degree of Doctor of Medicine from a medical school of recognized standing.—House of Delegates, A. M. A.

Compare that excellent definition with the legal definition of most states and we get a close-up of how government interferes with the progress of health.

PHYSICAL examinations of the well are all right, but they should be performed by the family doctor. This work should not be done second-handed through the

medium of some health institute.—Journal of Indiana Medical Association.

There seems to be a prevalent idea that almost anyone can make a diagnosis of a patient who is walking about.

THE average meal consumed today is the outgrowth of the efforts of cooks who have catered to taste rather than to reason.—N. P. Norman, M. D. (New Jersey Medical Journal).

The Unkindest Cut of All—We don't expect very much any more in this old vale of tears and laughter, but perhaps the hardest thing to forgive the professional reformers is pasteurized cider.—Ohio State Journal.

THE modern business man of the best type has a code of business ethics that might well be adopted by those physicians who are in the medical profession "for what they can get out of it" and not for the amount of service they can render the public.—Edward J. G. Beardsley (New Jersey Medical Journal).

NATURE has not yet adopted union laws and union hours, nor union standardization, and state medicine will have to travel farther and faster than it has been doing to get nature into this set standard.—Illinois Medical Journal.

Professional "Toters" Will Be a New Profession—The lower house of Congress has passed a bill restricting the use of the United States mails for the transportation of firearms that can be concealed upon the person.

One Baby Per Month for Each Doctor—It is announced that 87,000 babies were born in California during 1924. If all of the births were apportioned to educated physicians only, each would have officiated at one birth a month.

SOMEONE has defined an expert as a man who lives 100 miles away and charges \$100 a day for his services.

The quoted "fee schedule" is too low for the "expert" who must pay his publicity agent. And many newspaper editors are growing more discriminating between "news" and "advertising."

THE heart of a man has not capacity enough to feel as a mother feels at the grave of her son," says a proverb.

Nor has he the consolation of such close communion with Him who said "Suffer little children to —"

QUACKERY and the love of being quacked are in human nature as weeds are in our fields."—John Brown.

Weeds—and quackery—grow best on the golden grain fields, the sun-kissed fruit plains, and the breeze-bathed shores of the mighty Pacific. Love of being quacked grows in inverse ratio to intelligence.

MEMBERSHIP in a county medical society is a badge by which the general public determines whether the physician is interested in his colleagues, interested in keeping abreast of modern advances in medicine, and interested in an unselfish protection of community health (Ohio Medical Journal).

Doctors, that is worth reading again, pondering and measuring ourselves by.

THAT commercialized prostitution is the principal means of disseminating syphilis and gonorrhea is emphasized by many popular "health educators."

Is it?

CALIFORNIA AND WESTERN MEDICINE

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Official Organ of the California, Nevada and Utah Medical Associations

Contributors to This Issue:

H. A. HALL, M. D. and E. ALBAHADIAN, B. Sc.,
SPECIAL ARTICLE

The Function of the Spleen

WILLIAM E. STEVENS, M. D.

Kidney Anomalies: Report of a Case of Bilateral Fusion of a Supernumerary Kidney

E. C. MOORE, M. D.

Esophageal Diverticula

JOHN D. LAWSON, M. D.

Roentgen Therapy of Uterine Myoma During Pregnancy

ABRAHAM METZNER, M. D.

Diphtheria Immunization

P. K. GILMAN, M. D.

Surgical Amebiasis

BERTNARD SMITH, M. D.

*A Symptom Complex in Diabetes That May Be Confused With the
Reaction of Insulin Overdosage*

HIRAM E. MILLER, M. D.

Ringworm of the Scalp

FLOYD F. HATCH, M. D.

The Surgical Treatment of the Obstructing Prostate

C. A. DE LANCEY, M. D.

*Coexisting Large Fibroid and Pregnancy—Caesarean Section and
Hysterectomy at Term*

ETHAN H. SMITH, M. D.

Treatment of Fracture of the Neck of the Femur

Editorials on Legislation and Health; Old Age at Its Best; The Fifty-Fifty Bubble;
Shall We Have Two Medical Professions; Lead Poisoning from Ethyl Gasoline, etc.;
Activities of the California, Nevada and Utah Medical Associations; Medicine in
the Public Press; Medical Economics and Public Health; Medicine Before the Bench.

Volume XXIII

MARCH·1925

Number 3

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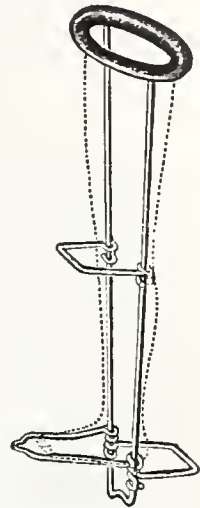
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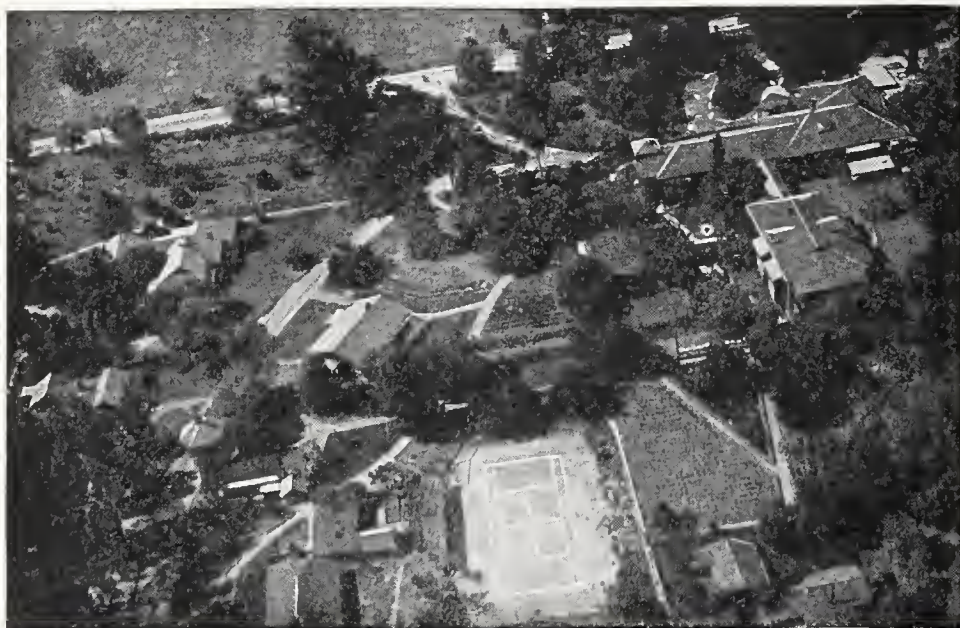
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Bacillus Bulgaricus (Squibb)—A culture of Bacillus Bulgaricus, marketed in tubes, each containing 12 cc. Bacillus Bulgaricus (Squibb), is designed for internal administration and for direct application to body cavities, abscesses, and wounds. See "Lactic Acid-Producing Organisms and Preparations," New and Non-official Remedies, 1924, p. 169. E. R. Squibb & Sons, New York.

Proposote—A condensation product of creosote and phenylpropionic acid. It contains the equivalent of 50 per cent of creosote. Proposote is not decomposed by the gastric fluids, and passes the stomach practically unabsorbed. It is decomposed in the intestine, and its components are chiefly eliminated through the kidneys, but it is claimed that a part of the liberated creosote is eliminated through the respiratory tract. Based on this latter elimination, the administration of proposote is claimed to

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Does the Shoe Fit?—"If we do not give to each patient who consults us our best services, we lower our standard, as well as aid in lowering the standard of medicine in the city or town in which we are licensed to practice," is the belief of E. J. G. Beardsley (New Jersey Medical Journal). "One of the greatest deterrents from doing our best professional work is that we *do not make careful physical examinations*. The failure to provide office kimono or similar covering is frequently made an excuse for not carrying out the complete examination that should be made of our female as well as our male patients."

The Future of Physiotherapy—"I see a great future for physiotherapy," says Ray Lyman Wilbur (P. T. Review), "if it is maintained and associated with the best that medicine offers in other fields. If it becomes simply one of the so-called cults, if the workers in it place an undue importance upon it and think they can, by using these procedures, neglect those necessarily diagnostic methods or proper professional care, then this, for the present, will again go into disrepute. But if this is kept on a clean, clear, scientific, intelligent, therapeutic basis, it has an enormous future of service to the public, as well as of help to those practicing medicine."

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"Those who have the public health in view and want to succeed in this contest will have to make a more vigorous fight. They must organize to educate the people and to inform legislators," is the opinion of H. E. Kelly, a prominent member of the Chicago bar (Federation Bulletin). "They must spend their time and money more freely in presenting the public's cause to the legislators of the country, and, indeed, to the courts, too, which also require ample arguments on the cases before them. *The persistent, the vigilant, the crusading men win.* It is unfortunate that truth has to be thus enforced and that it is not self-evident. But error propagated by money, enthusiasm and a not too scrupulous regard for facts often—in some fields generally—overcomes truth, which thus crushed to earth only after a long period of time will rise again. *Those who would give the public better health laws, if they would succeed, must not be content with merely stating their case scholastically, but they must organize to propagate it and then enforce it and compel attention to it by the practical methods everywhere influential with men, not only today, but tomorrow and year after year, until the truth is permanently embodied in the law as the settled policy of the state.*"

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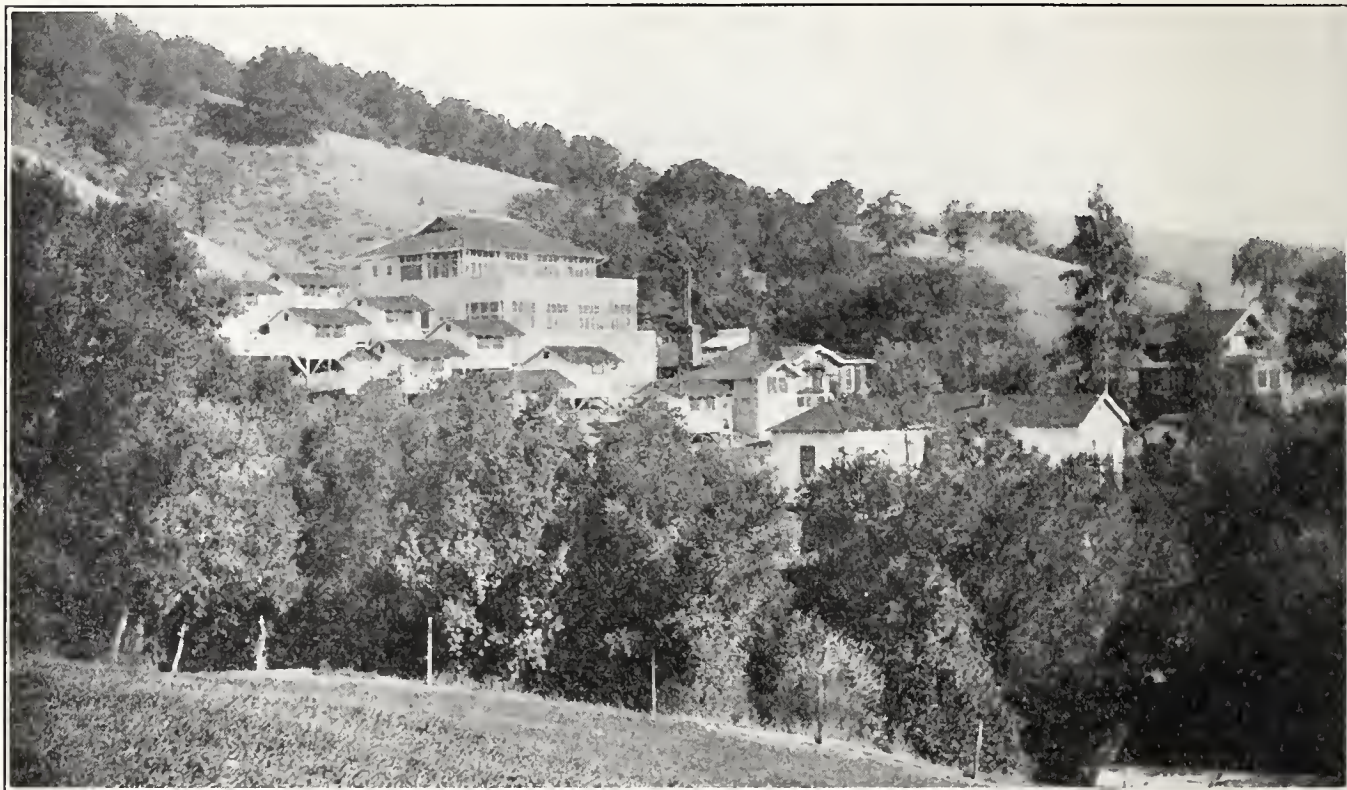
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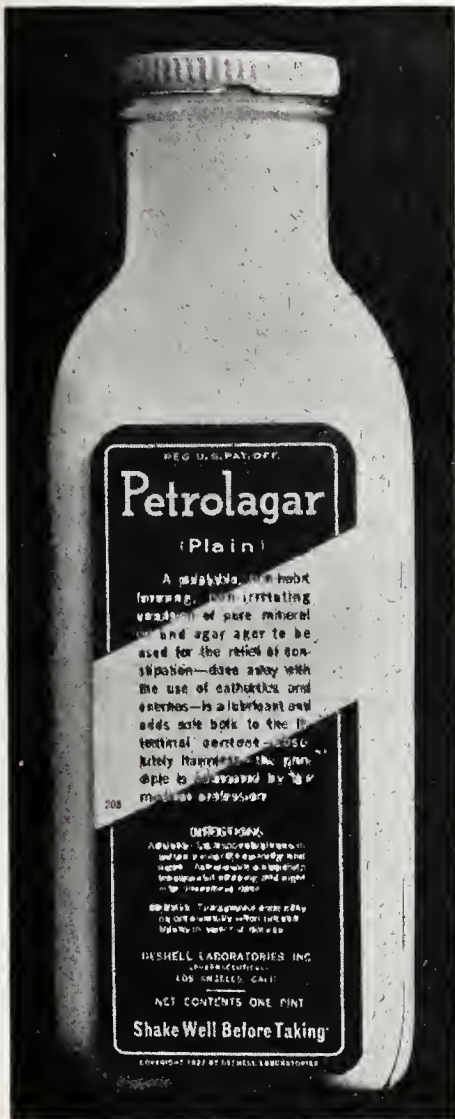
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Prevention of Congenital Syphilis by Treating Mother During Pregnancy—Some data on the results obtained by treating women during the child-bearing period, recently collected from eighteen municipal clinics of this state, are offered by Joseph S. Lawrence, New York (*Journal A. M. A.*), as evidence of the great benefits to be derived from careful treatment of ambulant patients at public clinics or dispensaries. Fairly complete data were obtainable on seventy-six cases, in all but one of which the patients, since beginning treatment, either have given birth to children or are now pregnant. Eleven women came for treatment before or during their first pregnancy. The sixty-five who had pregnancies prior to coming to the clinic may be divided into two groups: Eighteen (38 per cent), which we shall designate as Group A, were childless, while the other forty-seven (62 per cent), which we shall designate as Group B, had living children when treatment was begun. The primiparas were each, with two exceptions, delivered at full term of an apparently healthy normal child. None of these children exhibit any syphilitic stigmas, although some are more than a year old. The two exceptions were in abortion, which was found to have been artificially produced, and one pregnancy not terminated when the data were collected. In one instance in which therapy was instituted before marriage three pregnancies have resulted in the birth of three children, all of whom are free from any symptoms of syphilis. The eighteen multiparous women who had no living children when they began treatment have each, with four exceptions, had a child apparently free from congenital infection. The exceptions include two incompleted pregnancies, one fetal

death from dystocia and one miscarriage attended by hemorrhage which proved fatal to the mother. These eighteen women, who before receiving anti-syphilitic treatment were childless in spite of fifty conceptions, have had fifteen living children from seventeen pregnancies since treatment was begun. The forty-seven multiparous women who before taking treatment had 114 living children from 260 pregnancies have had subsequently fifty-four conceptions, eight of which have not been terminated. These forty-six pregnancies resulted in thirty-eight living infants, eight abortions, miscarriages or stillbirths and six infant deaths. Three of the five interruptions were miscarriages occurring in two women who were careless about their attendance at the clinics and received very unsatisfactory treatment. Of the six infant deaths, two were twins and a third was one of twins; while their deaths may have been due to syphilis, it must be remembered that the infant mortality for twins is greater than for single births. There were three sets of twins in this series. The scheme of treatment which the clinics employ consists of eight intravenous injections of arsphenamin given at intervals of a week, and fifteen intramuscular injections of mercury, also at intervals of a week; while treatment with arsphenamin and mercury are carried on simultaneously, they are rarely administered on the same day, but are separated by a three or four-day interval. After the fifteen injections of mercury are completed, a rest period of a month or six weeks is permitted, and then the procedure with both drugs is repeated. The size of the dose of arsphenamin is gauged by body weight, 0.1 gm. being allowed for each thirty pounds, (13.6 kg.). The mercurial preparation most commonly in use is mercuric salicylate, and the average dose is 1 grain (0.065 gm.).

It's the physician that breaks the rules of health.—Japanese Proverb.

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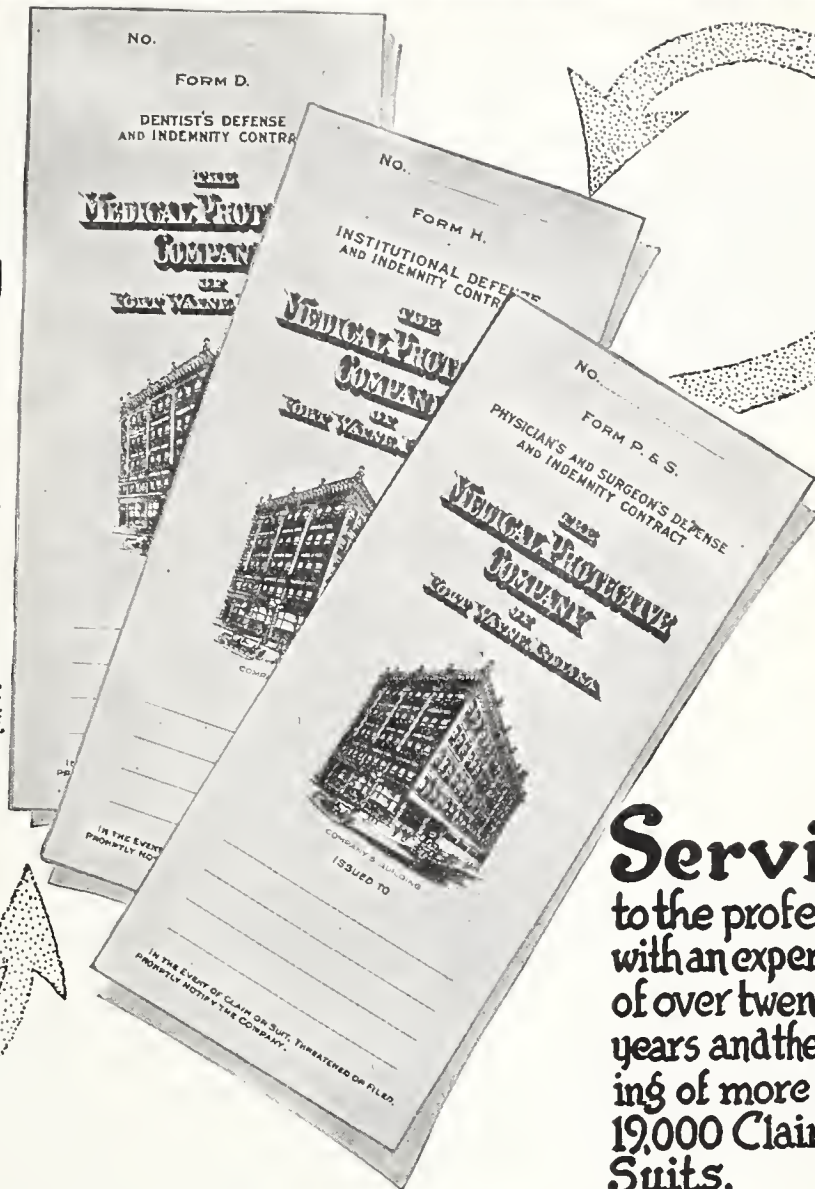


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Human Milk—The commercial production of human milk and its distribution in containers direct to the home have passed through the experimental stage. R. Raymond Hoobler, Detroit (*Journal A. M. A.*, January 17, 1925), reviews the work done in that direction in Detroit, since 1916. The actual output during this eight-year period has been 414,242 ounces of human milk, approximately 13,808 quarts. The present overhead expense could care for handling 100,000 ounces yearly, which would bring the cost of production to 10 cents an ounce. The cost of production includes the amount paid the mother, which is a flat rate of 10 cents an ounce, plus the cost of carfare for coming to the bureau either to express the milk or to deliver it in bottles. The remainder is overhead. The bulk of the money to pay the cost of operation comes from private patients who have been referred to the bureau by pediatricians and the medical profession generally. The bureau occupies quarters in the Woman's Hospital and Infants' Home, of which it is an integral part, and is operated under the direction of a committee from the hospital board and representatives of the Detroit Pediatric Society. The bureau employs two full-time officers. The maximum price charged was 30 cents an ounce. This charge is made only when it involves no hardship. In cases in which the milk is needed and the parents are unable to pay the maximum price, the charge is scaled down to their paying ability; but in no case is a baby denied milk. Some mothers have raised as many as three consecutive babies on the milk furnished by the bureau. The bureau keeps a sufficient number of producing mothers on its payroll to supply more than enough to cover its needs for private cases. This excess, each twenty-four hours, is distributed free of charge to hospitals caring for sick and premature infants. Should calls come in from private patients, this excess is drawn upon, and not so much milk is available for free distribution. Producers come mainly in answer to advertisements in the daily press. Others come by reference. Not all that apply are found satisfactory. They must come up to a certain rigid standard. They must: (1) be healthy, have a nega-

tive Wassermann reaction and be free from tuberculosis; (2) have clean personal habits; (3) live in a clean home; (4) nurse their own healthy babies up to 8 months; (5) express milk at least twice daily; (6) keep milk on ice until delivered, and (7) supply at least 16 ounces daily. A mother who has been at the bureau during three lactating periods, extending over fourteen months, had an income from the bureau of more than \$3500. This so encouraged her that when the bureau refused, after the fourteenth month, longer to use her milk, she purposely became pregnant that she might again become a producing mother. She is again at the bureau earning a good income, which is enabling her to buy her own home, and, incidentally, to enjoy many comforts previously beyond her reach. The bureau does not stipulate the diet the producing mother should use, but recommends one with a narrow protein ratio which was found to be most suitable. Any article causing an odor to the milk is strictly prohibited. The greatest percentage of infant mortality is among premature and sickly infants, during the first one or two months of life. Breast milk, if available, would save many of these lives. At present, there seems to be no satisfactory substitute for breast milk at this early age, particularly if the infant is a weakling; and there seems no better way to reduce the mortality of this early period of life than to increase the production of human milk. Every community supporting a maternity hospital is a potential center for such a producing group.

About Defective Eyesight—Perhaps we have become unduly pessimistic. In recent tests made by officers of the United States Public Health Service for defective vision on approximately 10,000 school children in four Eastern localities, 63 per cent of these young persons, ranging in age from 6 to 16 years, were found to be normal in both eyes; only 10 per cent had rather poor vision in one or both eyes. Nature's equipment of man for vision is, therefore, not as imperfect as a hasty guess might suggest.—*Journal A. M. A.*



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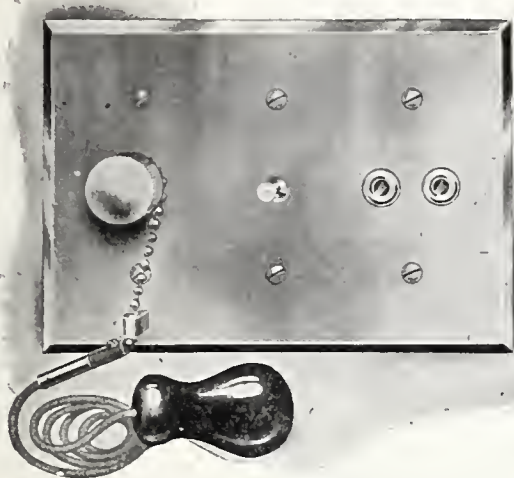
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All books received are promptly acknowledged in this column. Such acknowledgment is the only return California and Western Medicine feels obligated to render in return for the courtesy of the sender. Selected books believed to be deserving of comment will be reviewed solely in the interests of our readers. Our advertising columns are open to publishers of acceptable books for such further statements as they care to make.

Surgical Pathology. By William Boyd, M. D., M. R. C. P. Ed., F. R. S. C., Professor of Pathology, University of Manitoba; Pathologist to the Winnipeg General Hospital, Winnipeg, Canada. Octavo of 837 pages, with 349 illustrations and 13 colored plates. Philadelphia and London: W. B. Saunders Company. 1925. Cloth, \$10 net.

A Text-Book of Physiology—For Medical Students and Physicians. By William H. Howell, Ph. D., M. D., Professor of Physiology in the School of Hygiene and Public Health, Johns Hopkins University, Baltimore. Ninth Edition, Thoroughly Revised. Octavo of 1069 pages, 308 illustrations. Philadelphia and London: W. B. Saunders Company. 1924. Cloth, \$6.50.

Practical Lectures. Delivered under the auspices of the Medical Society of the County of Kings, Brooklyn, New York. Paul B. Hoeber, Inc., New York.

Fractures and Dislocations. By Philip D. Wilson, M. D., and William A. Cochrane, M. B., Ch. B., F. R. C. S. Edin. J. B. Lippincott Co. Philadelphia and London.

The Crippled Hand and Arm. By Carl Beck, M. D. J. B. Lippincott Co. Philadelphia and London.

The Diagnosis of Children's Diseases. By Professor Dr.

E. Feer. J. B. Lippincott Co. Philadelphia and London.

Operative Surgery. By J. Shelton Horsley, M. D. Second Edition. The C. V. Mosby Co. St. Louis.

Infection, Immunity, and Inflammation. By Fraser B. Gurd, B. A., M. D. The C. V. Mosby Co. St. Louis.

An African Holiday. By Richard L. Sutton, M. D. The C. V. Mosby Co. St. Louis.

Rejuvenation, the work of Steinach, Voronoff, and others. By Norman Haire, Ch. M., M. B., New York: The Macmillan Company. 1925.

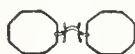
Serum Prophylaxis of Epidemic Parotitis—In two exposed groups of children in a contagious disease hospital, J. C. Regan, Brooklyn, N. Y. (Journal A. M. A.), first attempted convalescent serum immunization as a protective measure against epidemic parotitis. The protection afforded, although the exposure was close and the contact intimate, has been complete in this series of cases. The results gave reason to believe that the convalescent serum prophylaxis may be just as applicable to this disease as it is to measles. Immunization was effected with an average injection of 3 cc. of convalescent serum within a period varying from the first to the sixth day after exposure. Only one of the eighty-one patients developed mumps; but eleven were discharged from observation before their possible incubation period was over, and the results in these eleven immunized patients are not known. The remaining sixty-nine showed no signs of the disease. The convalescent blood used for this immunization was taken from healthy adult donors, who were Wassermann negative and clinically free from any active signs of tuberculosis, between the extremes of the tenth and twentieth day, usually on the fourteenth or sixteenth day of their disease. The serum should be administered before the seventh day after exposure to afford complete immunity. The dosage should be between 2 and 4 cc.



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So, too, for Syphilis and Many Other Diseases—“The evidence is overwhelming (Journal A. M. A.) that, when tuberculosis is introduced into a country hitherto free from it, the natives manifest a degree of resisting power much inferior to that shown by inhabitants of countries in which it has been present for countless generations.”

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CALIFORNIA AND WESTERN MEDICINE

VOL. XXIII

MARCH, 1925

No. 3

SPECIAL ARTICLE

THE FUNCTION OF THE SPLEEN

By H. A. HALL, M. D., AND E. ABLAHADIAN, B. Sc.,
Glendale, California

AT LEAST UNTIL WE KNOW MUCH MORE THAN WE NOW DO OF THE SUBJECT, AN OCCASIONAL REVIEW OF OUR KNOWLEDGE OF THE FUNCTIONS OF THE SPLEEN IS WORTH WHILE. WHEN TO SUCH A REVIEW IS ADDED SOME APPARENTLY IMPORTANT AND CAREFULLY CONDUCTED RESEARCH, THE SUBJECT IS ENTITLED TO PROMINENCE.

IN OFFERING THIS ARTICLE FOR PUBLICATION, DOCTOR HALL STATES IN HIS LETTER OF TRANSMITTAL:

"UNDER SEPARATE COVER, I AM FORWARDING AN ACCOUNT OF SOME ORIGINAL WORK PERFORMED BY MYSELF AND A COLUMBIA GRADUATE CHEMIST. I BELIEVE THAT THE RESULTS OF OUR WORK ARE BOTH INTERESTING AND PRACTICAL, AND THROW, AT LEAST, A FEW RAYS OF LIGHT UPON THE TRUE FUNCTION OF THE SPLEEN.

"MISS ALBAHADIAN, WHO WORKED WITH ME CONTINUALLY THROUGHOUT THE EXPERIMENTS, GRADUATED FROM CHEMISTRY AT COLUMBIA, IN 1917, HAD TWO YEARS OF POST-GRADUATE WORK IN CHEMISTRY AT CORNELL UNIVERSITY, AND HAS PERFORMED HIGHLY SATISFACTORY WORK IN SEVERAL PRIVATE LABORATORIES IN CALIFORNIA.

"I GRADUATED FROM ALFRED UNIVERSITY, A BRANCH OF THE UNIVERSITY OF THE STATE OF NEW YORK, IN 1915, WITH A BACHELOR OF SCIENCE DEGREE, AND LATER TOOK UP MEDICINE, GRADUATING FROM THE COLLEGE OF MEDICAL EVANGELISTS IN 1920. SINCE GRADUATION, I HAVE BEEN IN ACTIVE GENERAL PRACTICE AT RIVERSIDE, WITH THE EXCEPTION OF THE PAST TEN MONTHS, DURING WHICH TIME I HAVE BEEN IN GLENDALE, CALIFORNIA. I AM A MEMBER OF THE COUNTY, STATE, AND NATIONAL MEDICAL SOCIETIES.

"IF YOU CARE TO READ THIS ARTICLE, WE SHALL BE PLEASED, AND IF YOU DECIDE TO PUBLISH IT IN PART, OR IN WHOLE, IN CALIFORNIA AND WESTERN MEDICINE, WE SHALL, OF COURSE, BE GREATLY PLEASED.

"WE SEND THE ACCOUNT OF OUR WORK TO YOU WITH THE IDEA OF SPREADING THE PRACTICAL INFORMATION WHICH WE FELL UPON BY ACCIDENT AND DEVELOPED BY MUCH HARD WORK."—EDITOR.

*T*HERE is just one finding in common in all the list of conditions that are known to have splenic hypertrophy, or splenomegaly, so-called.

The spleen may have something to do with hemolysis; it may have something to do with the elaboration of uric acid; it possibly is an important lymphatic gland, but, above all these functions, we wish to place its action as a calcium metabolism stimulant, preparing suitable calcium salts for presentation to the blood stream and the impoverished body cells.

12 centimeters; breadth, 7 centimeters; thickness, 4 centimeters; and that its weight is approximately 160 grams, would be repeating facts that can be readily found in all of our standard anatomy books.

Let us, for a moment, look over the possibilities that the spleen has had in the field of medicine from the supposititious standpoint entirely. This organ was supposed to have something to do with the elaboration of iron, probably set free after the demolition of the red corpuscles. This gland was also implicated for a time in the production of uric acid. A digestive function was also attributed to the spleen and its hormones, for it was observed, in some instances, that the gland enlarged after meals, reaching its maximum at approximately the fifth hour after eating. Enlargements of the spleen have been observed in practically all of the fevers, especially those of the intermittent type.

Mr. Raymond Householder of Chicago, in 1921, experimented with guinea pigs, and in a long series

THE authors of this article had for some time felt that the spleen must have some worthwhile function, and set to work about a year ago to carry out some very definitely planned campaigns into the splenic area to see if the spleen were worth anything, and, if so, for what.

A great deal has been written about the spleen, pro and con. Many functions have been attributed to it and it has been endowed with all sorts of possibilities, as, for instance, a graveyard for the red blood-cells; also as one link in the lymph glandular chain. The upshot of the whole matter has been that, for a long time, the only definite thing known about the spleen was its average size, weight, and anatomical position in the body. For us to state, for instance, that its average length is

of cases found that the subcutaneous injection of hydrochloric acid caused splenomegaly. This author and experimenter, in his conclusions, infers that this enlargement could possibly be due to the increased destruction of red cells which must accompany this artificial acidosis, and yet wavers also toward the belief that the gland was perhaps hyperfunctioning as a hematogenic gland to offset this same anemia.

Other experimenters (Ott and Scott of The Medical Chirurgical College of Philadelphia) have tested certain of the animal extracts, as well as other drugs, and their influence upon splenic size. Infundibulin (pituitrin) was shown to decrease primarily the volume of the spleen and then to cause an exaggeration in its size. No relation between blood-pressure changes and splenic size was demonstrated. Pineal solution was tested and found to cause a diminution in the size of the spleen, after which the gland returned to normal. Thymic infusion had the same action, as did also infusion of the ovaries. Corpus luteum in solution produced an increased volume in the gland, which shortly became normal. Infusions of mammary tissue and dried pancreas had no action upon splenic volume. The results from injections of quinin hydrochloride were not of a nature to establish any definite reports, for, in some instances, the spleen increased, and in others decreased in size. Probably all of the above changes can be explained from blood vascular changes of the vasomotor type, as, for instance, when adrenalin or infundibulin were used.

Can we say, then, that the spleen has an internal secretion or hormone? Does it break up red cells because of a true hormone or because of a secretion of the digestive type that breaks down red blood corpuscles or disease germs, as the case may be? Can we not explain some of its functions by stating that it produces phagocytes which devour invading organisms and by a rapid elaboration on the part of the splenic laboratory may fill the blood stream with a normal amount of white cells in ordinary existence and an overamount in certain of the lymphatic leukemias, for in such cases we find a splenomegaly? Whether this action of the spleen in relation to blood cells is endocrine or not we may never be able to state, but we do know that the results of splenectomy are very satisfactory in certain splenic anemias and in hemolytic jaundice.

Inlow, at the Mayo Clinic, some years ago carried out a series of experiments to show the effects of splenectomy upon digestion, with particular reference to the flow of bile and the production of bile acid. He concluded that there is an increase in the outflow of bile after splenectomy, constituting an amount about one-fourth above that produced in the normal animal. The findings vary, however, when the time element is considered. Shortly after splenectomy, there is an increase in the output of bile, and along with this there is a concomitant rise in the hemoglobin content of the blood, and also in the red blood-cell count. All of this is later followed by an anemia and a reduction in the amount of hemoglobin, with more or less change in the flow of bile, usually more readily observed in late cases. His most dependable finding was that the regular fluctuation in the flow of bile and in the blood condition is accentuated by splenectomy.

Whether these findings are practical or not, we are unable to state. They are of academic interest at least. Other investigators at the Mayo Clinic have shown that the spleen may at times serve as a reservoir for the retention of syphilitic spirochetes, and, just for the moment, it is pleasing to know that the removal of such spleens is attended by a rapid change for the better on the part of the patient. Things may turn for the worse later, but, in many instances, there is an apparently satisfactory result following splenectomy in these individuals. This same clinic removed a large series of spleens in pernicious anemia, but the results were so discouraging that the procedure has been discontinued for the relief of this particular disease.

Dr. Reginald Weiler, of New York City, has given us an exhaustive discussion of the so-called spleno-pancreatic apparatus, and his conclusions would evidently show that it has a definite relation to the endocrine apparatus in general. The relation of the circulation to both glands is such that he believes that trypsin should be called the spleno-pancreatic secretion (a true internal secretion), "which reaches the portal vein by the way of the splenic vein and which continues in the blood stream the splitting process begun in the intestinal canal." That the spleen may have, therefore, something to do with the elaboration of insulin would be indicated by the fact that the islands of Langerhans are three times as numerous at the splenic extremity of the pancreas as in other parts, and, further, at the terminal portion of the descending arm, where there is no communication with the splenic vein, there are no islets. The author is sure that the splenic vein serves as "a channel for the transmission of pancreatic and splenic ferments of the liver. Trypsin becomes a constituent of the entire blood stream where albuminoids are broken down into simpler bodies."

There are many causes for the enlargement of the spleen. Osler has given us an exhaustive list of the causes of splenomegaly. This is perhaps worthy of repetition at this time. It serves to show the great number of conditions varying from some of the metabolic disturbances in childhood to violent infections which have to do with splenic disturbance. It is as follows:

I. In children: (a) Disturbances of metabolism, rickets, amyloid disease; (b) Chronic intestinal affections; (c) Large but ill-defined groups of intestinal disorders, particularly in the tropics; (d) The pseudo-leukemia infantum (Von Jaksch's disease).

II. In the infections: (a) Syphilis; (b) Malaria; (c) Kala-azar and other forms of tropical splenomegaly; (d) Hodgkin's disease; (e) Tuberculosis.

III. In primary disorders of the blood-forming organs: (a) Leukemia; (b) Pernicious anemia; (c) Chlorosis; (d) Hemachromatosis; (e) Polycythemic splenomegaly.

IV. In cirrhosis of the liver: (a) Syphilitic; (b) Alcoholic; (c) Hypertrophic of Hanot.

V. Hereditary and family forms of splenomegaly: (a) Congenital acholuric icterus; (b) Constitutional disturbances, dwarfing, etc.

VI. New growths and parasites: (a) Sarcoma; (b) Primitive endothelioma of Gaucher; (c) Echinococcus; (d) Schistosoma of Japan.

VII. Splenomegaly not correlated with any of the above or with any known cause: (a) Banti's disease in its three stages: 1. Simple enlargement; 2. Splenomegaly with ane-

mia; 3. Splenomegaly with anemia, jaundice, and ascites.

European writers have given us quite a large number of reports of the findings in animals either splenectomized or treated with splenic solution. Some of these writers, as, for instance, Bayle of Cannes, is certain that the splenic function has to do with the development of antibodies and immunity. This investigator treated a large number of tuberculous cases with a splenic preparation, and, in his first paper, read at Rome before The Congress of Tuberculosis, in 1912, he says: "I feel authorized by my results to call splenic opotherapy a specific treatment for tuberculosis. . . . From the therapeutic standpoint, it modifies the soil, rendering it less suitable for the growth of the bacillus of Koch." This statement is very sweeping, and it is not our purpose to comment on it here. We are giving this report purely to show the belief this physician has in the function of the spleen. Quoting further from this author, we find: "Employed in convalescence, it prevents tuberculosis by increasing the mineral content of the tissue." He even makes more definite statements than this, and his belief that splenic solution or extract has a certain control of tuberculosis is one the writers could accept only after greater personal experience with this form of therapy. More of this later, however.

Hans Sollberger tells us that, after splenectomy in normal rabbits, there is an increase in the hemoglobin figures and also in the number of the red blood corpuscles, perhaps due to the reduction of hemolysis which must take place if we are to accept the original theory of the "graveyard" possibilities in the splenic reservoir. Sollberger believes that, after splenectomy, the bone marrow is more sensitive and has a greater working capacity, perhaps due to the removal of one party in a balanced action, the idea being that there is a mild antagonism, or ratio, at least, between the blood-destroying spleen and the blood-forming bone marrow. To prove this latter-mentioned theory, he injected hydrogen cyanide subcutaneously in normal and splenectomized animals. We know that the action of this powerful poison is hemolytic to a marked extent. Just why he chose this particular drug, we do not know, but, at any rate, it gave immediate depression in the amount of red blood corpuscles and hemoglobin in all animals treated. The normal animals were very slow in securing their former hemoglobin and red blood corpuscle figures, whereas the splenectomized animals, with readily active bone marrow, produced blood corpuscles rapidly and arrived at normal figures as to blood content much more readily than their normal fellows. Sollberger is confident that the ready increase in hemoglobin and red blood corpuscles is due to the rise in the efficiency of the marrow of the splenectomized animal. This same investigator removed the thyroids in rabbits to find, if possible, a compensatory change on the part of the spleen. He does not report any change in size or texture of the latter gland, but says that there is probably a non-specific stimulation of blood-forming organs, for he noted an increase in the formation of hemoglobin after thyroidectomy. These are interesting findings, but again of a purely academic type. We must remember, however, that the position of small straws

can readily indicate the direction in which the wind is blowing. To many, this idea of a balance between the spleen and bone marrow is new, and, while theoretical, is still sensible and worthy of consideration in certain diseased conditions. The ready relief in Banti's disease, in any stage, following splenectomy is a vindication of this idea.

Schröder, Kaufman, and Kögel have tested spleen pulp as a direct media for implantation of tuberculous cultures, and report that virulent tuberculous bacilli are weakened at the normal breeding temperature in such a media, and many of them are destroyed. Complete destruction or solution of the tuberculous bacilli was not noticed. The anti-tuberculous value of the spleen must be rather worth considering, for we know, not only from the findings of these investigators, but from the generally accepted principles in our own United States that the body of an animal is considered to be saturated with tuberculosis only when the spleen itself is thoroughly involved. In other words, when we have marked splenic tuberculosis, we have an organism whose resistance has been completely overcome in regard to Koch's bacillus, and that is why inspectors in our slaughterhouses throughout the country investigate the spleen in all cases first. The anti-tuberculous action of the spleen and its secretion is one that has aroused the attention of a large number of investigators other than those just mentioned—a function that we believe is worthy of further investigation, particularly after some experiences we have had in the last year or so. The proof of the value of splenic therapy is to be found, we believe, in clinical and animal experimentation rather than in vitro. In animals treated with splenic extract, there is a change that is readily observed and apparently consistent throughout the numerous resultful experiments.

Walter Frey and Erich Hagemann have brought forth a clinical test, which we believe is fairly delicate, to determine the functional capacity of the spleen. The test consists in injecting from 0.6-1 mg. of adrenalin subcutaneously and then counting the number of lymphocytes twenty minutes after the injection of the adrenalin. In cases who have a diseased or hypofunctioning spleen, the lymphocyte increase will be less than 1500 cells within the twenty-minute time limit. The results of this test cannot be considered absolute, but should be taken along with the general findings in the case. These two writers reported a series of sixteen patients tested with the adrenalin-lymphocytosis procedure and found only one doubtful result. In all the remaining fifteen cases, the reaction was accurately diagnostic of the true splenic condition: i. e., the positive reactions were present in those patients who had a normal spleen and the negative reactions in all instances were attended by a diseased spleen. We do not believe that this test is being used to any great extent in the United States, and we deem it worth while to consider it in cases in which we would like to know whether or not the spleen is diseased for obvious reasons.

From the Italian sector we have some recent reports from T. Silvestri, in which he reviews, as a result of his own experiments, some of the actions of the spleen, and also tells us of some of the origi-

nal digestive experiments which he is confident show a relation between splenic function and pancreatic secretion. In this review he tells us that the function of the spleen is partly to furnish the peptic glands with material of great importance to their normal functioning, although this particular substance is not indispensable, for pepsin is readily formed after a period of readjustment in splenectomized animals. He believes, however, that gastric digestion is never as active after splenectomy as before. In other words, there is a constant hypopepsia, but the other principles of the gastric juice remain unchanged. He tells us that the gastric ferments can be corrected quite readily by splenic organotherapy. The translator does not tell us, in the article which we have at hand, whether or not the splenic extract was given by hypodermic or by mouth. We should like to know more about the method of administration. The general principles involved, however, are interesting and worth recording here.

We are told further in this report from Silvestri that the three enzymes found in the internal secretion of the pancreas are unaltered by splenectomy. He states, however, that albuminoids are not digested by the pancreas after splenectomy, but the powers of the gastric juice, so far as the splitting of albuminoids are concerned, is markedly increased under the same conditions; and, further, we are told that this increase may become very great, perhaps making up for the simultaneous loss of that function on the part of the pancreas. This would lead us to believe that there is some relation between the pancreas and the spleen. As we have already stated, there is a circulatory arrangement between the two glands which definitely controls the location of the Langerhansian isles, for the portion of the pancreas, which extends beyond the spleen and is not connected with it in a circulatory way, has none of these specialized islets.

After looking over the previous discussion, many of us will be willing to agree with William Osler, who said that he enjoyed reading an article concerning the splenic function which contradicted a previous article on the same subject, for he had never been able to assure himself that the spleen had a definite business in life. Yet, we must not say that the work that has been done in this field was inaccurate or done in a slipshod manner. The rather elusive function of the spleen has aroused the interest of many men whose time could well be spent in research work, and they have contributed here and there some ideas that, while at first appearance may be antagonistic in the final expression of fact, yet we believe are capable of being correlated under proper headings; at least, we wish to make an attempt to do so, in view of the very definite findings that we have had in our experiments with splenic solution, and in which we considered an entirely new phase of action.

We believe that this attempt is worth while, for we find, as an expression of the common belief in splenic unimportance, the following paragraph taken from an editorial appearing in *The Journal of The American Medical Association*, January 7, 1922:

"Taken all together, an enormous amount of experimental work, as well as not a little careful clinical

study, has failed to show conclusively that the spleen is an organ of internal secretion, or to account in any way for the fact that it is a large organ, universally distributed in the animal kingdom, provided with a blood supply so large as to suggest that it must have great activity and most important functions. Whatever it does in the way of destroying decrepit red cells can be done elsewhere. Surely it must have some further task than this; yet, if it has, this must be readily carried on in other tissues, since splenectomy is so well endured; probably this is why we cannot find out just what the chief function of the spleen may be."

The material thus far placed in paragraph form for the reader's interest has been by way of preparation, so to speak, for our original work. We had originally begun our work with splenic extracts to test their action in cases of tuberculosis. This was due to the belief we had in their possibilities in this type of infection, not so much from personal experience as from observing the writings of others, and also from some discussions we had had with physicians who were beginning to become enthusiastic about this particular endocrine, if endocrine it is. Purely by accident, Miss Ablahadian discovered that the rabbits who had received intravenous splenic extracts were showing some phenomenal increases in blood calcium. The blood calcium tests were being performed at the time to produce, if possible, a briefer clinical method for determining blood calcium—a matter that had been brought to the attention of the medical profession by the work of Drs. Vines and Grove, of Cambridge University, England, who had been working with parathyroid extracts. So sharp was the increase of blood calcium in the animals receiving splenic extract, that a series of them were immediately placed upon this solution, the blood being tested at regular intervals for its calcium content. We were soon very much surprised to find that all of the rabbits placed on splenic treatment were found to have an increase in blood calcium; in fact, this increase was found to be several times greater than in rabbits who received parathyroid nucleoprotein by vein. We shall proceed, then, to give you some of the information that we have gathered during the last nine months after exhaustive experimentation and accurate laboratory work.

It is evident that an injection of spleen nucleoprotein causes the outpouring of a shower of ionic calcium in the blood stream. This increase in blood calcium is fairly rapid and reaches its greatest height in about twenty-four hours after the injection. In from twelve to fourteen hours more, the findings are, in terms of calcium, again practically normal, never becoming subnormal. It is evident from our findings that any excess of lime in the blood is shortly eliminated by the kidneys, and that is our main idea in adding a small amount of parathyroid substance to the splenic solution, since the parathyroid preparation evidently acts as a mordant to hold the excess calcium in the blood and to prevent its rapid elimination. We can readily see that the actions of splenic substance and that of parathyroid substance are, while similar in many ways, very different when it comes to the elimination of calcium. By combining the two preparations, we have a re-

markable stimulant to the chemistry of blood calcium and a hormone whose activity already has been demonstrated as being a conservator of blood calcium.

The following tables will show that the calcium is markedly increased after the injection of spleen solutions intravenously. In several instances as great a change as three milligrams was observed after the injection of splenic hormones, and in almost no instance have we observed a decrease in blood calcium. It seems that the reaction is very dependable:

Rabbit No.	Normal Calcium	Calcium after 2 injections	Calcium after 5 injections
4	14.40	15.42†	
4	14.78		15.00†
5	14.41		14.93†
6	15.9	15.80†	
6	14.43		18.20†
7	16.9	16.20†	
9	15.3	16.0*	15.6*
10	16.5	20.0*	17.4*
11	15.0	18.5*	15.2*
12	16.0	17.0*	22.1*
13	15.0	16.0*	19.6*
14	16.0	15.5*	21.0*

* Figure produced by spleen injections, 1 cc. daily.
† Figure produced by injections of a combination of splenic and parathyroid extracts, 1 cc. daily.

Blood-cell increases have been observed after the injection of spleen nucleoprotein. Contrary to the old belief that the spleen has a hemolytic action, it was found that the red blood-cells increased in some instances over one-half million in a few days' time and, further, that the blood hemoglobin was increased, as would be expected when the red blood-cells were augmented in numbers.

The clotting time was shortened markedly in every case. This was noticed very readily when drawing blood from experimental animals. In some instances, the blood clotted so readily that it was withdrawn from the marginal ear vein with considerable difficulty, the wound having to be freshened frequently.

Two rabbits were splenectomized and their blood tested at intervals for its calcium content. In both rabbits thus treated, the blood calcium dropped almost 50 per cent. A control animal was cut open and sewed up without tampering with the spleen or any of the other abdominal viscera. In this rabbit no change was noted in the blood calcium. The two splenectomized rabbits were given intravenous injections of spleen solution, after which the blood calcium came to normal.

In keeping with the foregoing considerations, a series of tuberculous patients was placed on splenic extract therapy (by hypodermic administration) with some satisfactory changes in the blood calcium findings. These patients thus far have been observed for a period of a little over one month. The clinical findings have not been changed markedly. The physical findings will probably respond more slowly to treatment in tuberculosis than in any other condition on account of the marked chronicity of the infection and the usual long periods of toxemia preceding the tests.

Further experiments must be carried out in tuberculosis to find, if possible, a strength of solution that can be used which will be comparable to the severity of the symptoms of the disease. Ordinary strengths of splenic extract are probably not sufficiently active for Koch's infection. Ordinarily, a 4 or 5 per cent

solution has been used. If we can double that in this condition, well and good. That particular problem remains to be solved.

We believe one of the possibilities of treatment with this solution lies in inhibiting a tendency to hemorrhage in pulmonary tuberculosis, as injections of solutions of spleen shorten the clotting time in a few hours after the injection.

It is evident that spleen solutions, when injected into the human economy, cause an outflowing of calcium which is constant, marked, and readily produced. Further, it is evident that this rapid increase of calcium will be followed shortly by a loss of that particular substance due to elimination and lack of a supply. Since parathyroid is capable of fixing the blood calcium and of preventing its undue elimination, a combination of parathyroid (the calcium conservator) and spleen will be an ideal one for use in all calciprivic states, including tuberculosis.

May we call your attention to the fact, then, that there is just one finding in common in all the list of conditions that are known to have splenic hypertrophy, or splenomegaly, so-called? If we look down through the list of diseases given by Osler, we can, at least, say that there is one thing in common in all of those disturbances, and that is calciprivia, demineralization, or acidosis, depending upon the reader's personal choice of a term indicating lack of alkali reserve, and, therefore, a need for calcium ions. The spleen may have something to do with hemolysis; it may have something to do with the elaboration of uric acid; it possibly is an important lymphatic gland, but, above all these functions, we wish to place its action as a calcium metabolism stimulant, preparing suitable calcium salts for presentation to the blood stream and the impoverished body cells.

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KIDNEY ANOMALIES: REPORT OF A CASE OF BILATERAL FUSION OF A SUPERNUMERARY KIDNEY

By WILLIAM E. STEVENS, M. D., San Francisco

Examination of available literature fails to reveal a previously published case.

Bilateral fusion and horseshoe kidneys not the same in etiology or pathology.

If one chooses to classify the reported case as horseshoe kidney, it is still unique.

DISCUSSION by Louis Clive Jacobs, San Francisco; Burnett W. Wright, Los Angeles; A. S. Musante, San Francisco; E. Spence De Puy, Oakland.

Doctor Stevens supplies, with his interesting article, a complete bibliography of previous publications on the anomalies of kidneys. Under the policies of CALIFORNIA AND WESTERN MEDICINE, and most other general medical journals, bibliographies are not published. Workers interested in studying the subject more fully will gladly be supplied with a copy of the bibliography by the secretary of the California Medical Association or by Doctor Stevens.

I wish to utilize this opportunity to again call the attention of readers to the great assistance of the Cumulative Index of all worth-while medical literature published quarterly by the American Medical Association and furnished at a nominal subscription price.—EDITOR.

S anomalies of the kidney are more frequently encountered than those of any other organ, these conditions are of special interest to the urologist, and the possibility of their occurrence should always be considered in the presence of obscure lesions of the abdomen or upper urinary tract.

In 4215 consecutive autopsies, Lowsley, Kingery, and Clarke found 1.47 per cent of renal anomalies. In the records of 11,168 autopsies, Morris found abnormalities of the kidney in 211 subjects, a little less than 2 per cent. This author collected from the literature between 1883 and 1893, 21 cases of various malformations. Of these, 8 were horseshoe kidneys, 11 single, and 2 unilateral fused kidneys. Dorland, in 1911, collected 121 cases of renal anomalies which had been reported in the literature during the preceding twelve years. He added two of his own. Of these, 36 or 29.2 per cent were horseshoe kidneys, 24 or 19.5 per cent were single kidneys, 14 or 11.2 per cent unilateral fused kidneys, and only 5 or 4 per cent supernumerary kidneys. Eight of the third group were classified by Dorland as sigmoid kidneys, and six as disc-shaped kidneys. The former are now usually included with unilateral fused kidneys. Of these 123 cases, the sex was stated in 66; 53.2 per cent of the 123 occurred in males, and only 28 per cent in females. The left kidney was affected in a little over 70 per cent. In 1905, Gerard, quoted by Dorland, studied 527 cases of renal anomalies. He arrived at practically the same conclusions.

Considered from a standpoint of variation in number and form, these anomalies are, therefore, in the order of their frequency, horseshoe kidney, single or solitary kidney, unilateral fused kidney, and supernumerary kidney. Atrophic, displaced or ectopic kidneys and reduplication of the pelves and

Conference Board of Physicians in Industry—At a recent meeting of this interesting organization, it was agreed that many trifling injuries created no disability and required no redressing, but that many serious infections, entailing much loss of time and production, arose from the neglect of such patients. . . . Over 2000 infection cases were reported among 32,500 workers during 1924, and of this number only about twenty had received treatment prior to the appearance of the infection. It was thus seen that where prompt medical attention is given to injuries, infections are practically eliminated, and that practically all infections in such injuries result from delay in reporting for treatment. In the experience of the members of the conference the most beneficial results to the worker who is recovering from an injury are obtained in cases WHERE HE IS RETURNED TO EMPLOYMENT PENDING COMPLETE RECOVERY. Certain types of workers are unfavorably influenced by prolonged periods of idleness pending complete recovery, and it is hard to get such persons to again take up their usual employment. It was the unanimous conclusion of the board that the practice of permitting the worker to unduly prolong his idleness was a factor in delayed recovery and the development of traumatic neurosis and certain cases of malingering. In many patients a certain amount of physio-therapeutic treatment is necessary before any work can be attempted, but the board believes that supervised active motion of the previously injured part, carried out as work in the factory, also leads to more prompt recovery.

ureters, which are comparatively common, will not be discussed.

The feature of greatest interest, as well as the one of most clinical importance, is that of pre-operative diagnosis. An attempt will be made in this paper to correlate in as concise a manner as possible the symptoms of the above four types of renal abnormalities and to differentiate them from pathologic conditions of the upper urinary tract and abdominal organs.

As all types of renal malformations are frequently associated with abnormalities of other organs of the body, especially those of the genital tract, the presence of developmental irregularities of the latter organs should suggest the possibility of kidney anomalies. Abnormal organs are also more susceptible to disease and, as a rule, unless accidentally discovered, the symptoms of these complications first attract attention to the urinary tract. The most common pathological processes found with these conditions are hydronephrosis and calculi, although tuberculosis, pyonephrosis, and pyelonephritis are not infrequently seen.

HORSESHOE KIDNEY

Morris found 19 horseshoe kidneys in 18,244 recorded autopsies, Premdlberger, 6 in 1344 autopsies; Socin, 5 in 1630; Stewart and Lodge, 14 in 6500; Botez, 72 in 51,504; Carlier and Gerard, 80 in 68,000; Oleson 1 in 507; and Lowsley, Kingery, and Clarke, 1 in 600 consecutive autopsies. Summarizing, this anomaly was found once in 740 post-mortem examinations.

Braasch stated that, in 1000 kidney operations performed at the Mayo Clinic from 1910 to 1920, 17 were on horseshoe kidneys. They occurred more frequently in women. Botez stated that, in 1000 kidney operations, the proportion of horseshoe kidneys was 1-143, about two and one-half times as many as at the Mayo Clinic.

When subjective symptoms are present, the most common is more or less pain in the umbilical region. This is usually increased by exercise and relieved by rest in bed. Pain is also present in the lumbar region at times. Instead of definite pain, these patients sometimes complain of an uncomfortable feeling or sensation of pressure in the upper abdomen. Manipulation of the kidney frequently causes a peculiar, disagreeable, sickly, faint sensation along the thigh or in the hypogastric region. There may be periods of frequent or painful micturition brought on by muscular effort, by manipulation of the tumor or by pressure upon it by hardened or retained feces. Rovsing described three cases in which pain was evidently caused by pressure on the nerve trunks. Hickling described a case in which acute congestion of the fused kidneys caused compression of the inferior vena cava resulting in thrombosis of the vein and death from complete arrest of the circulation. A case has been mentioned in which pressure of the isthmus was responsible for aneurysm in the first part of the abdominal aorta.

In exceptional instances it is possible to palpate as a smooth oval mass the isthmus or bridge between the two halves of a horseshoe kidney, but in the majority of cases pyelography is of greater value in

the diagnosis of this condition. By the latter procedure, several anatomic features which are strongly suggestive of horseshoe kidney are demonstrated. These are: overlapping of the calices because of the antero-posterior direction of the pelvis due to the incomplete rotation of the kidneys which occurs in these cases, the closer approximation of the two pelves as a consequence of which they lie nearer to the median line, the anterior and slightly upward direction of the hilum and the high insertion of the ureter with a sharp, ureteropelvic angle. The importance of the injection of the media used for pyelography through a catheter which is introduced but a short distance into the ureter is worthy of emphasis. By this procedure the presence of one or more additional pelves or ureters will be demonstrated, and its value in that type of anomaly in which the ureters unite before reaching the bladder is obvious.

Byron Robinson, in a study of sixty specimens of horseshoe kidneys observed that 93 per cent possessed bilateral ureteral unicity, $3\frac{1}{2}$ per cent bilateral ureteral duplicity, and $3\frac{1}{2}$ per cent central ureteral unicity. No case of unilateral ureteral duplicity was found.

Fusion of two kidneys is always accompanied by some displacement, and palpation or ordinary radiography will disclose the fact that they are situated at a lower level in the abdomen. A mass in the upper abdomen, deformity of the renal pelvis, and an abnormality in the course or number of the ureters, is almost pathognomonic of this anomaly. In the diagnosis of horseshoe kidney, the presence of abnormalities of the genital and other urinary organs with which it is frequently associated should also be remembered.

DIFFERENTIAL DIAGNOSIS

A horseshoe kidney is to be differentiated from several pathological conditions of the abdominal cavity, the most common of which are tumors of the pancreas, tumors of the intestines, tumors of the omentum, tumors of the retroperitoneal connective tissue and inflammatory exudates.

Tumors of the pancreas are usually cysts or carcinomata. Pancreatic cysts are often associated with a history of trauma followed after a brief period by the development of a tumor in the upper abdomen. Others not associated with injury begin with severe pain which is followed by the development of a tumor. A third group develops more slowly, and is frequently associated with chronic inflammatory conditions of the pancreas. The tumor is palpable as a smooth globular mass between the ensiform cartilage and the umbilicus. It usually lays between the stomach and the transverse colon, but may be above or below them. Pancreatic cysts are most often found in the median line, otherwise more commonly to the left than to the right. Primary carcinoma of the pancreas is infrequent. Jaundice is common. The tumor is usually situated in the median line, occasionally on the left and rarely on the right side. It is usually dense, often nodular, and it is immovable. Dull pain and digestive disorders are frequent.

The majority of intestinal tumors are in the sigmoid, rectum, or cecum. If the tumor, which is

usually a carcinoma, is high in the intestine, obstruction is frequently present, and blood is found in the stools. These growths are more or less mobile at first. Inflation or bismuth enemata usually localize the tumor. Duodenal tumors give rise to pain in the right hypochondrium. There may be vomiting of bile and pancreatic fluid or jaundice. Unlike carcinoma, a horseshoe kidney is usually smooth and regular in outline. Solid or cystic tumors of the omentum are usually mobile and are not painful. Lipomata and sarcomata occasionally develop from retroperitoneal connective tissue. They are immobile and dense in character. Inflammatory exudates are usually accompanied by general disturbances.

SINGLE OR SOLITARY KIDNEY

Morris found in Gray's Hospital reports 1 single kidney in 4632 autopsies, in Middlesex Hospital reports 2 in 6536 autopsies, in St. Bartholomew's reports none in 3800, and in the autopsy reports of



Fig. 1.—Pyelogram of right kidney, showing overlapping of calices.

the Hospital for Sick Children 1 in 936. Peterson found 1 in 1500 autopsies, Sangali 3 in 5348, Menzies 2 in 1790 autopsies. Lowsley, Kingery, and Clarke found congenital absence of the kidney twice in their 4215 consecutive autopsies. Summarizing the above reports, we find that a single kidney has been found once in about 1259 autopsies. They occur somewhat less frequently than this, as some of the reports include atrophic and rudimentary kidneys. At the Mayo Clinic a solitary kidney was found once in every 142 kidney operations. They occur almost twice as frequently in males, and more often on the left side. There is a marked tendency to pathologic changes in single kidneys. Nephritis, calculi, tuberculosis, hydronephrosis, and pyonephrosis in the order mentioned have been most frequently found.

DIAGNOSIS

Ordinary radiography will reveal the absence of a kidney shadow on one side, and in the majority of instances a single ureteral orifice will be found on cystoscopy. While the frequency and volume of the ureteral spurt is usually greater in congenital single kidney, and increased kidney function is also suggestive, it is important to remember that the ureters from normal kidneys occasionally join before reaching the bladder. On the other hand, the presence of two ureters, both of which discharge urine, does not necessarily indicate that there are two kidneys. Pyelography or insistence upon repeated radiography until the kidney shadows are visible or the absence or displacement of one kidney satisfactorily proven is necessary in excluding a single kidney. While all of the above procedures are of importance, pyeloureterography is of greater value in the diagnosis of solitary kidney, as well as in all other abnormalities of the urinary tract. The number and course of the ureters is readily seen, and anomalies of the pelves are demonstrated. In this connection, Braasch has called attention to the fact that the pelvis of the congenital single kidney is enlarged in proportion to the increase in renal parenchyma, but is otherwise normal in outline, whereas in the acquired solitary kidney the pelvis is of usual size. The indigocarmine test is often of value when catheterization of the ureter or ureters and pyeloureterography is impossible. Malformations of the genital organs are more frequently associated with single kidneys than with unilateral fused or horseshoe kidneys, as in the latter anomalies fusion occurs after differentiation of the urinary and genital system has taken place in the embryo.

UNILATERAL FUSED KIDNEY

Morris found but one unilateral fused kidney in the autopsy records of 12,104 cases. Stewart and Lodge found one unilateral fused kidney in 6500 autopsies. Of 57 cases collected by Stein up to 1911, in which the sex was mentioned, 16 occurred in females, and 41 in males. In a study of the autopsy records, however, the fact that a greater number of males than females are available for this purpose is to be taken into consideration.

SYMPTOMS

The most common subjective symptoms of unilateral fused kidney are bearing down pain in the side of the abdomen, and constipation. If the kidney is situated at the pelvic brim, pain in the back and lower abdomen in women, most pronounced during menstruation, is often present. Vesical disturbances are not infrequent. An elongated kidney on one side can sometimes be palpated in the presence of this condition, and radiography shows the kidney at a lower level. Obstruction to the ureteral catheter will also be found at the latter point. Following distension of both pelves, pain will be felt on the same side. Pyeloureterography, however, is the only certain method of diagnosing unilateral fused kidneys. This procedure will demonstrate the unilateral position of both pelves, and will also reveal the abnormal course of the ureters. Stereoscopic pictures, following inflation of the colon or bismuth enemata, will serve to

demonstrate the retroperitoneal location of the mass, as well as the absence of intestinal involvement.

A unilateral fused kidney may be differentiated from carcinoma of the intestines by the absence of blood in the stools and by its smooth, regular outline. It is usually fixed, consequently it cannot be moved upward like a simple floating kidney or a movable liver or spleen. Following exposure, an unilateral fused kidney is easily recognized by its form and size and the direction of one ureter toward the opposite side of the bladder.

SUPERNUMERARY KIDNEYS

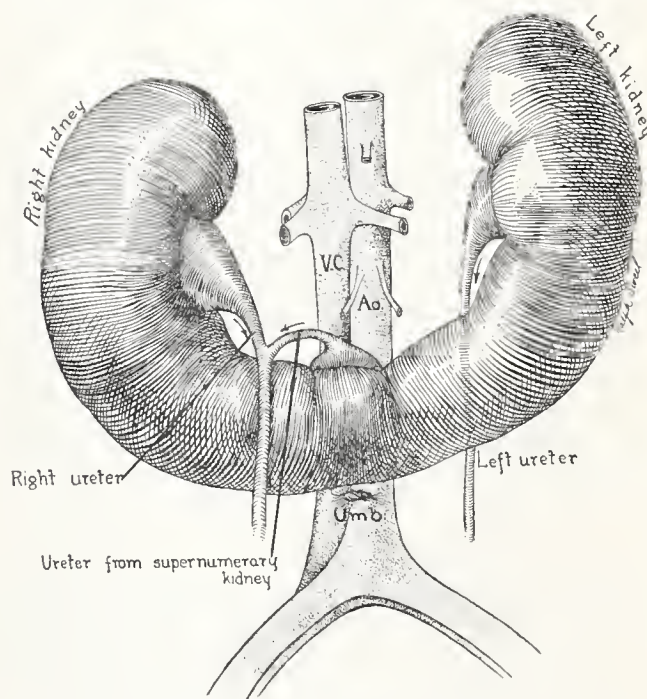
Supernumerary kidney is the rarest of renal anomalies. In a series of 24 cases, 23 of which have appeared in the literature and to which my own case has been added, 15 were on the left side, 7 on the right side, and but 2 in the midline. The sex was mentioned in 21 cases, 11 were found in females, and 10 in males. Two supernumerary kidneys are evidently extremely rare. Although Voigtel, in 1805, mentioned eleven or twelve writers who reported the presence of four kidneys, the only references to this condition since that time were cases reported by Monquoit and Oleson. The former found a kidney from seven to eight inches long placed transversely across the lumbar vertebrae, which had four pelves, ureters, arteries, and veins. In Oleson's case, the organ lay with the two extremities in the usual situation of the kidneys. The lower margins of what should have been the normal kidneys were continuous, with no apparent break in their structure. Two adventitious kidneys existed, turned with their hila directed obliquely outward and downward and their inferior margins continuing across the front of the aortic bifurcation. Each of these four kidneys was anatomically, and apparently functionally, perfect, with pelvis, ureter, artery and veins only differing from normal kidneys in fusing imperceptibly into each other.

Since the United States Marine Hospital report of a case of supernumerary kidney in 1885, other cases have been reported by Hyrtl, Wedensky, Mills, Israel, Gottfried, Depage, Hansemann, Rustschinski, Calabrese, Isaya, Tonkou, Cadenat, McArthur, Gavard, Monquoit, Oleson, Cheyne, Wilcox, Kretschmer, Samuels, Kern and Sachs, Newman and Barlette. In Kretschmer's case the supernumerary kidney contained thirteen stones. It was found on the left side in a woman 27 years of age. It lay beneath the left kidney, and had its own blood supply and a ureter which united with that of the left kidney. The latter was also full of stones. Samuels, Kern and Sachs reported a case of supernumerary kidney, the ureter of which opened into the vagina. The organ was situated on the right side. Gavard reported a case in which a supernumerary kidney was imbedded transversely in front of the lumbar spine. This central kidney had its own ureter, which joined that of the right kidney. Wilcox reported a case in which the three fused kidney elements were represented by an irregular, nodule mass in the midline at the level of the brim of the pelvis. Three separate pelves which fused into one huge, dilated pelvis were present. Newman mentioned a case in which a pear-shaped supernu-

merary kidney was situated close to the upper margin of the left kidney. Cheyne reported a case in which the patient suffered from definite abdominal pains, indigestion, and a general hysterical condition. When the pain was severe, there was a diminution in the quantity of urine passed. He thought that the symptoms were due to mobility of the kidney, with slight pressure on or kinking of the ureter.

CASE REPORT

My patient, a married woman 23 years of age, complained of chronic constipation, backache, most pronounced in the lower lumbar region, general weakness and a "tired feeling" on exertion. She had suffered from constipation, which was severe enough to require a laxative every other night, for three years. The other symptoms were of one year's duration. The backache was relieved by rest in bed. It was worse during the menstrual period. The latter was accompanied by severe cramps in the lower abdomen. Six weeks before entering the hospital she had remained in bed for three weeks. After getting up she flowed for two weeks, the last three days of which she spent in bed. Abdominal examination was negative except for the presence of a firm, smooth, oval mass about the size of a large



hen's egg, a little to the right of the midline and just above the umbilicus. It was slightly movable and gave the impression that it might be connected with the right kidney. It was hardly sensitive to pressure, although manipulation occasionally caused sharp pain. Aortic pulsation, more forceful over the inner half of the mass, could be detected. The pelvic examination was negative. Examination of the gastro-intestinal tract was also negative. The urine was chemically and microscopically negative, and the patient had never complained of any urinary disturbances. Cystoscopic examination showed a normal bladder sphincter, mucosa, and ureteral orifices. The latter were readily catheterized to pelves which were but slightly displaced downward. Kidney function was slightly increased on the right side. A pyelogram of the right kidney pelvis revealed marked overlapping of the calices. An abnormality of the kidney or adjacent structures was then suspected, and an exploratory laparotomy deemed advisable.

The abdomen was opened through a right rectus incision, and the posterior peritoneum incised over the most prominent portion of the mass. A kidney with normal pelvis and ureter was then seen lying transversely across the lumbar vertebrae. The hilum was directed upward, and the ureter ascended about 1½ cm., then turned to the right, descending about 1 cm., where it fused with the right ureter. Palpation disclosed the fact that both poles of this

kidney fused imperceptibly with the lower poles of the right and left kidney, the entire structure thus resembling the horseshoe type of kidney. Further exploration revealed an appendix which showed evidence of previous inflammation and a cystic ovary. Both of these structures were removed. Following operation, the patient's symptoms were somewhat improved, but she still complains of pain in the hypogastric region, worse during menstruation.

There are no characteristic symptoms attributable to a supernumerary kidney. The condition is usually discovered following investigation because of some pathological condition with which it is associated, as like all anomalous organs they are more susceptible to disease. The presence of additional ureteral orifices in cases of supernumerary kidney is suggestive, but without pyeloureterography a positive diagnosis of supernumerary kidney is impossible.

Pyeloureterography, with the catheter just inside the right ureteral orifice, would probably have revealed the supernumerary pelvis and ureter in this case, but it has been impossible to gain the patient's consent to a repetition of this procedure. Pyeloureterography following the administration of sodium iodide by mouth failed to disclose these structures.

After a somewhat extensive search of the literature, I have been unable to find a single record of transverse fusion of three kidneys. This case differs from a horseshoe kidney, in the number and location of the ureters and in its position above the umbilicus. The right and left portions of an ordinary horseshoe kidney are lower than the normal position, and the inferior border of the isthmus is seldom higher than the sacral promontory. If one chooses to classify this case as a horseshoe kidney, it is still unique, as a careful review of the literature reveals no instance of a third ureter connected with the isthmus of a transversely fused kidney.

Flood Building.

DISCUSSION

LOUIS CLIVE JACOBS, M. D. (Flood Building, San Francisco)—Dr. Stevens' paper is of especial interest, as it emphasizes the prevalence of anomalies of the kidney. This is of great importance in the diagnosis of abdominal tumors, inasmuch as malformation of the kidney is usually associated with considerable nephritic displacement.

The clinical diagnosis of a bilateral fusion of a supernumerary kidney is practically impossible. A cystoscopic study, with the insertion of the opaque catheter and the introduction of fluid into the kidney pelvis, in conjunction with the roentgenogram, is the most practical way of determining kidney pathology, and in Dr. Stevens' case was of material value in the diagnosis of the kidney anomaly.

Malformations of the kidney have often been mistaken for malignant growths. Where it is absolutely necessary to elucidate a differential diagnosis, the procedure to employ is exploratory laparotomy. However, if in the investigation of a kidney tumor-mass one feels justified in treating the kidney surgically, he must first ascertain by direct catheterization and functional tests whether there is another healthy kidney present, independent of the mass.

Anomalies of the kidney are embryologically associated with anomalies of the ureter, and a complete physical examination usually reveals some abnormal embryonic development elsewhere, more often in the urogenital organs.

It is not infrequent with the better-trained cystoscopist to find a greater number of multiple ureteral orifices with two ureters running to a kidney, where formerly this was thought of as a very rare condition. And though there has been, as Dr. Stevens states, but twenty-three cases reported, I am sure there are a large number of other cases which were passed unrecognized, due to incomplete investigations.

BURNETT W. WRIGHT, M. D. (527 West Seventh Street, Los Angeles)—This very interesting and authoritative paper should attract new interest to kidney lesions, not alone from urologists, but from those men who do abdominal surgery. The frequency with which the abdominal cavity is opened for the relief of symptoms originating in the kidneys or ureters, behind the peritoneum, is well known, and in every case in which there is the least doubt, a careful cystoscopy and kidney study should be insisted on. Palpation of both kidneys and along the course of both ureters should be a part of every laparotomy in which there is any question of the cause of symptoms, and if this were done with the care with which the average surgeon investigates the appendix, the gall-bladder, the liver, the pancreas and the duodenum, while working within the abdominal cavity, many anomalies and displacements of the kidney that are being overlooked would be recognized.

Many anomalous and misplaced kidneys function perfectly during life and are not discovered, unless at autopsy or by palpation from within the abdomen during an abdominal section. One of the frequent ways by which they attract attention is by interfering with pregnancy. This is especially true of the misplaced kidney. The enlarging uterus, by pressing on the deformed or misplaced kidney, interferes with drainage and predisposes to retention and infection.

A. S. MUSANTE, M. D. (916 Kearny Street, San Francisco)—It is a pleasure to respond to the request for a discussion of this paper. Dr. Stevens is to be congratulated for having encountered a kidney condition which has all of the characteristics—relating to number, shape, and position—of these anomalies, instead of only the usual one or two, and has not before been recorded in medical annals, and deserves our praise for the studies and the investigations of the literature pursued in preparing his essay. The author's opening statement, "that anomalies of the kidney are more frequently encountered than those of any other organ," should be compared with Keyes' declaration: "Abnormalities of the kidney are very rare" (Urology, 1917).

The case itself is an example of the advantage of the abdominal approach to suspected kidney lesions. The only missing evidence was a pyelogram of the extra organ, which would probably have been obtained "with the catheter just inside of the ureteral opening." The remembrance of this case will impel us to carry out a more thorough survey of the kidney regions in abdominal surgery whenever possible.

E. SPENCE DE PUY, M. D. (Dalziel Building, Oakland)—Dr. Stevens is to be congratulated upon his rather extensive assemblage of references to kidney anomalies, and upon his careful consideration of the same. The question occurs to me, however, and apparently from the concluding sentence in his paper the same thought is in Dr. Stevens' own mind, that possibly the case he reports is not, after all, that of a supernumerary kidney.

Is it not more likely, and the embryology of kidney development would seem to bear out the idea, that the case under consideration is that of a fused horseshoe kidney with reduplication of the pelvis on the right side? This, though, is a question which may not be determined by an ante-mortem examination.

DOCTOR STEVENS (closing)—It is only within the last few years that the comparative frequency of kidney and ureteral abnormalities has been appreciated by the urologist. Their recognition is due to improved diagnostic technique and the increasing popularity of pyelography. A knowledge of the presence of these conditions is of obvious importance to the surgeon when operative procedures are contemplated.

A supernumerary fused kidney could have been produced in our case by the development of two closely approximated renal buds from one of the Wolffian ducts, the fusion occurring because of the close contact of these buds and union of their metanephric substance.

Any man that is faithful can overcome the disadvantages of a country practice, and if he cannot there is something radically wrong with him or with the community. He is entitled to good pay for good service.—Austin Flint (Iowa Medical Journal).

ESOPHAGEAL DIVERTICULA

By E. C. MOORE, M. D., Los Angeles

Diverticula of the esophagus are much more frequent than was formerly appreciated. They ought to be recognized more often and earlier in the course of the disease than they are.

The clinical picture, if formed from all the evidence, is clear and definite.

Good surgery is the treatment of election. The mortality has been much reduced by wider knowledge of what to do and how to do it.

DISCUSSION by George Thomason, Los Angeles; Charles D. Lockwood, Pasadena; and John Hunt Shepard, San Jose.

IN tracing the course of the esophagus, we recognize at its junction with the pharynx, in the median line posteriorly, a union of the oblique muscles of the pharynx and the transverse circular muscles of the esophagus, where there is a small area not covered with musculature, but only a subcutaneous layer. At this point, most of the diverticula occur, due probably to a more than ordinary weakness or a congenital absence of muscle-fiber, which, in the act of swallowing, permits a pushing out of the mucosa and submucosa through this small triangular defect.

The congenital nature of the disease has been based on the analogy to other diverticula of the gastro-intestinal tract; the improbability that the diverticulum on the posterior surface of the esophagus is caused by pull or pressure, because the spinal column offers a rigid background and would prevent any such factors from coming into play; the condition is completely developed when the symptoms first begin to appear. This may be demonstrated by x-ray examination and by gurgling sounds on swallowing, caused by the entrance of air and fluid into the previously existing space of the diverticulum; there are no manifestations in earlier life because the tissues are elastic, but the turgor is lost later in life (at 40), and symptoms may suddenly appear as a result of the condition which has existed for a long time, but has been dormant; and upon the fact that there is no recurrence after radical operation and the characteristic preference for the male.

In the weakened triangle (Lannier-Hackerman area) we find the pulsion or pressure type of diverticula. It is rare to find a true pressure type in any other part of the esophagus.

Traction diverticula may occur at any point, but usually are within the thoracic part of the esophagus and are caused by some previous irritation such as the cicatrix of a broken-down lymph gland or some other pathological condition of the mediastinum pulling on the esophagus. Zenker defines the traction type as one "in which the wall of the esophagus has been dragged outward by an external force."

Beverman found in sixty cases that 73 per cent were due to tubercular infection and other diseases of the lungs, and that pericarditis was responsible for the remainder.

This traction diverticulum is small and usually located at about the level of the bifurcation of the trachea. It is not met with so often as the pulsion and probably occurs under tension. While it may be congenital, it is not progressive. Occasionally, it is

incidentally found while passing the stomach tube or in x-raying the gastro-intestinal tract.

Ordinarily, we find diverticula of the esophagus considered under these two heads. Halstead classifies them as:

A. Pressure or pulsion which include:

1. Those of the pharynx.
2. Those of the pharyngo-esophageal junction.
3. Those originating near the bifurcation of trachea just above the left bronchus.
4. Those deep-seated, whose orifice is a little above the diaphragm, with the fundus of the sac resting on it.

B. Traction diverticula.

C. Traction-pulsion diverticula.

Treatment from a medical standpoint applies particularly to the traction type, and is directed to the primary lesion that is responsible for the production. If mucus or decomposing food is present, lavage is indicated. The patient is advised to avoid coarse food and alcohol. The pulsion type eventually becomes surgical. The larger may prove to be fatal as they increase in size, and as the amount which they can contain not only increases but becomes a source of danger and discomfort from decomposition of the contents, swallowing becomes more and more difficult until, in the extreme picture, the patient in his effort to swallow simply fills up the diverticulum, and little food, even liquid, passes into the esophagus, and unless relieved, starvation may result. Sometimes building up by feeding through a small stomach tube or catheter is necessary, or, in extreme cases, by a gastrostomy. The pouch fills from above; it is oval and the outline distinct. Its location is cervical, posterior or posterolateral in relation to the esophagus, and the diverticulum follows the movement of deglutition.

Percussion may suggest the diagnosis. The use of the catheter and sound may supplement this evidence. The method of guiding the sound by a silk cord, swallowed, and allowed to pass into the intestine until anchored there, is often resorted to. Radiologic examination is necessary.

It is possible to mistake the condition for a high spasm of the esophagus; also it may be interpreted as a dilatation above a constriction and not a sac lying along the esophagus. Different radiograms will promote distinguishing data. The ejection phenomenon is of diagnostic value; this consists of emptying the contents of the diverticulum into the esophagus on deglutition when no food is given. With the possible existence of a diverticulum being kept in mind, together with characteristic history and typical radiographic findings, its recognition often is easy without sounding or esophagoscopy.

The neck of the pulsion diverticula seems always to be small, but the pouch may be large enough to hold ten or more ounces. It gradually enlarges and develops a semi-inflammatory thickening of fibrous tissue, at first in mid-line growing down in front of the spine, then bulging to the sides, increasing usually more to the left. The large sacs grow into the mediastinum and become intra-thoracic; here they increase still more rapidly. Walls of the large

sacs are thinner than those of the small, less fused and easier to separate.

A diverticulum in the esophagus has the same effect as a foreign body which irritates the parts. Symptoms depend upon the size and position. There is a tendency to cough and other signs of irritation, on account of the proximity to the larynx. Clucking and gurgling sounds occur on speaking and swallowing. There may be a sudden explosive emptying of the pouch if the mouth is wide, and there is a strong muscular contraction. There is dryness of the pharynx, difficulty in swallowing, and regurgitation of food. At times food suddenly flows out of the nose when the patient bends over, pieces remaining wedged in the esophagus and not passing down. The patient is obliged to take but small quantities of food into the mouth at a time, swallow completely before taking more food, and may use various manœuvres of position and pressure to facilitate deglutition. There is excessive secretion of mucus, the breath is bad from decomposed food and constant indigestion. If the pouch is large and filled the patient complains of a lump in the throat. It may be so large as to cause serious respiratory symptoms with increased difficulty in swallowing, relieved by induced vomiting. Pain is not usual unless ulceration occurs.

Fully developed symptoms comprise obstruction, dysphagia, pain, regurgitation, especially when the body is prone or inclined forward. Fetid breath, congested face, cervical tumefaction, gurgling, compression signs, such as dyspnoea, neuralgia, and voice changes are frequent symptoms. The patient is usually nervous, irritable, and choleric. Occasionally, he presents only symptoms of psychosis, and only by exhaustive study is diverticulum discovered.

Medical treatment is often demanded, but is never fully satisfactory. It seeks to keep the pouch empty and overcomes stenosis.

In the pulsion type, surgery is indicated. Good results are obtained. Formerly, surgery was attended with great risk, and performed only to meet an emergency. Local anesthesia was used. The danger then lay in the way the sac was isolated and amputated. Many of them leaked into the raw tissues; sepsis and mediastinitis followed.

There are various methods for eliminating the sac. It can be drawn up by forceps and pushed down inside the esophagus, providing adhesions do not prevent. Other methods include external removal, change of position, and obliteration. The great danger is from leakage and infection, suffocation from the contents of the sac pressing with a subsequent broncho-pneumonia.

If a general anesthetic is used, the sac must be well emptied before attempting surgery, so as to prevent any chance of the contents pouring into the trachea, which would probably produce suffocation or cause a broncho-pneumonia.

Operations may be done in one or two stages. When the sac is small it matters little what method is chosen, but when large and intra-thoracic, the two-stage operation is advisable.

The incision usually recommended is parallel to the anterior border of the sternomastoid muscle. The collar incision is preferred by many. If one-

third of the mass is behind the anterior border of the sternum, and the skin and the platysma muscle is dissected both ways from this, there are few vessels to ligate. By blunt dissection and retractors, the sternomastoid and omohyoid muscles and the anterior jugular vein and common carotid artery are drawn back. Anteriorly, the sac is seen just behind and extending below the cricoid cartilage. The sac is light-colored and has a small plexus of veins over it. The large ones are drawn out with more difficulty, and much care is needed to keep from rupturing the sac. There is not much difficulty in amputating any of the sacs, and suturing at the junction with the esophagus. Two rows of chromic catgut and a small rubber drain are usually placed. Some elevate the sac and fix its fundus to the hyoid bone, to prevent infection, cellulitis, and fistula. Murphy delivered the sac unopened, then twisted it; later amputating, closing fistula and invaginating the sac by sutures.

Only a few hundred operations are on record. The mortality has been given as high. In a series of 200 cases there were reported 16 deaths; in 109, 12; and in 100, 10 deaths and 28 fistulas. Judd reports 3 deaths in 75 cases. The reported mortality of 16.6 per cent includes those cases operated on before rigorous asepsis was observed.

In selecting a method of operation, we want the one where there is least danger from infection, cellulitis, and fistula. I believe the most satisfactory method is where the sac is fixed to the skin incision and left unopened, with its neck ligated to slough out of the packed wound and be removed a few days later. Excellent results have been obtained with this procedure. Owing to the lack of time, I shall cite only my most recent operative case.

A man, age 63, in addition to an esophageal diverticulum, had cataract on each eye. He had seen an eye surgeon for the removal of the cataracts who, on examination, felt that the irritation of the patient's throat with cough and difficult swallowing would interfere with the success of the cataract surgery by breaking open the eye with ensuing disastrous results; therefore, the case was referred to me for treatment of the esophageal condition before further attention to the eyes. The patient had had trouble in swallowing his food for twenty-six years. Within a few minutes after eating, food would be regurgitated. The throat was much irritated, and it seemed as if there were a lump there. The initial symptoms followed diphtheria twenty-six years before, when he believed his throat to be partially paralyzed. The condition never disappeared and became progressively worse during the past eight years. In ten years he had lost thirty-five pounds, was very nervous and had had considerable sore throat, for which the tonsils had been removed.

Radiographs showed a diverticulum of the esophagus. The operation was performed under general anesthesia. The diverticulum was found to arise from the left side of the cricoid cartilage. It was 6 x 3 inches in size, and the neck was about half an inch in diameter. The operation consisted in dissecting and freeing the sac, bringing it out between the sterno-mastoid and sterno-thyroid muscles through a collar incision, with drainage into the sac.

On the sixth day the sloughing sac was amputated. The patient made a good convalescence and was out of the hospital on the eleventh day. A few weeks later the cataracts were removed.

These patients are not considered so rare as they were ten or fifteen years ago, nor as poor surgical risks. There is wider knowledge of the possibility of their existence and a better acquaintance with the typical syndrome they produce. If the patient is in good physical condition, little fear is warranted in making a favorable prognosis. If the patient has become emaciated from inability to swallow food, then we have the task of building him up by feeding, and getting him in fit condition of nourishment before operating. In extreme cases a gastrostomy may have to be done preceding treatment of the diverticulum.

A surgical technic that will prevent leakage and infection is the next step. This has been accomplished, as stated before, by bringing the sac through and attaching it to the skin incision; ligating and amputating later.

With the above points in view, it would seem possible to perform radical operation in these cases of esophageal diverticulum with a small mortality rate, and with ultimate good results.

Merchants National Bank Building.

DISCUSSION

GEORGE THOMASON, M. D. (Hollingsworth Building, Los Angeles)—Doctor Moore has covered the ground so thoroughly that there is little left to be said. I have had a number of these patients in the past few years. One sign which has not been mentioned is that of a change in the contour of the neck, especially, of course, in the larger and more fully developed diverticula. As the patient swallows and the diverticula fills, there is a marked bulging of the neck on that side. With the regurgitation of the food and the emptying of the diverticula, the neck promptly returns to its normal appearance.

The chief reason why the traction diverticula are practically never of surgical importance, is that the opening into the esophagus is usually the lowest part of the diverticula and, therefore, empties readily and does not tend to increase in size or embarrass the function of the esophagus.

So far as operation is concerned, my personal experience has been with the Sippey-Bevan operation of puckering the sac and folding it upon itself accordion-like, thus collapsing the diverticula and plugging the opening with the sac itself.

One fundamental feature for success in any type of operation is to either keep the sac entirely closed as in the Sippey-Bevan operation, or do the two-stage operation of the Jackson-Gaub-Judd type. The absence of any serous coat on the esophagus means almost certain failure so far as immediate closure is concerned, and to open the sac before adhesions have formed around the site of operation is to court disaster from acute mediastinitis.

CHARLES D. LOCKWOOD (Citizens' Bank Building, Pasadena)—I wish to report briefly a case of diverticulum of the esophagus upon which I operated over twenty years ago. I think it is one of the first cases in which the x-ray and an opaque solution were employed for diagnosis.

The patient was a woman about 50 years of age, with a very large diverticulum in the cervical region. An x-ray was first taken with a stomach tube in the esophagus, through which a copper wire had been passed. The tube could not be passed into the stomach, but coiled up in the sac of the diverticulum. Later pictures, with a bismuth mixture filling the sac, gave an excellent outline and revealed the size of the diverticulum.

The patient became so emaciated from regurgitation of food that a gastrostomy was done before attempting removal of the diverticulum. She gained thirty pounds in weight after gastrostomy. The sac was then exposed through the neck, and partially removed. It was so large

that complete removal was impossible. The remaining portion of the sac was plicated and its cavity greatly reduced. The patient remained well for several months and was able to swallow normally, but the diverticulum recurred and she finally died of starvation. In such extreme cases I believe gastrostomy is of great value.

JOHN HUNT SHEPARD, M. D. (San Jose)—A year ago, at our meeting in San Francisco, I read a paper before this Section on this same subject and reported two cases seen during the previous two years. Since then I have seen another case. I am confident that this condition is not as rare as we formerly considered it. These diverticula should be recognized before they attain a large size and seriously interfere with health. There is one point mentioned by Dr. Moore which I wish to emphasize, as I considered it the most important point in technique in all esophageal work. I refer to the use of the silk thread. With a little patience and perseverance it is possible to get the thread through any and every incomplete esophageal obstruction. Though at times it may be advisable to follow the thread with a linen fish-line, or even introduce over the thread a fine piano wire, once the silk is anchored in the intestine the continuance of the examination and treatment is rather easy. By the use of this technique, gastrostomy is practically never necessary. In all cases where caustics have been swallowed, the silk thread should be introduced before cicatricial contraction begins and kept in place until the degree of stenosis is determined. I agree with Dr. Moore that it is preferable to use a two-stage operation in all cases of large diverticula, but as these cases become recognized earlier, there will be fewer requiring the two-stage method.

ROENTGEN THERAPY OF UTERINE MYOMA DURING PREGNANCY

By JOHN D. LAWSON, M. D., Woodland, Calif.

(From the Department of Radiology, Woodland Clinic)

A review of the literature. Full report of one case. For literature reviewed, see Index Medicus or Cumulative Index, A. M. A.

Discussion of the value, indications and contra-indications of extensive roentgen treatment in the pregnant woman.

Pelvic irradiation of females who may become pregnant should be done with much care in selection of cases, and either only very light dosage employed or complete castration effected.

Pelvic irradiation of pregnant females should not be done except where there are very extenuating circumstances, and in any event the patient and her husband should be informed of the possibility, if not probability, of a deficient child.

Irradiation during the later months of pregnancy, if conclusions may be based on the results in six cases, is less injurious to the fetus than irradiation during the early months.

It would seem that the longer the elapse of time between irradiation and subsequent pregnancy, the greater is the probability of a normal child being born.

Radiography should be limited during pregnancy to the minimum.

Roentgen abortion or castration should never be performed except where there are definite reasons why the ordinary surgical procedures should not be followed.

There seems to be little difference between the actions of long and short waves on ova, either fertilized or unfertilized.

Additional evidence and opinions contained in the discussion by Francis B. Sheldon, Fresno; Kurt F. Behne, Los Angeles; Frederick H. Rodenbaugh, San Francisco.

THE selection of title was made hurriedly and unfortunately. Facts which should be brought out in reference to irradiation of the germ cells previous to fertilization, as well as other pelvic conditions treated during pregnancy by irradiation, are not included in the title, but I feel that it is best to

make the title a misnomer rather than to limit the scope of this paper conform to it.

Certain results observed by different men on irradiation of the male and female cells previous to their union have a direct bearing upon the result observed after irradiation following impregnation, and a consideration of one without the other would be incomplete.

The first work showing effect of irradiation upon fertilization of cells was probably done by F. Shaudinn in 1899, on protozoa. His article, however, did not cover the subject with any great accuracy, nor were his observations of any great value, except as a pioneer in the field.

Bohn, in 1903, described deformities and arrests in development of frog embryos resultant upon irradiation. His work was quite complete and well controlled, and is the first real scientific effort along this line.

Gilman and Baetjer, in the same year, reported results of experiments in which they irradiated the fertilized ova of amblystoma. They noted particularly that there was at first an apparent stimulation in growth of the embryo and then a depression. There always was a resultant deformity characteristically of the head and brain.

Much experimental work continued, especially under the observation of Hertwig and his school, who did extremely painstaking work, especially on the semen of frogs and the eggs of seagulls and various nematodes. This school verified the observation of Gilman and Baetjer, especially on the resultant skull and brain injury.

Baldwin working with frog ova in 1919, Bagg in 1920, and Little and Bagg in 1923, working with mice, noted deformities of the products of the irradiated ova.

Bagg, in his work, irradiated female mice previous to impregnation, shortly after fertilization, and during the latter portion of the pregnancy, and found similarity in the results obtained by the three methods. He used in his experimental work radium emanation in three ways: first, as a gamma ray pack; second, subcutaneous injection; third, intravenous injection. The results were comparable in all three methods, the deformities observed consisting chiefly of injury to the head and neopallium and numerous areas of subcutaneous extravasation. Abortion was frequent in these cases, especially when the irradiation was given during the early part of the pregnancy. There did not seem to be any difference in the end-result of the irradiation of the female before fertilization and irradiation during pregnancy. The most common deformities were noted in the brain and eyes. Blindness being a very prominent feature of all these experiments.

Little and Snyder, in 1923, continued the work of Little and Bagg, but their observations did not allow them to verify the latter's work.

From a clinical standpoint, probably no therapeutic pelvic irradiations were given during pregnancy until 1914. No observations were registered in the literature until 1920, when Ashenheim reported a case in which the patient was given five irradiations for myoma between the second and the sixth months of gestation. The fruit of the preg-

nancy was a male child delivered at eight months, underweight and underdeveloped, showing a definite microcephaly, aplasia of the right optic nerve, atrophy of the left optic nerve, neuroretinitis, strabismus, mystagmus, and imbecility. This child was followed through the age of 6 years, and was definitely slow in development. The irradiation in this case was evidently of the short wave type, as the treatments were one hour each and included both a posterior and anterior field of application, other factors used not being noted.

Stettner, in 1921, reported a case of treatment for myoma during the second month of pregnancy, with the resultant delivery at eight months of an underdeveloped child, weighing 1850 grams, showing hypospadias, strabismus, neuroretinitis, and definite mental changes. At 2 years of age the child could not speak. The dosage in this case was also probably of the deep therapy type, copper filtration being used, and the castration dose of Seitz and Wintz being administered.

Berkeley, in 1921, reported a case of treatment of carcinoma of the cervix in a pregnant woman, the irradiation being administered in the sixth month of gestation. The patient was delivered at term by hysterotomy, a normal viable child being obtained. The only abnormalities noted were two bald spots on the child's head, corresponding to the site of application of the radium. This child was followed to 7½ years without any defects being noted, the hair coming in shortly after birth. Radium was used in this case, and the dosage totaled 3712 mgh., evidently chiefly gamma rays being used.

Field, in 1922, administered heavy irradiation during the sixth month of pregnancy to a patient with carcinoma of the cervix. The fetus was delivered normally in the eighth month, was apparently normal in all respects, except that it weighed but four pounds (1.8 kg.) at birth. At the end of three and one-half years reports indicated it was a healthy child. The treatment in this case consisted of 7320 mgh. of radium, only gamma rays being utilized.

Bailey and Bagg report two cases of pelvic irradiation during pregnancy. The first had carcinoma of the cervix on which both bare emanation tubes and gamma pack were used in the sixth month of gestation, the patient being delivered by hysterotomy for eclampsia in the eighth month. The child weighed four and one-half pounds (2 kg.) and was apparently normal, but died in ten weeks of pneumonia.

The second patient referred to in this article had an epithelioma of the vulva and was treated with both bare tubes and gamma radiation in the fifth month of gestation. A normal child was delivered at term by hysterotomy and was living and well at time of report.

These are the only authentic records of therapeutic pelvic irradiation during pregnancy which I have been able to discover. There is, of course, the work of Archangelsky, who in 1923 reported a series of therapeutic abortions chiefly for pulmonary tuberculosis. Ten cases, the duration of pregnancy being from one and one-half to four months, were

treated. In seven of the cases abortion resulted. The remaining three were not successful within the time observed, although none of them was allowed sufficient time to obtain a definite result, operative interference being instituted in each case shortly after the last treatment. Three pregnancies were noted in the series after abortion, but the results of these pregnancies were not noted. The factors used by Archangelsky were as follows: 2 Ma., 55 Kv., 1 mm. al, distance and time not stated, but an average dosage of 45 H. was used, evidently bringing the irradiation under the classification of long-wave therapy.

Probably the most important feature of Archangelsky's series has not been included in his report, namely, the results of the three pregnancies following therapeutic abortion.

Considering now the influence of pelvic irradiation of the female not pregnant, but with a reasonable possibility or probability of future pregnancy, we have numerous articles referring to this subject, and while, as was stated at the beginning, the title itself is not sufficiently broad to cover this phase, nevertheless it appears to me that the consideration of this angle of irradiation cannot be divorced from that of treatment during the gestation period.

Stacy, in 1922, reviewed the cases handled at the Mayo Clinic, the total of which was 1113, in which pelvic irradiation for various conditions was employed in women of all ages. This, of necessity, would include a large number of cases where there was no possibility of future pregnancy; it also presumably included a certain number of cases in which definite follow-ups could probably not be obtained. However, in this series Stacy reports ten pregnancies, and of this ten, four of the children were normal, and at the time of writing were living and well. Three of the pregnancies resulted in a still-born fetus. Two of them miscarried, and one was pregnant at the time the article was written. This would give a percentage of, at the most, 50 per cent normal pregnancies. Stacy does not note after what type or amount of irradiation these pregnancies occurred, so that the influence of the amount and type of irradiation cannot be taken into consideration.

Werner, in review of his cases, 990 for essential metrorrhagia and 552 for myoma, notes that there were twenty-four pregnancies following irradiation; of these twenty-four, thirteen were carried to term with a normal labor and a normal living child as a product. One case was delivered normally about one month before term, the child being viable and normal. Nine cases aborted between the second and fifth months, three of these abortions being induced. One fetus was delivered by hysterectomy before term, the reason for the hysterectomy not being given. It is rather difficult to analyze Werner's statistics, as four of twenty-four cases were artificially terminated and the end product could not be, or was not, determined.

Clark and Keene, in 1922, reported a series of 527 cases of pelvic irradiation for various conditions, with seven pregnancies following irradiation. Out of these seven cases, only two were delivered at term of a normal child.

In Polak's series of treatment of menorrhagia in

young girls, two pregnancies have been noted, the end-result of these pregnancies not being stated.

Steiger reports one case of pregnancy following a two-year period of amenorrhea after irradiation, with delivery of a normal child.

Of much interest is the case of Bailey and Bagg in which irradiation, by radium pack of the intrascapular region for glioma of the cord was administered in the third month of pregnancy with hysterotomy at term, a viable child being delivered. However, the child had a spina bifida and a double club-foot, and died at the end of fifteen days. A second case in their report is one of Hodgkins' disease, in which irradiation was given during May and December, 1917. The areas irradiated were neck, groins, back and axilla. Pregnancy began at about the time of the last irradiation, and the patient was delivered in September, 1918. The child had a malformation of the head with the sagittal suture open, exposing the brain and died in eleven hours.

These writers also report two cases of pregnancy following fibroid irradiation. The first became pregnant about nine months after treatment and was delivered of a large stillborn child. The second became pregnant one and one-half years after treatment and was delivered of a normal child at term.

It is probable that in all the cases cited all types of irradiation, including short wave and long wave therapy, were used, as the statistics extend over a sufficient length of time to include the periods of prevalence of both types of treatment.

We are, of necessity, considering two different conditions: First, the effect of irradiation on germ cells previous to fertilization and second, the effect of irradiation on the fertilized ovum in its different stages of development.

Under the first consideration, in view of the various reports, we must believe that the ova will be definitely disturbed in a high percentage of cases by irradiation. It is the contention of the German school that this disturbance, if irradiation is pushed to a sufficient degree, will result in destruction of the ova and graffian follicles, and that by this destruction the common results are obtained on all menorrhagias, metrorrhagias, and fibromyomata. The French school contends that these results, especially in the case of fibroids, are due to direct action on the tumor cells and endometrium. They do not, however, dispute the ovarian effect manifested by the cessation of menses and the production of distorted feti.

The second part of our statement would seem to be the one most difficult on which to draw any definite conclusion, in that only six clinical cases have been reported. If we can base our conclusion upon animal experimentation, there seems to be much evidence that definite developmental defects will be noted following fetal irradiation in utero; especially there seems to be proven by Archangelsky's work the fact that the pregnancy may be terminated during the first three months by irradiation of ovum and uterus. These experimental findings have been quite well borne out by the clinical evidence in the case reports cited.

This would necessarily bring up this question:

To how much exposure may be subject pregnant patients in radiographic work? Horner does not believe that there is any danger up to 3000 m. a. s., this being the limit in 250 cases which he had handled, each of which had had some radiography. He has never noted any influence of the exposure on the fetus. I have personally, in a number of cases, made gastro-intestinal examinations on pregnant patients in the first to eighth month of gestation, with exposure, chiefly abdominal, varying from 2000 to 4000 m. a. s., without noting any effect upon the fetus. There is, however, one case in my series in which there was a total exposure of about 5000 m. a. s., including a gastro-intestinal examination and two stereoscopic sets of the pelvis and fetus, one at seven months and one at about term.

In this particular instance, the child's birth weight was six pounds (2.7 kg.), and her progress has been very slow. She is now eleven months old and weighs slightly less than sixteen pounds (7 kg.). There are no definite mental symptoms nor findings, but the child does not conduct herself as does the average child at the same age. She does not speak, is rather apathetic, and dentition has also been delayed.

I have never associated the amount of radiographic exposure in this case with the child's deficiency. However, in view of the literature noted in the preparation of this paper, I believe that the exposure was a definite etiologic factor in the underdevelopment of this child.

We may only speculate on the influence of irradiation on the general development and well-being of the child noted above. However, it has been my good fortune to observe one case of particular interest in which I am certain x-rays played a part in the production of a child below normal—not permanently, but for the first two years. Acknowledgment is hereby made of the assistance of Dr. M. P. Burnham and Dr. F. H. Rodenbaugh of San Francisco in the handling of this case.

Mrs. A., housewife, age 29. April 10, 1921. *Family history*—Negative. *Past history*—Nothing of significance except the history of being a bleeder. *Menstrual history*—Began at thirteen, regular, with severe dysmenorrhea until a few years ago, flow lasts six to seven days, profuse first two days. Last period began December 22, 1920; was normal. Expected date of confinement September 29, 1921. *Previous pregnancies*—None. Married in 1914. *Abnormalities during present pregnancy*—Except for usual nausea and slight show of blood on March 14, patient was well until one week ago, when she had an attack of pain in region of left scapula, suggestive of acute pleuritis. Three days later pain appeared in pelvis and involved both sides, more marked on left, radiating down left leg. Pain was very severe and had to be controlled with morphine.

Physical Examination—Young woman of slight build, rather undernourished and anemic in appearance. General condition fair. Fundus about two fingers below umbilicus and pushed to right, where patient states it has been for some time. Mass about size of a large grapefruit felt just above pubis; firm, but not nodular. Another mass, movable, about size and shape of a medium-sized banana on left side attached low and extending upward. Abdomen very tender and sensitive, especially over tumor masses. *Vaginal examination*—Cervix hard, showing round tumor mass as above described; cervical canal not located; impossible to insert finger between tumor mass and pubis; small movable mass to the left and passing upward toward cul-de-sac, about three centimeters in length and two centimeters in diameter. The whole uterus has been pushed, or drawn, as the case may

be, upward until its actual size cannot be exactly ascertained. The whole abdominal and pelvic structures are tender and sensitive to touch. *Diagnosis*—Multiple fibromyomata complicating a pregnancy of about four months. *Comment*—The factors in all irradiations were as follows: Ninety Kv—5 ma—12 minutes FSD 25 cm.—Filter 5 mm. al. Both anterior and posterior fields were used. *April 19*—After roentgen treatments on April 15, 16, and 18, patient states that pain has been markedly relieved. *April 24*—Pain has been absent for several days, no symptoms whatsoever. Patient eats and sleeps well, gaining in health. *May 10, 1921*—Patient states she has been free from pain for past two weeks; feeling very well, and can perform her usual household duties. Another irradiation given on this date.

Abdominal Examination—Abdomen only slightly tender, and that on deep pressure over tumor masses. Tumor mass which involves the cervix has decreased slightly in size. All other tumors decreased considerably. Patient was able to come to the office alone for examination. *May 12*—Irradiation. *June 8*—No pain since last examination, eats and sleeps well, no discomfort whatsoever. Fetal movement marked and vigorous. Patient states that she first felt fetal life on May 18. *Physical examination*—Shows cervical tumor mass about size of an orange, all other tumor masses not palpable. *Vaginal examination*—Cervix has not regained its identity, but is not so hard and not sensitive. Uterus is coming down farther into pelvis, two fingers can be inserted between tumor mass and pubis. *September 26, 1921*—Since last record, patient has had some pain, never extremely severe, mostly in left lower quadrant. She has gained from 115 pounds to 145 pounds in weight, and general condition has been good.

Physical Examination—Blood pressure, 120-60. Fundus to thirty-eighth week. Tumor mass rather soft at cervix, about the size of an orange. One tumor mass about 5 cm. in diameter, and 2 cm. thick just in front of head in left lower quadrant.

Operation—September 27, 1921. Median incision. Conservative Cesarean section, subserous myomectomy.

Findings—Uterus found twisted to left with right tubo-uterine junction anteriorly. Exploration revealed about eight small subserous myomata scattered over uterus, ranging in size from a pea to a walnut. One large myoma about 6 cm. in diameter and 9 cm. long at the left and including the cervix. In cutting through the uterine wall, it was noted that the thickness was greater than normal, and quite fibrous. A female child was delivered, and breathed before the cord was severed. Four of the largest and most prominent myomata, exclusive of the large cervical tumor, were removed, being easily enucleated. Due to the fact that patient wished to become pregnant if possible, and also that the blood loss had been much greater than in the average case, it was deemed advisable to allow the uterus to remain, as total hysterectomy would have been necessary to remove the large myoma.

Except for a moderate rise in temperature for the first seven days post-operative, her convalescence was uneventful and she returned home sixteen days from the time of her operation, in as good a condition as the average Cesarean section at this time. The child was apparently normal, weight five pounds (2270 grams), cried vigorously, nursed well and conducted itself as a normal infant should. The myoma remained regressed somewhat, but there was some pelvic pain, and further irradiation was administered on the following dates: October 30; November 8, 15, 23, 28; December 6 and 13, 1921; and January 17, 1922, the factors being the same as in the previous treatments except the time was decreased to eight minutes, and the voltage increased to 105 Kv.

The myoma following these treatments disappeared entirely, and the patient was in excellent health six months after delivery. Her menses had not appeared at this time.

The child at this time, however, was rather frail and anemic, and while there was no definite deviation from normal, she was below par physically and mentally.

All effort to establish direct communication with this patient since that time has been fruitless, but the observation of a colleague six months ago was to the effect that

the child was at least one year mentally and physically backward.

Dr. Rodenbaugh informs me that he has very recently observed both mother and child. The child, to all intents and purposes, is normal. The mother's general condition is excellent; her menses have returned and all myoma are absent, the uterus being small and fibrous.

CONCLUSIONS

1. Pelvic irradiation of females who may become pregnant should be done with much care in selection of cases, and either only very light dosage employed or complete castration effected.

2. Pelvic irradiation of pregnant females should not be done except where there are very extenuating circumstances, and in any event the patient and her husband should be informed of the possibility, if not probability, of a deficient child.

3. Irradiation during the later months of pregnancy, if conclusions may be based on the results in six cases, is less injurious to the fetus than irradiation during the early months.

4. It would seem that the longer the elapse of time between irradiation and subsequent pregnancy, the greater is the probability of a normal child being born.

5. Radiography should be limited during pregnancy to the minimum.

6. Roentgen abortion or castration should never be performed except where there are definite reasons why the ordinary surgical procedures should not be followed.

7. There seems to be little difference between the actions of long and short waves on ova, either fertilized or unfertilized.

DISCUSSION

FRANCIS B. SHELDON, M. D. (Mattei Building, Fresno, Calif.)—This very interesting paper shows much work. However, it seems to me that we have not yet done enough work on this subject to form very definite conclusions. Certainly, we will all agree that the fetus in utero should not be exposed to more than a minimum of ray with which we may accomplish the purpose for which we are making the exposure. We should not accuse the ray of results, when we do not uniformly get those same results following exposure to the ray. There is much filtration of the ray before it will reach the fetus in utero.

Very often in families where there are several children we will see one or another that will apparently be more backward than others. Or they may not grow and develop as rapidly as some of the others. Families in which this occurs may never have been near an x-ray. We have not determined the reason of this backwardness in one child and not in the others. Until this is determined, how are we to have perfect controls to determine the actual lesion that may be produced by the ray? There has been no fetal lesion reported following radiation that cannot be found where no radiation has been given. We have all rayed pregnant women and seen no ill-results in the child after delivery.

Until we have ruled out all the causes for the deformities and backward conditions in children, we should not be too hasty in placing the blame for these things on the x-ray. This does not eliminate caution in our work. In the case reported, can we definitely say that the condition for which the radiation was given was in no way responsible for the temporary backward development of the child? I do not believe that we should blame the ray for results that are more or less common without its use.

KURT F. BEHNE, M. D. (Soiland Radiological Clinic, Los Angeles)—The very interesting article of Dr. Lawson touches a problem which is, next to the treatment of cancer, the most important one in modern radiation deep

therapy. It is an established fact that we are able to produce the menopause by roentgen or radium rays at any age of the patient without causing any damage to the skin or to any internal organs. The observation of patients who have undergone this treatment during the last ten years has proven that the after effects of the "radiation-menopause" do not differ from the bodily changes happening during the course of the natural menopause. The experiences in Dr. Soiland's Radiological Clinic corroborate this.

Provided a proper indication is present for an artificial menopause, we are justified in producing it by the rays without restriction in cases of women who are nearing the menopause. The question is whether we are generally entitled to cause the "radiation-menopause" in women who are still in the child-bearing age. Of course, we are allowed to stop the menstruation permanently by the radiation treatment in younger women as is the surgeon who extirpates both ovaries, provided there is a proper indication for this treatment. Another question is whether we are allowed to give the patient the radiation treatment in cases in which the surgeon is able to relieve the condition by a conservative operation, not disturbing the function of the ovaries, as, for instance, in cases of myomectomy. The experience of Gauss, Seitz, Wintz and other authors has shown that we can obtain, in proper cases, the same results as the surgeon with his conservative operation without endangering the life of the patient and without hospitalization, by the "temporary stopping of the menstruation" for a half year or longer with the administration of an adequate roentgen ray or radium dose. Within this time the diseased condition of the genital organs clears up (myoma, irregular and excessive menstrual flow, inflammation, etc.) and the patient again starts menstruating normally.

Up to the present time, there has been no damage observed in the children borne by women with regularly functioning ovaries after such a temporary stopping of the menstruation with the radiation treatment. The biological happening in the ovaries after the absorption of such a small radiation dose and the harmlessness of this dose as to future pregnancies can be easily explained. There is a difference in the radiation sensitiveness of the various stages of evolution of the ova. The primordial follicles are apparently much less sensitive to the rays than the Graafian follicles. The small dose of rays destroys the function of the Graafian follicles, but does not affect in any marked degree the less sensitive primordial follicles. As soon as the slightly disturbed primordial follicles have developed into Graafian follicles, the normal function of the ovaries starts again and the menstruation again appears. It is evident that the ripe ova which originate from these follicles have not been affected by the small radiation dose which was necessary for the temporary stopping of the menstruation. The appearance of an entirely normal menstruation shows also that there is no longer a disturbance of the function of the ovaries, and for these reasons any fears of finding either bodily or mental disturbances in a child born after such a radiation treatment of the mother are without foundation.

I agree with Lawson that the administration of rays should be done only in cases where it is properly indicated. I think, however, we should use the rays more extensively in cases of benign diseases of women in the child-bearing age instead of surgery.

The case of Stettner, referred to by Lawson, is well known to me, Professor Stettner, Erlangen, being a personal friend of mine. The patient had been treated in our University Women's Hospital in Erlangen, Bavaria. What Sheldon says in his discussion applies also to this case. It cannot be positively determined whether the disturbances of the child are due to the x-ray treatment or due to other unknown causes. A myomatous uterus as such is liable to cause failures of development in a child.

FREDERICK H. RODENBAUGH, M. D. (516 Sutter Street, San Francisco)—The patient referred to by Dr. Lawson was observed by me during treatment, and observed two years following treatment, shows two distinct phases of the effects of radiation:

First, the difficulty with moderate radiation in producing complete and permanent amenorrhea in young women. The restoration of the menses in varying periods of time following treatment is the rule in young women.

The child at this age does not present any marked mental or physical stigmata to differentiate it from the average child of its age.

I was most reluctant to treat a pregnant uterus, and was only induced to do so when an abortion was imminent, and while my personal experience is limited to two cases, neither of them received massive radiation, and I was fortunate in not producing deformities in the children. I believe that the administration of heavy radiation to pregnant uteri will conform to experimental data, and produce defective offspring. I do not believe that I will personally administer therapeutic doses to any pregnant uterus in the future.

It should be clearly understood, however, that there is no danger in the use of the ordinary diagnostic measure, and an impression should not be given to the general profession that harm will result from diagnostic procedures.

Doctor Lawson is to be congratulated on his clear presentation of the subject, and his careful review of the literature, and I fully concur with his conclusions.

DOCTOR LAWSON (closing).—It has pleased me very much to have a full discussion on this paper, inasmuch as I have experienced very much interest in the collection of the data which has been put into the article.

I fully agree with Sheldon in his statement that there has been no fetal lesion reported following the irradiation that cannot be found where no irradiation has been given, but I really feel that the incident of fetal lesions is infinitely greater in cases where irradiation has been given than in cases not so treated. I think this opinion is verified by the literature.

Behne states: "Up to the present time there has been no damage observed in the children borne by women with regularly functioning ovaries after such a temporary stopping (by irradiation) of the menstruation."

This, however, is not borne out either by experimental data or by cases cited in this paper, especially the work of Clark and Keene, Werner and Stacy. There is no doubt that we are in the dark to a great extent as to results directly traceable to irradiation and the many variable conclusions bear witness to this fact.

DIPHTHERIA IMMUNIZATION

By ABRAHAM METZNER, M. D., Los Angeles

The increased and increasing knowledge of diphtheria should be constantly utilized by all physicians.

It is as much a physician's duty to prevent his clients from contracting diphtheria as it is to treat them after they have it.

Preventive methods are simple and certain, and can be used by any intelligent physician in his office.

DISCUSSION by William C. Hassler, San Francisco; Langley Porter, San Francisco; Clifford D. Sweet, Oakland; Edgar Brigham, Dinuba; J. W. Morgan, Modesto; J. D. Dunshee, Los Angeles.

DIPHTHERIA is still one of the most dreaded diseases and one of the most frequent causes of death in early childhood, and it is a fact that the discovery and use of antitoxin has materially reduced this death rate. The death rate has dropped from about 65 per cent to about 10 per cent. At this latter figure it has remained, in spite of our clearer knowledge of the disease and improvements in diagnosis and treatment. That no further decrease in the death rate has occurred, is due to the human agencies rather than to limitation of the value of antitoxin. The poor resistance of patients, their inability to manufacture a natural resistance, and the too frequent failure in early administration of sufficient antitoxin are among these causes. B. S. Roberts of the New York State Health Department found, in an analysis of over 500 deaths from diphtheria, that the death rate is practically nil when

adequate treatment is given on the first day of the disease. This has been corroborated by others. The fact also remains that, when contacts are given antitoxin as an immunizing agent, the period of immunity is brief, no provision being made for susceptible contacts who are not discovered. The carrier problem is also present. Atypical and nasal diphtheria often pass unnoticed. Antitoxin is not entirely without danger, and deaths from its use, though few, have occurred. It will thus be seen that further measures are extremely necessary. Thanks to the work of Behring, Schick, and others, the dangers from additional factors can be aborted, and diphtheria so controlled that, eventually, it will become one of the diseases more rarely seen.

Lesions of diphtheria, both local and general, are due to the action of a soluble toxin secreted by the Klebs Loeffler bacillus. How they act is still a moot question. Recovery takes place through the formation of antitoxin by the body cells, which neutralizes the toxin. That permanent immunity is not produced by the disease is evident, in that two or three attacks are not very uncommon. A natural immunity is frequently present at birth and may last through life. Von Groer and Kassowitz found that those mothers who had a natural immunity were able to transmit this immunity to their offspring, while the 16 per cent of the mothers who did not possess this immunity had offspring who were not immune. These findings were more recently corroborated by Ruh and McClelland. This immunity, however, is lost in fully 85 per cent of the infants by the age of six months. Those losing this immunity reacquire it in a progressively increasing number as they grow older, but, as a rule, it is not reacquired before the ninth year, thus leaving them vulnerable during the most susceptible age group between six months and nine years.

The problem then remains to separate the immune from the susceptible and to immunize the non-immune. In 1913, Bela Schick proposed a very simple method of separating these groups based upon the observations of von Behring. Schick discovered that when 1/50 of an M. L. D. for guinea pigs weighing 250 grams was injected, intracutaneously, in a human being in whom there was 1/30 or more of antitoxin per cubic centimeter of serum, no reaction followed. If less than this amount, or none at all was present, it produced an inflammatory reaction at the site of the injection. This inflamed area persists for four days or more, and should not be confused with a somewhat similar reaction which may be produced by the protein found in the diluent, and which disappears within twenty-four or thirty-six hours. Von Behring, following the method used by Park and others in immunizing animals, showed that the same procedure could be safely used in humans. In 1920, Bieber published a history of 1097 children who had been immunized by Hahn and Sumner, in the village of Madgeburg in 1913, showing that of those who had received full treatment of toxin-antitoxin, only 3.3 per cent later developed diphtheria, while of those who had not been immunized, 15 per cent developed the disease, thus reducing the incidence by approximately 80 per cent.

From that time on, there has been an increasing

volume of reports corroborating these results. The first work on a large scale was done by Park, Zingher, and co-workers of the New York Health Department. This placed the work on a solid foundation, and served as an impetus to other communities throughout the country. As a result, most of the larger cities have undertaken this work as a routine measure, most of them working through the public schools and health boards. Consequently, there has been reported a distinct lowering of the incidence of diphtheria in those communities.

The toxin-antitoxin is prepared according to the method worked out by the New York City Laboratory, and is supplied by several of the reputable commercial houses in convenient containers for immediate use. This preparation contains 1/10 M. L. D. of toxin to the dose, and is sufficient to immunize without causing any untoward reactions, in contradistinction to the preparation used until the first of the year, which contained 3 M. L. D. The toxin-antitoxin is injected preferably intramuscularly in three doses of 1 cubic centimeter each, at weekly intervals.

It would seem that the following facts have been proved:

The use of antitoxin has about reached the limit of efficiency in reducing mortality.

The highest percentage of susceptibles are among children between the ages of 6 months and 9 years.

The Schick test is a reliable method of separating the immune from the susceptible.

Toxin-antitoxin given in three doses at intervals of one week will actively immunize about 85 per cent of the susceptibles.

This problem is, in my opinion, a health board problem, and in many of the larger communities it has been taken up by public health department with very encouraging results. In Southern California, we are laboring under a serious, difficult condition because of the great political strength of the anti-medical groups. We are completely shut out of the public schools in this work, and are, therefore, unable to reach the public through that channel. The board of health is also hampered by a paucity of nurses and physicians, and an inability to secure sufficient funds.

In Los Angeles, diphtheria immunization has been carried on since 1919 in some of the orphanages and other child-caring institutions. Where it has been adequately supervised, diphtheria has been almost entirely eradicated, but in those institutions where this work has not been done, they still have their customary yearly quarantines from diphtheria. Conditions in the county outside of the city of Los Angeles are much better in this respect, because of better organization and contacts with other communities and schools. It has been possible to reach a much larger number of children, and to date over 3000 children have been immunized.

In November, 1923, this work was begun at the Anita Baldwin Clinic. This was the first attempt in this city to reach the children outside of institutions. Later the city health department offered to supply free toxin-antitoxin. At the onset of the work a few of the children and nurses were "Schicked," with results corresponding to those published by

other writers, namely, that over 80 per cent of positive reactions were obtained in the younger children, whereas only 9 per cent of the nurses were Schick positive. Since this first series, we have not given any initial Schick tests in the children under 9 years of age. This method is also being followed in many other communities. However, we are "Schicking" all of them three months after the last injection of toxin-antitoxin. Thus we are able to simplify the procedure and require fewer visits to the clinic. We have had very good response from the mothers bringing their children to the clinic, and very few have refused to have their children immunized when the procedure was explained to them. To date we have given 432 injections of toxin-antitoxin, and 91 Schick tests. This number is too small to be of any statistical value. We hope to be able to publish a detailed account of our work at a later date. This work is being done without publicity or other outside aid in interesting the parents.

More recently, a plan has been devised which may be productive of good results. A life insurance company has agreed to co-operate, and will instruct their nurses to work with the city health nurses in canvassing the homes in two districts which will be definitely outlined. The children in these districts are to be referred to the Anita Baldwin Clinic and the Children's Hospital. While much good may be accomplished by such a campaign, it will require the active co-operation of the physician to be of maximum benefit. This applies particularly to the general practitioner, who sees the bulk of the children.

It must be recognized that, as physicians, we have a moral obligation to the public; that while we are in the favored position of being better informed on health matters, it is our duty to impart that knowledge to those who are less adequately informed. This movement is one of the many, which, from time to time, we will be obliged to carry forward, and it is by such steps we will still further add to the confidence of the public at large, so valuable to the cause we lead and espouse, and in physicians who serve that cause.

902 Union Bank Building.

DISCUSSION

WILLIAM C. HASSLER, M. D. (Department of Public Health, San Francisco)—Perhaps once in each generation of human existence is a discovery in medicine made that equals the importance to the human race of that of toxin-antitoxin as a prophylactic and preventive of diphtheria.

Doctor Metzner says that the death rate from diphtheria has decreased very little in the last few years, because of the failure of human agencies. Naturally, there is a twofold reason for this: First and most important in the absence of toxin-antitoxin immunization, the physician is not called or the diagnosis is not made until so much of the diphtheria toxin has combined with the tissue cell that the antitoxin is not as effective as it would be if earlier recognized and administered. Secondly, many failures in the use of the Schick test are due to improper technique, and no doubt a considerable percentage of cases are classed as "immune" that should, because of this failure to get a proper Schick reaction, receive toxin-antitoxin. When we have learned this technique, we may be able to reduce the death rate still lower.

Diphtheria, before the advent of antitoxin, was a disease that gave more or less immunity against subsequent infection, but since the antitoxin has come into general use this is not a fact, because antitoxin administered during the disease inhibits the manufacture of natural antitoxin

in the blood stream, and this antitoxin artificially administered is eliminated in a short time, leaving one almost as susceptible to infection as before. I agree with Dr. Metzner that a Schick three months after the administration of toxin-antitoxin is of more importance than a preliminary Schick, because experience has proven that, in a certain proportion of cases, three doses of toxin-antitoxin mixture was not sufficient to produce immunity, and those cases should be known and receive further treatment. We, in San Francisco, have recently had this experience in a group of school children that were Schick tested, received toxin-antitoxin, and out of one class five cases developed diphtheria. No great effort has been made in San Francisco to force the Schick test, but we are spreading propaganda by circular and by discussions of the subject through our school-nursing division and health centers. We find that an increasing number of parents are inquiring and ask for this protection to their children.

LANGLEY PORTER, M. D. (380 Post Street, San Francisco)—The contribution of Dr. Metzner on diphtheria immunization is most timely, and it will be of value if the profession in California will accept the big message, which is that it is needful and useful for all health agencies—state and local—ceaselessly to inform the public that diphtheria is a preventable disease. Imperative as it is for these agencies to provide the machinery by which any child in the community, whose parents desire it, may be immunized, *it is only through the aid of the individual physician practicing in his office that the full benefit of the discoveries of Behring, Schick, Zingher and Park, can be made fully available to the community.*

Some physicians are issuing a statement of the value of the toxin-antitoxin immunization to their patients. To my mind, it would be a valuable disease preventive measure if the boards of health would supply a printed slip which could be enclosed in every bit of correspondence that leaves the doctor's offices—a slip which might ask, "Is your child protected against the deadly disease, diphtheria? If not, why not? The use of toxin-antitoxin is a proven preventive, your doctor is prepared to advise and serve you."

As to the technique, the method of the New York Board of Health is based on wide experience, and should be accepted as the standard. The reaction to the first injection can be used as Park uses it—to replace the preliminary Schick test in young patients. As Hassler emphasizes, the Schick test, following three months after the immunizing course, is most important in order to check the acquisition of immunity. *Not less important is it to instruct parents and teachers that the three months following the immunizing course is a time of susceptibility, else we will have the ignorant and vicious pointing of the finger of scorn and saying, "The toxin-antitoxin—oh, that is a fake of the doctors. Smith's Johnnie and Jones' Katie, they got diphtheria a few days or a few weeks after they were given the serum."*

CLIFFORD D. SWEET, M. D. (440 Seventeenth Street, Oakland, Calif.)—I am glad, indeed, if I can emphasize the importance of diphtheria immunization by means of toxin-antitoxin. *Only by means of continued work and this matter ever be satisfactorily presented to the public.* The mother's natural reluctance to submit her healthy enthusiastic propaganda by all practicing physicians can child to even a fancied inconvenience can only be overcome by her physician pointing out its advantages and its lack of any real danger. Since the 1 plus L dose has been used, we have had few, if any, severe reactions. It is very important that the mother be told of the possibility of failure to completely immunize the patient. In my experience three months is a somewhat too short time to allow immunization to become complete. We direct our patients to return in four months for the Schick test.

I hope many others will follow Doctor Metzner's example and present this matter back to the general and medical public at every opportunity.

EDGAR BRIGHAM, M. D. (Dinuba, Calif.)—The toxin-antitoxin treatment is without doubt the most important recent prophylactic measure to be used. I agree with Doctor Metzner that it is, however, essentially a health board measure, as the opportunity for carrying out the

tests and checking results on a large scale, is, with few exceptions, confined to public service.

Doctor Sweet considers it best to wait four months after the toxin-antitoxin injection before making the Schick test. In view of the experience of Sears, Zingher and others, it is probable that the longer period would show more negative reactions.

As practicing physicians, our duty is to support our local boards of health as the most active agents of preventive medicine.

Metzner announces a truth which ought to be actively accepted by every member of the profession, when he says: "It must be recognized that, as physicians, we have a moral obligation to the public . . . to impart knowledge to those who are less adequately informed."

J. W. MORGAN, M. D. (Modesto, Calif.)—It is to be hoped that Doctor Metzner's article will be read by every physician in the West, as it is through co-operation by the individual family medical advisors that the parents will see the light. We have had splendid results in Modesto. During the past ten months we have immunized over 1400 children. *The City Council donates the toxin-antitoxin, and the parents are advised by the health department through the press to go to their own physicians for the treatment. All members of the local medical society agree to give the treatment for a nominal sum (\$3 is charged), and everyone has co-operated.*

This method does not allow for proper Schick-testing, but it gets the children immunized. We are now able to tell the public that if they have diphtheria it is due to neglect. *To date the cost to the City Council has been less than \$250, and everyone is of the opinion that the physicians are taking the proper attitude.* Our greatest difficulty has been to convince the parents that children under school age are so susceptible. It is our plan to advertise every case of diphtheria reported so that the parents will finally have the great majority of their children immunized. We also stress the fact that three months' time must elapse before the immunity will be active.

J. D. DUNSHEE, M. D. (Department of Health, City of Los Angeles)—The city health department has been much handicapped in this work which might have been and should be done in Los Angeles, due to the fact that they do not have admission to the public schools. They have been Schicking all the inmates of two of the largest institutions in the city, and giving toxin-antitoxin to those showing susceptibility for the past four years, and have endeavored to do the same in other institutions, but up to a very recent time have been unable to get their consent to do this.

It is well understood among health workers that health programs are exceedingly more difficult in cities of any size than in the smaller communities, which is largely responsible for the fact that the smaller places of Los Angeles County have received this better.

We have been able to go into the outlying districts of the city and easily secure the consent of a majority of the parents in this work.

One of the greatest obstacles we have met is the general apathy of some physicians and the opposition of a few who seem to have considered, or, at any rate, advised families under their care that the administration of toxin-antitoxin is dangerous.

DOCTOR METZNER (closing)—I have very little to add to the discussions. In regard to allowing four months to elapse before giving a re-Schick, as suggested by Doctor Sweet, I can see no objection to such a procedure. I feel, however, that it is practically as reliable to re-Schick in three months, and it is easier to keep in touch with the patient for the shorter length of time. Each parent is requested to have another Schick test made in six months.

Think of the dancer, Lotta, who accumulated \$4,000,000, and died at the age of 74 in Boston four months ago. She left her money, a large part of it, to PREVENT the investigation of disease through the study of diseases in animals. It isn't fair to the beasts, to the animals of the world, to allow them to go on dying when we are taking care of ourselves, but the highest work that any animal in the world can do is to furnish evidence for the protection of human life.—C. H. Mayo.

SURGICAL AMEBIASIS

By P. K. GILMAN, M. D., San Francisco

Proper drug treatment cures a large percentage (85 to 90 per cent) of cases of amebiasis with one course. A small number will require a second course. A still smaller a third.

Of the remaining small number, the majority suffer reinfection from a focus either in the appendix, gall-bladder, or both. Removal of these foci is followed by permanent cure.

DISCUSSION by Alfred C. Reed, San Francisco; Wilson T. Davidson, San Francisco.

AMEBIASIS is not limited to tropical and subtropical countries. It is widespread in its distribution, and occurs in practically all parts of the United States. Here in California the cases of infection with *A. histolytica* are on the increase.

The disease—infection with *A. histolytica*—may manifest itself through a great variety of symptoms. One of these is dysentery, at times the predominant one. The disease should not, however, take its name from one symptom and, therefore, amebic dysentery is not a good term; in fact, is misleading, as often no dysentery occurs during the entire course of the disease.

Amebiasis is to be preferred. Its symptoms may be definite or extremely indefinite; may be concerned with the gastro-intestinal system and suggest peptic ulcer with either normal-appearing or very costive stools; may center in the neuro-muscular apparatus, with various nervous manifestations and muscular pains.

In addition to persons presenting sufficient symptoms to be classed as ill, there is a group of "carriers"—people with cysts and at times motile amebae in their stools who consider themselves as not suffering from amebiasis. Is any so-called carrier perfectly well? The majority probably are not, if sufficiently painstaking investigation be made.

While the treatment of amebiasis is medical in over 90 per cent of the cases and of these from 85 to 90 per cent are cured by one course of treatment, some cases will require a second, and a few a third course in order to cure by medical means. In addition to this major group a smaller group will resist any or all known forms of medical treatment. These cases become surgical.

The surgical cases may be fitted into three main groups:

1. Cases requiring surgery to assist medical measures directed toward clearing the bowel of the amebae, the disease being limited to the bowel.
2. Cases complicated by disease set up by the organism beyond the limits of the bowel.
3. Cases "incurable" by medical means to remove at operation organs now known to harbor the organism and act as foci of reinfection of the gut. These cases are cleared of the organism by medical means temporarily only.

In the first group, dysentery is the important symptom, either acute or chronic. The patient either shows no signs of improvement with drugs, diet, and rest, or becomes worse.

Surgery should here be considered early, and has for its object putting the diseased bowel at rest.

This may be attempted by appendicostomy, by cecostomy, or by ileostomy.

Appendicostomy was introduced largely for purposes of lavage until the x-ray showed us how completely and promptly all parts of the large bowel may be reached from below via the rectum. However, appendicostomy undoubtedly has a value in certain cases.

Cecostomy is to be preferred to appendicostomy, as being followed by more complete rest of the large bowel. However, this rest is far from satisfactory, as some bowel contents will pass across the opening. Compared to ileostomy, cecostomy is more simple and possibly more readily closed, but is less effective.

Ileostomy is followed by absolute rest of the large bowel, and the relief of symptoms is immediate. With the ordinary ileostomy, a second operation, of course, is necessary to restore the continuity of the bowel. The more recent method of forming a double diaphragm, as used by Stone of Baltimore, meets this objection.

In the second group occur the abscesses, empyemata and granulomata resulting from the action of the ameba beyond the limits of the bowel wall.

Pulmonary abscess is not rare. It usually follows an abscess below the diaphragm, but at times is primary. It may rupture into and drain through a bronchus, and at times cures itself spontaneously. More often, however, added surgical drainage is needed.

Amebic abscess of the liver, if of any considerable size, is surgical and demands drainage. Hepatitis, and at times small abscesses, may yield to medical measures. We prefer the abdominal route in attacking hepatic abscess, as the surrounding structures may be explored and there is a minimum danger of peritonitis, the amebic pus usually being sterile. After drainage is established, the administration of emetin hastens materially the healing and shrinkage of the abscess cavity.

Abdominal abscesses are rare, when one considers the condition of the large bowel in a well-developed case of infection. Bacterial infection is, of course, added.

Perinephritic abscess is met with occasionally. It follows spread of material from the colon direct or indirectly from an abscess of the liver pointing downward.

Of considerable importance are amebic granulomata. These inflammatory masses occur in relation to the wall of the large bowel, usually at the flexures, and, clinically, strongly suggest new growth. We have seen two cases subjected to resection for supposed malignancy. Their treatment is medical, rarely surgical, and then only for obstruction.

Less common abscesses are those occurring in the brain and in the spleen.

The third group of cases which are surgical includes those where medical treatment has failed. The so-called "carriers" are placed in this division.

The important question is, when has the drug treatment failed? My associate, Gunn, holds the case incurable medically, if the amebae appear in the stool during a course of combined emetin and salvarsan treatment after the salvarsan has been ad-

ministered, cases not responding promptly to the drug treatment and cases where amebae reappear in the stool after three complete courses of the combined treatment, as outlined by him.

Are there any true "carriers"? Very few if any. If a careful history and examination of such persons be made, it is usually possible to elicit more or less definite symptoms due to the infection. These symptoms may be referred to any part of the gastro-intestinal tract or to the neuro-muscular apparatus.

In the above cases, foci of reinfection exist in association with the gastro-intestinal tract, where the amebae lodge and where the circulating drugs fail possibly to reach them in sufficient concentration to kill. Removal of these foci will lead to a cure, at times without any further medical measures.

The appendix and gall-bladder are both possible foci for reinfection of the intestine. The former has been known, for some time, to harbor amebae in its mucosa. Amebic ulceration of the appendix often produces typical symptoms of appendicitis.

Crowell, in Manila, some years ago demonstrated amebae in the wall of the gall-bladder, and we have confirmed this on several occasions. Patients long considered incurable have been cured following cholecystectomy and appendectomy.

SUMMARY

Proper drug treatment cures a large percentage (85 to 90 per cent) of cases of amebiasis with one course. A small number will require a second course. A still smaller a third.

Of the remaining small number, the majority suffer reinfection from a focus either in the appendix, gall-bladder, or both. Removal of these foci will be followed by permanent cure.

350 Post Street.

DISCUSSION

ALFRED C. REED, M. D. (380 Post Street, San Francisco)—I think this is one of the best summaries I have seen of the subject under discussion. It is comprehensive, and I can only endorse the position taken. I am constantly seeing the surprise of patients that amebic infection can be acquired in California. Yet it is frequent in persons who have not been out of the state, and even is acquired here in the bay district. As the author points out, the term "amebiasis" is much more accurate and descriptive than amebic dysentery. This term was coined by Dr. Musgrave, in Manila. It can be matched or qualified in another term which I have used to describe the prevailing type of this disease as we meet it here. This is "non-dysenteric amebiasis." In hot climates dysentery is a more usual symptom. In cooler climates and in California, it is our experience that constipation predominates as a symptom in these patients, and that many other symptoms are found. Hence, the logic of classifying such cases as non-dysenteric amebiasis. Finally, I want to emphasize the dangers of the indiscriminate and injudicious use of emetin. Emetin is a powerful and poorly understood drug. Its pharmacology is not worked out fully. A certain percentage of patients treated intensively for amebiasis will develop symptoms of weak heart, low blood pressure, and peripheral neuritis. The syndrome has certain analogies to beriberi. It is interesting that, in the Orient, the observation has been made that dysentery treatment often precipitated an attack of beriberi. We need to know more of the action of emetin and to understand better how to intensify its amebicidal effect by diet and other drugs.

WILSON T. DAVIDSON, M. D. (350 Post Street, San Francisco)—I have read with great interest Dr. Gilman's paper, and I consider it a valuable contribution to this important subject. I believe that if these cases were diag-

nosed early and treated intensely, very few of them would develop surgical complications.

We have passed through a period of therapeutic nihilism. Many will recall Dr. Osler's dictum that we had only four specifics. Recently Dr. Hewlitt added quite a number to that list.

Although the life history of the *entamoeba histolytica* has been worked out fairly completely, unfortunately we have no specific for amebiasis. Ipecac has been the favorite remedy since the time when the roots were carried from Brazil to France and sold to Louis the fourteenth as a secret remedy for a select few of his court. To the English in India must be given the credit for popularizing the use of this drug, and it was used as such until within recent years, when the alkaloid emetin was separated. For a few years emetin was very popular, almost to the exclusion of all other remedies. Lilley & Co. put out the alcresta tablets, which were very widely used.

At the present time we see large doses of bismuth, as recommended by Deeks in the Canal Zone, emetin-bismuth-iodine and emetin per iodide, as used by the English; yatrin, a combination of iodine, oxy chinolin and sodium sulphate, as used by the Germans, and various preparations of arsenic and emetin, as used by the French. Chaparro armagosa or bitter root, as a decoction, now has its strong advocates; and recently, with the prevailing tendency to cure everything by intravenous medication, arsenic preparations and the penetrating dyes are coming into vogue. We also see mercurochrome used both by mouth and by way of the colon.

Twenty-five years ago, when I first began the use of ipecac in Cuba in the treatment of amebic dysentery, I found that the symptoms rapidly subsided, and I thought that my patients were cured. However, no laboratory examinations were made and no doubt many of them were not cured, became chronic cyst excretors, and quite likely developed just such surgical complications as Dr. Gilman has described; and I would like to emphasize the point that today amebiasis patients are still discharged as cured as soon as they are free of symptoms, and one stool is pronounced negative.

Personally, I put these patients to bed on a liquid diet and give a combined course of emetin hypodermically, three grain capsules of emetin-bismuth-iodine, and at the end of the week .9 of neosalvarsan. This completes the course, and in 90 per cent of cases is effective in rendering the patient free from parasites. However, it may be necessary to repeat the course one or more times.

No patient should be dismissed until one is reasonably sure that he has been rendered free from the infection. This is by far the most important point of all and one to which particular stress has been given by Herbert Gunn.

As a working method, I usually examine the second week, after a course of treatment, a formed stool; then give the patient a dose of salts, and examine a liquid stool with ample fecal matter. Then, afterwards, another formed stool. This is repeated the following week. Then, in the course of five or six weeks, a series of stools are examined: five or six formed stools, and three or four liquid stools. This is repeated the following month.

By giving salts and examining the stools while they are warm, you get the motile forms. During the entire course, twenty-four formed stools and twelve liquid are examined. If such examinations are made with negative findings over a period of three or four months, one can feel quite confident that his patient no longer harbors infection in the colon.

Examining the Well Person—The best post-graduate course that the American medical profession could have at the present time would be to learn how to examine the well person. We should examine every case from head to foot, no matter what the complaint. If we had that sort of routine and uniformity of examination in our individual practices, what wonderful doctors we would be. What is our trouble? Lack of knowledge? No. We really don't see many obvious conditions because we don't examine systematically. What better preparation can you have for examining and diagnosing the pathologic conditions than to make it a custom among physicians to examine frequently every individual in their own clientele?—W. D. Haggard (A. M. A. Bulletin).

A SYMPTOM COMPLEX IN DIABETES THAT MAY BE CONFUSED WITH THE REACTION OF INSULIN OVERDOSAGE *

By BERTNARD SMITH, M. D., *Los Angeles*

Symptoms described.

Illustrative case record given.

Significance of the symptom complex not fully understood.

DISCUSSION by Franklin R. Nuzum, *Santa Barbara*; Albert H. Rowe, *Oakland*; P. Berman, *Los Angeles*.

A CONSIDERABLE proportion of diabetic patients develop a rather definite group of symptoms that may easily be confused with many of the symptoms that follow an excessive insulin dose. These symptoms appear most frequently in those patients who had become undernourished to an extreme degree, or who have had some complication that has required vigorous treatment with insulin. The symptoms do not usually appear until the patient has reached a state of apparently adequate nourishment and strength.

Muscle weakness is frequently one of the early symptoms. This weakness usually appears in the middle of the forenoon or late in the afternoon, and is described often as a sense of goneness or a feeling of lack of supporting strength in the leg muscles. It closely resembles the weakness that may be an early symptom from an overdose of insulin. A sensation of stiffness in the muscles may be present during the period of weakness or may be constant throughout the day. This is often felt in both arm and leg muscles. Occasionally, there have been noticed slight spasmodic contractions in these muscles that give the appearance of a mild tetany.

During the periods of weakness, the patient may complain of chilliness. At such times the forehead and palms are moist with a cold perspiration; the entire face shows an ashy pallor; the pupils are dilated; the pulse is rapid and soft; and the hands and feet are cold. When the symptoms are more pronounced the patient may appear to be in severe shock or collapse. The pallor is more marked than in the early symptoms of the insulin reaction, and the cold sweating is more profuse than the slight moisture that precedes the insulin tremor, but is not so general or so extreme as the later sweating associated with the insulin convulsion. Dizziness is a common symptom and may be so severe that the patient is unable to continue at work. There may be various parathesias, and disturbance of co-ordination, together with a dimness of vision. Faintness may be a disturbing symptom, although an actual loss of consciousness has never been reported by the patients. Arterial hypotension has been a constant finding, even when the symptoms have been mild. More recently a gradual lowering of the blood pressure has been found in patients before definite symptoms developed.

These symptoms may be found with patients who have never received insulin. They occur more frequently among patients who have had the aid of the extract. The condition seems to be most common among those patients who have been built up rapidly

to a satisfactory weight, or who have been carried through a short convalescence after some serious diabetic complication. The insulin reaction is always a result of subnormal blood sugar, and the symptoms will vary in severity with the degree of hypoglycemia present. The condition now described may be associated with a normal blood sugar value or with a hyperglycemia. Glycosuria is not uncommon in the period these symptoms remain uncontrolled. Several patients have been kept under observation for several weeks, during which time the sugar excretion has continued at a concentration of from 1 to 5 per cent. This glycosuria is not associated with an increased urine volume or any other of the common diabetic symptoms. An increase in the insulin dosage to clear up this glycosuria may result in a severe reaction from overdosage, with little, if any, effect on the sugar output.

Studies of this condition have not been carried far enough at this time to justify any conclusions as to a definite etiology. Estimations of the calcium¹ and inorganic phosphorus of the blood have been of interest. In twenty-five determinations on twenty diabetic patients who were in good physical condition and without symptoms, calcium values below 10 mgs. per 100 cc. of blood were found in but two patients, and both of these had had symptoms, but at the time the determinations were made they were vigorous and doing manual work. The average calcium value for this normal series was 11.45 mgs. In twenty-nine determinations on twenty-three patients who had symptoms, only seven gave values above 10.0 mgs. The average for this group was 9.01 mgs., with 6.4 mgs. as the extreme low value. Determinations of inorganic phosphorus showed practically the same distribution for the two series, averaging 3.54 mgs. and 3.57 mgs., respectively.

ILLUSTRATIVE CASE REPORT—June 24, 1923. Admitted. Male. Age, 54 years. Weight, 56 kgm. Gangrene of foot. General examination negative, except for gangrene. Blood pressure, 128/80. Urinalysis: Sugar, 1.9 per cent. Diacetic acid trace. Albumen trace. Casts none. Blood analysis: Sugar, 400 mgs. Calcium, 11.2 mgs. Non-protein nitrogen, 2.6 mgs. Diet: C. 60; P. 50; F. 140. Insulin: Ten units twice a day.

AUGUST 30, 1923—Insulin stopped. Diet: C. 90; P. 60; F. 150. Feeling well. Active. Returns to work.

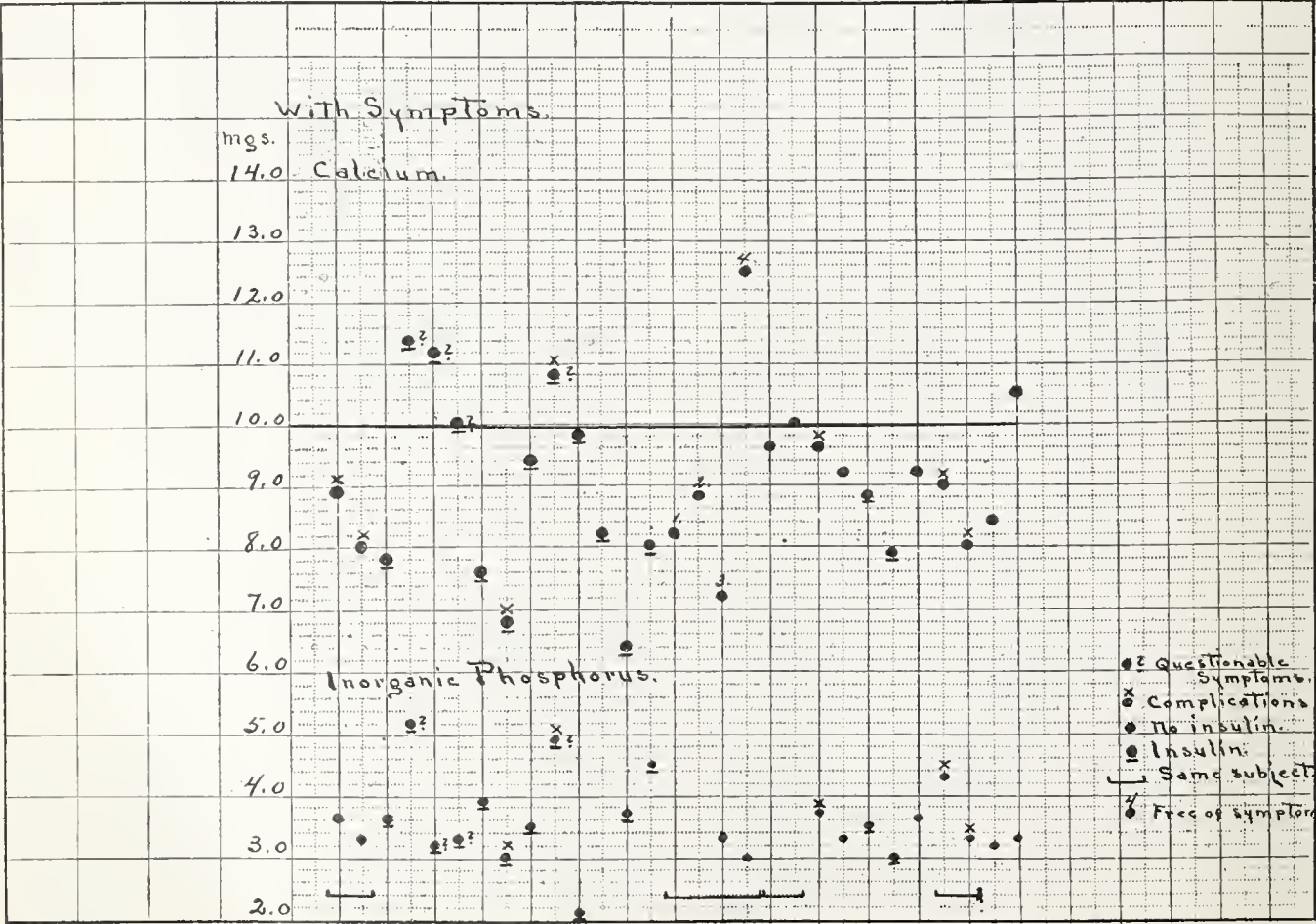
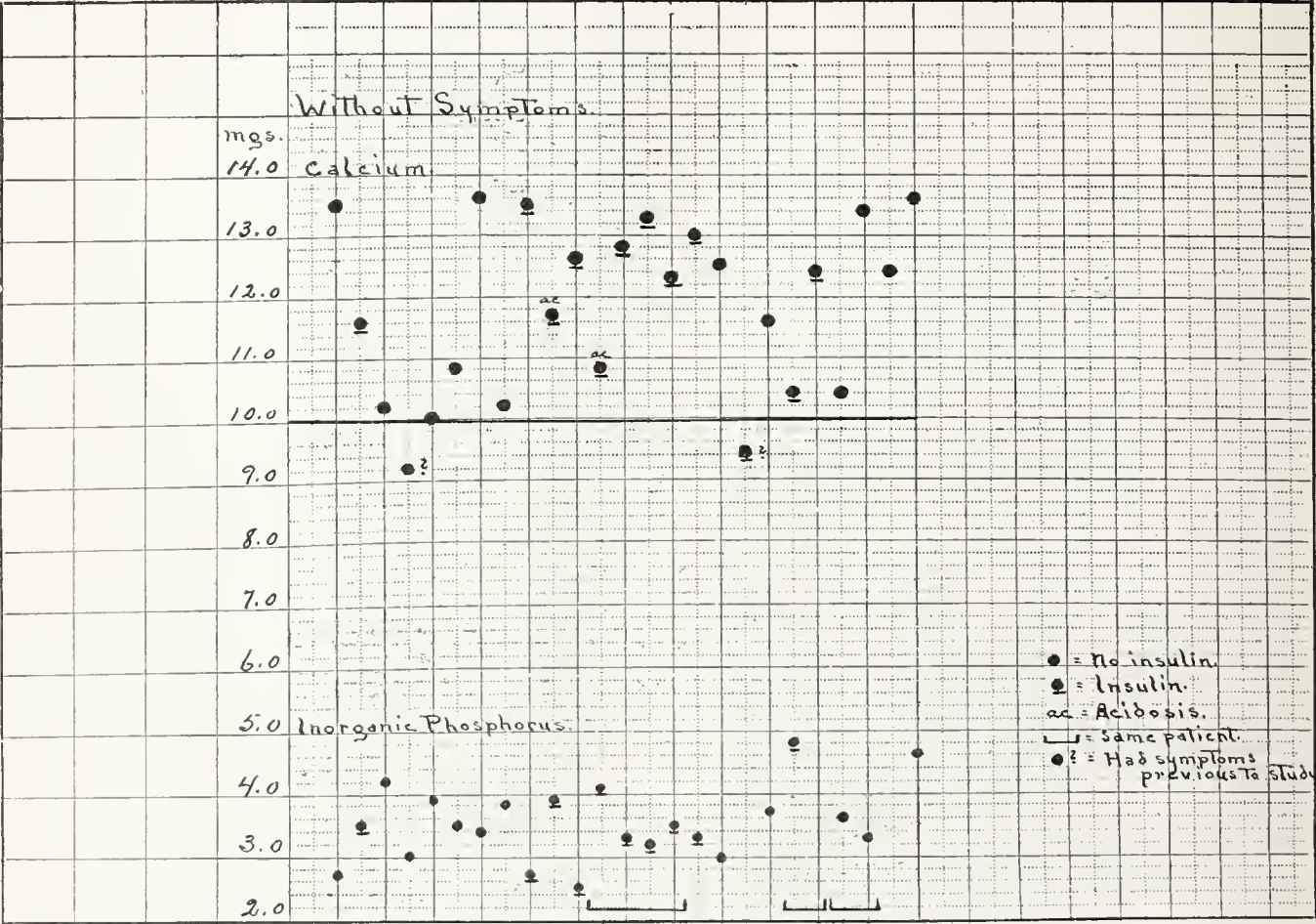
SEPTEMBER 30, 1923—Complains of extreme weakness of leg muscles. Weakness appears about 10 a. m. and 5 p. m. Urinalysis: Sugar, 1.08 per cent. Albumen none. Diacetic acid none. Blood analysis: Sugar, 175 mgs.

DECEMBER 10, 1923—Symptoms have increased. Complaints of inco-ordination, aching and stiffness of leg muscles. Dimness of vision and faintness. Attacks periodic. Feels well between attacks. Blood pressure, 110/78. Urinalysis: Sugar, 0.75 per cent. No acidosis. No albumen. Blood analysis: Sugar, 138 mgs. Calcium, 8.2 mgs.

FEBRUARY 4, 1924—Seen during symptoms. Face of ashy pallor. Hands and feet cold. Forehead and palms moist with cold sweat. Pupils dilated. Pulse regular, 110. Blood pressure, 90/68. General appearance of shock. States that symptoms are often severe during night. Is afraid to continue at work or to go on street alone because of faintness and dizziness. Urinalysis: Sugar, 0.28 per cent. No albumen. No acidosis. Blood analysis:

¹ Calcium determinations were made by the technique of Kramer and Tisdall, Jour. Biol. Chem. 1921, XLVII, 475. Determinations of inorganic phosphorus were made by the method of Tisdall, Jour. Biol. Chem. 1922, L, 329.

* From the Los Angeles Metabolic Clinic. Preliminary Report.



Sugar, 138 mgs. Calcium, 7.2 mgs. Inorganic phosphorus, 3.33 mgs.

APRIL 13, 1924—Has been away from work for one month. Feels well. No symptoms for two weeks. Blood calcium, 12.6 mgs. Blood pressure, 136/80.

MAY 10, 1924—Patient has continued at work without symptoms.

1032 West Eighteenth Street.

DISCUSSION

F. R. NUZUM, M. D. (Santa Barbara Cottage Hospital, Santa Barbara)—Doctor Smith's report of a symptom complex in diabetes that might easily be confused with symptoms caused by insulin overdosage is a matter of great importance to those treating diabetic patients. He has shown that there is a difference in the symptomatology of the two conditions, and that laboratory studies will determine at once whether insulin overdosage is actually the cause of the condition. His studies having to do with calcium and inorganic phosphorus of the blood are interesting and suggestive. Further work will be necessary to determine what these findings signify.

A considerable number of diabetic patients with whom we have had to do have had complaints which are covered by the term "neuritis." Any or all of the extremities have been involved in many of these patients. As improvement occurs coincident with the use of insulin, a large per cent of them have become free of these "neuritic" pains. Some extremely emaciated patients, when gaining weight rapidly with the help of insulin, have complained of pains in the joints of the lower extremities upon first arising in the morning. This complaint is not to be confused with the "neuritis" complained of as noted above.

ALBERT H. ROWE, M. D. (242 Moss Avenue, Oakland, Calif.)—The syndrome which Smith reports has been noticed in a few of the patients I have under treatment with insulin, though any urgency in regard to such symptoms has not impressed me. I have carried out calcium determinations on some forty diabetics during the last year with the titration method of Clarke of the University of California. During the same time, in order to be sure of the normal variations obtained by this method, we have determined the calcium content of the blood plasma in fifty normals, most of whom were first and second year medical students. The results obtained in this normal series vary between about 8 milligrams and 12 milligrams per 100 cc. of blood plasma, and the diabetic values have fallen within the same range, excepting in several cases of coma where with much dehydration the calcium was around 13 or 14 milligrams. I am continuing the calcium studies, and it will be with added interest that I shall watch for the syndrome which Smith describes and seek to corroborate his findings in regard to the calcium values in the blood plasma of such patients.

P. BERMAN, M. D. (Los Angeles General Hospital, Los Angeles)—I have on several occasions observed a train of symptoms similar to those described by Smith, especially in patients taking large doses of insulin. The blood sugar examined at the time of the reaction does not show the expected hypoglycemia. This was especially noticed in some patients recovering from deep coma after very large doses of insulin were given. Pain in the extremities was a most usual symptom in my patients. The cause of this condition in several patients was considered to be due to the too rapid reduction in the blood sugar, though the level of the sugar in the blood still remained above normal.

The relation of this symptom complex to the calcium condition of the blood is certainly of great interest.

Do You Know Him?—A man who is now a prominent practicing physician was speaking of an old doctor who has just died. "I remember," he said, "when I was an interne, coming in late one night to the hospital and I saw this doctor sitting on the steps. 'What is the matter?' I asked him. 'Well, that woman we operated today,' he said, 'I went home and went to bed, but I kept thinking about her and I couldn't sleep, so I got up and dressed and came over. I thought it was better to be around here in case any complications should come up.'"—Missouri State Medical Journal.

RINGWORM OF THE SCALP *

By HIRAM E. MILLER, M. D., San Francisco

The disease increasing.

X-ray the best treatment and the quickest cure.

DISCUSSION by Samuel Ayres, Los Angeles; Granville MacGowan, Los Angeles; O. V. Schroeter, Los Angeles; Moses Scholtz, Los Angeles; Harry E. Alderson, San Francisco.

THE marked increase in the number of patients that I have recently seen with ringworm of the scalp has prompted me to bring this subject before you. In the last six months, I have treated in clinic and private practice over ten times as many cases as in any previous six-month period. The cases have been diffusely scattered throughout the San Francisco bay region, and are not the result of an epidemic in a single institution or localized community. I do not know the cause of this increase, but I think that it may go hand in hand with a general increased prevalence of ringworm infections of other parts of the body.

The following chart will show this increase:

1920	1921	1922	1923	1924	Total
- | 3	3 | 6	6 | 4	3 | 19	43	87

Of the 19 cases in the last half of 1923, 18 occurred during November and December. All of the cases in 1924 have occurred during the last four months. This makes a total of 61 cases during the last six months. The largest number that I had seen in any previous six months was 6. Of these 87 cases, 19 came from private homes, and the remaining 68 from five different orphanages or institutions.

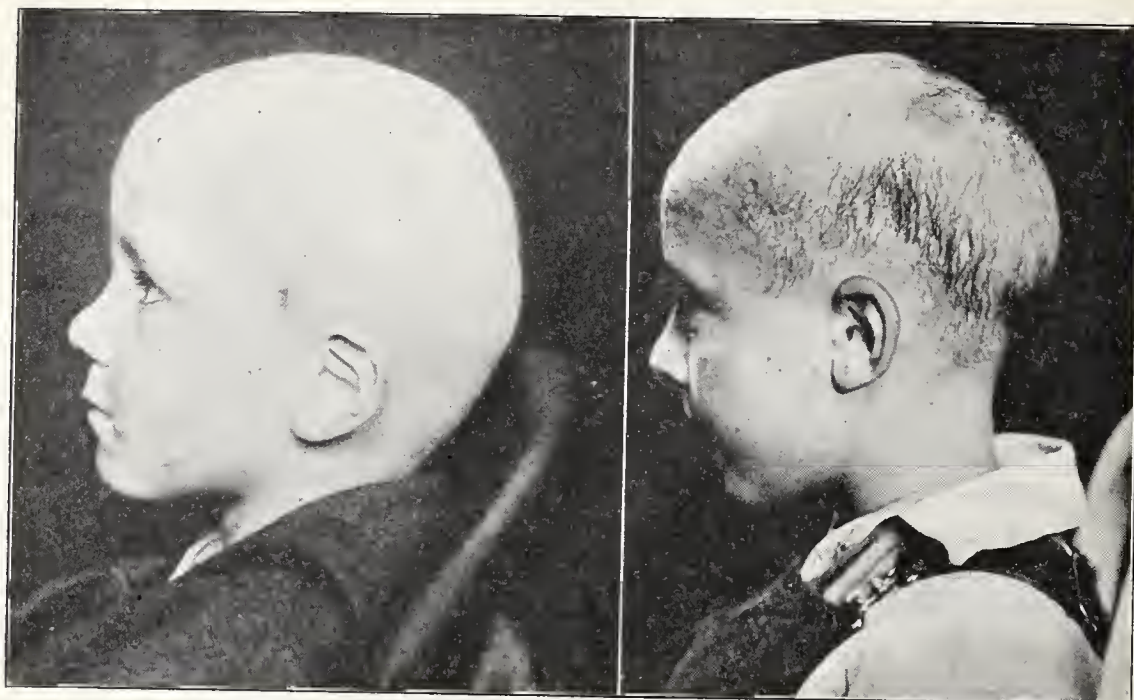
Before the advent of modern x-ray therapy, the treatment of this number of patients would have been a long and tedious process. I personally have not had any experience in treating ringworm of the scalp with local applications. At the Paris Ringworm School, prior to the time when x-ray therapy was used, it took, on an average, two years to cure their cases. This was under ideal conditions, the therapy being given by experienced attendants. Darier states that it takes an average of eighteen months to produce a cure, with a few taking from two to four years.

A few of my cases were well and back in school in a month. On an average, they were away from school for seven and one-half weeks, the longest period being three and one-fourth months. The hair had not returned in this time, but the child was cured of the ringworm infection.

I do not wish to advocate x-ray therapy for all cases of ringworm of the scalp, nor do I wish to deny the fact that isolated cases may be cured by local applications in a comparatively short time. Broadly speaking, however, I do think that x-ray therapy is the method of choice and the only type of therapy to be carried on in institutions on account of the danger of infection to others.

Ringworm of the scalp clears spontaneously at puberty, probably due to some inhibitory action of the glands of internal secretion on the growth of the organism in the hair shafts. Children who are 12 to 13 years of age may, therefore, be treated with local applications, knowing that they will clear

*From the Department of Dermatology, University of California Medical School.



No. 1—Complete defluvium due to x-ray therapy. Ringworm infection is cured and hair is returning. Photograph taken one month after treatment.

No. 2—Partial defluvium due to x-ray therapy. Hair has all fallen from ringworm areas. Disease cured and new hair coming in. Six weeks after treatment.

within a few months, due to internal changes. In an infant of six and one-half months, I was able to clear up the disease in a few weeks with local applications. In a child under 3 years of age it may be difficult to give x-ray therapy, as the little patient will be unable to stay quiet for a sufficient period of time. All patients between the ages of 3 and 12 can generally be treated with x-ray therapy without difficulty. I have had some children of 3 years of age that were much easier to treat than others of 8 or 10. Institutional children in general are ideal patients, while those from private homes are often spoiled and unruly.

It is needless to say that a positive diagnosis must be made before the patient is submitted to x-ray therapy. The main difficulty that one encounters is in differentiating the disease from alopecia areata. The bran-like scales, the stumps of hairs, and the localized areas of alopecia in a young subject are always more than suggestive. Microscopical examination of the stumps of hairs should always be done to make a positive diagnosis. The diagnosis should be made as soon as possible to prevent the possibility of infecting others.

When there is only one visible lesion, one may be tempted to epilate this area alone. In general, I think this is always unsatisfactory. When the clippers are run over the scalp, many smaller areas are found that could not be seen before the hair was clipped. If one area is to be treated, make that exposure correspond to one of the five Kienböck-Adamson areas, so if further treatment is necessary the other four areas may be used. I had one case referred to me on which the localized areas only had been treated, and many of the early areas were reinfected before the later ones were healed and a sufficient period of time had not elapsed to allow further x-ray treatment.

In 1897, two years after the discovery of x-rays, Freund suggested the use of x-ray in treating local-

ized areas of ringworm of the scalp. Due to inaccurate instruments, many cases of permanent alopecia resulted. In 1904 Sabouraud and Noiré introduced the plan of epilating the entire scalp at one sitting. In 1907 and 1909 Kienböck and Adamson, respectively, elaborated our present method of treating five areas. The advent of the Coolidge tube in 1914, the development of the interrupterless transformer by Snook in 1908, and the arithmetical method of computing dosage as advanced by MacKee, Remer, and Witherbee, have made x-ray treatment of ringworm of the scalp a safe procedure.

X-ray treatment for ringworm of the scalp is solely a mechanical process. The spores and mycelia are unaffected by the roentgen ray. The ray causes the hair shaft to fall from the hair follicle in from fifteen to twenty-one days after exposure. It thus removes the millions of spores and all of the hair in which they may live.

The local treatment that has been recently applied to the scalp may be a contra-indication to immediate radiation. If mercury, iodine, sulphur, chrysarobin, etc., has been applied in any form, a period of a week or ten days should be allowed to elapse before x-ray treatment is given.

The hair should be cut close to the scalp, to enable one to make careful measurements and to prevent it from acting as a filter.

I do not wish to go into the technique of x-ray treatment of ringworm of the scalp in detail. Anyone who endeavors to do this type of work should acquaint themselves with every detail as brought out in MacKee's text-book on "X-ray and Radium Treatment of Diseases of the Skin." The scalp is marked off into five areas, according to the Kienböck-Adamson method. One Holzknecht unit of unfiltered x-ray therapy at skin distance is given over each of these five areas at one sitting. The whole procedure is carried out in a period of twenty to thirty minutes. The hair falls out within two to

three weeks after treatment. With this technique, all of the hair may not fall. In general, the diseased hair falls first, and even with a partial defluvium the result will be satisfactory. The hair begins to return almost immediately, and the patient will have a good growth of hair in three or four months. The margin of safety is likely such that one may give 25 per cent more than this amount without disastrous results, but this should not be encroached upon.

Of the eighty-seven cases that I have treated with x-ray therapy, I have not had a single case with any permanent alopecia. Everyone should have the same results if they follow the technique carefully. In the first two patients that I treated, the hair did not fall at all. They were the first cases with ringworm of the scalp that I had treated with this machine, and they did not receive sufficient x-ray to cause a defluvium. They had to be retreated.

The after treatment of most of these cases is very simple. The children are provided with cloth caps, to be worn under the regular head covering. They have to be changed daily or bi-weekly, and boiled before reusing. These are discarded as soon as the hair has fallen. At the end of the second week I prescribe a 3 per cent ammoniate of mercury ointment to be massaged into the scalp, with the idea of preventing reinfection.

A week or ten days after the x-ray has been applied the areas may become inflamed. In certain cases (10 per cent) mild as well as severe toxic symptoms may develop along with a more or less severe impetiginized dermatitis of the entire scalp. Under the continued use of a 3 per cent ammoniate of mercury ointment, perhaps supplemented by boric acid compresses, the areas clear up in from ten days to two weeks' time, not however, without considerable worry and concern on the part of the parents of the child.

Without thorough study one cannot appreciate the economic and social aspects of the disease. Under modern x-ray therapy each patient generally remains out of school from six to nine weeks, and may have been the cause of several others remaining away for similar periods of time. If the disease is left untreated or treated with local applications alone, the child may be forced to remain out of school until the disease heals spontaneously at the age of puberty. He is then so backward that he may prefer to go to work rather than to school.

In conclusion, I wish to call your attention to the marked increase in the prevalence of ringworm of the scalp, to roentgen-ray therapy as the best and quickest way to a permanent cure and to the comparative safety of this procedure if all details of technique are carefully carried out.

Fitzhugh Building.

DISCUSSION

SAMUEL AYRES, JR., M. D. (Brockman Building, Los Angeles)—I thoroughly agree with Dr. Miller regarding the efficacy of x-ray in the treatment of ringworm of the scalp; its rapid and satisfactory results have been amply demonstrated. In the hands of such a capable operator as Miller it is reasonably safe. But I do contend that conservative measures are preferable in the average case.

The element of risk in roentgenotherapy cannot be entirely removed, and I do not feel that any element of risk whatsoever should enter into the treatment of a benign

condition when absolutely safe measures can be applied with success. In treating carcinoma or some serious disorder which threatens life, a reasonable element of risk is justifiable. A personal experience of my own in which I was very nearly responsible for producing a permanent alopecia has given me a wholesome respect for the possible dangers of roentgenotherapy. I am not nearly so pessimistic concerning the treatment of scalp ringworm by local applications. I thoroughly agree and insist that epilation shall be the first step in treatment, but with a little care and patience this can be accomplished in a most thorough manner by means of epilating forceps or in more extensive areas by the application and rapid removal of sheets of adhesive plaster after the hair has been cut close. The infected hairs readily adhere to the adhesive. Rigid cleanliness to avoid reinfection must be observed. A variety of local applications has been successful in my hands, especially sulphur and salicylic ointment. The treatment must be kept up from four to six weeks or longer, and epilation must be repeated every few days as needed. Thorough application of the medicament is necessary; it should be rubbed into the entire scalp for at least fifteen minutes every night and morning. Since many of our cases are seen at the Parent-Teachers' clinic and are under the careful supervision of school nurses, we feel that our cures are permanent in a high percentage of cases, and that they can be effected within a month or two. The large spore type of ringworm is often overlooked because it does not present the typical bald areas. School nurses especially should be taught to recognize these less typical cases which are often confused with seborrhea.

Although I have no available figures to offer, I have not been aware of any increase in the incidence of tinea capitis in Los Angeles.

GRANVILLE MACGOWAN, M. D. (Brack Shops Building, Los Angeles)—Dr. Miller has given to us a very interesting exposition of the most modern and rapidly successful method of treatment for ringworm of the scalp. No fault can be found with his statistics; nor are his claims unreasonable. It is alluring enough when we consider that we have at our command an agent that is clean, painless, and requires but one application to effect a cure of this loathsome disease within a very few weeks.

And yet I think I can easily see that its popularity will probably not be great, for unfortunately no one can say more than this skillful roentgeologist where he speaks of the "comparative safety of this procedure if all details of technique are carefully carried out."

There is always a chance that an undefendable suit for damages may be just back of its use, for an occasional destruction of the hair follicles and permanent baldness may result.

In private practice, given the proper attention by means of local remedies, the outlook for the care of ringworm of the scalp is only in the exceptional cases, the *bête noir* it is pictured in the books. It usually can be overcome in a reasonable time by skill applied with care.

Who of us would look with equanimity upon the unpleasant sight of a girlchild of our own made permanently bald so that she might be rid of a disease that, at the most, is only a nuisance.

O. V. SCHROETER, M. D. (Union Bank Building, Los Angeles)—Until such a time in dermatological practice as x-ray exposure to human tissues can be so precisely measured as to obviate all harmful results in all instances of average practice—and it is doubtful if such a time can ever come—especially in view of varying susceptibility as well as other factors, this form of treatment should not be the one of election. And such is the case in the treatment of ringworm of the scalp; the usual methods of treatment get results in even less time, in most cases, than it takes to recover from the x-ray alopecia when that is not permanent.

In fact, as with ringworm of the scalp, many cutaneous diseases, too many, are treated roentgenologically that should not be or could be treated with as good or better results by other methods. My experience is that the use of x-ray should be more restricted in the treatment of skin conditions. When one sees inflammatory skin conditions treated even by dermatologists in this way, it brings the thought that the x-ray is used many times because it is

handy, and the apparatus cost something, and not because the case was selected.

This is no criticism of the skillful epilation as done by Dr. Miller and others before him. The method should not be used generally.

MOSES SCHOLTZ, M. D. (Brockman Building, Los Angeles)—The advocacy of x-ray treatment as the method of choice in ringworm of the scalp can be accepted only with certain reservations. Theoretically, it must be granted that, in the hands of a competent operator, x-ray is the most effective, clean, quick, and reasonably safe method of treating ringworm of the scalp. However, I fear that, should we broadcast this notion and encourage the average regular and irregular practitioner to attempt this short cut to the cure of ringworm cases, disastrous results would follow. We see already entirely too many x-ray acute and chronic burns following the treatment of perfectly benign dermatologic conditions, such as psoriasis, eczemas, warts, etc. Epilation of the hair by x-ray is one of the most delicate technical problems in practical x-ray work, and should be entrusted only to men handling large numbers of these cases, specializing in this line of work. Leaving aside the question of idiosyncrasy, which is doubted by most roentgenologists, the milder degree of it—individual hypersensitiveness—cannot be denied; neither the possibility of a delayed x-ray reaction can be gainsaid.

I agree with the previous speaker that, in a benign condition, such as ringworm of the scalp, which in many cases responds to local medication, would be ill-advised to use as a routine measure a weapon potential of dangerous effects as x-ray. In my opinion, every case of ringworm of the scalp should be given a trial of thorough local medication for a reasonable period of time, say from four to six weeks. Only persistent, intractable cases, those generalized all over the scalp, also cases lacking facilities of proper nursing (which is the most important factor in the treatment of ringworm), and particularly institutional cases, should be referred for x-ray treatment. With this reservation of using x-ray only in certain types of cases as means of the last resort, and not as the method of choice, I fully endorse the advocacy of x-ray treatment in ringworm of the scalp.

HARRY E. ALDERSON, M. D. (240 Stockton Street, San Francisco)—I have read Miller's paper with much interest, for I know something about his good work.

Roentgen-ray treatment of this condition, according to MacKee's technique, is cleanly and effective. In the hands of a careful man like Miller it is safe, and the results are good. There are other effective methods, but they are useless unless the patient and family co-operate fully. Where x-ray treatment is not feasible, I use a prescription given me by Jackson some years ago, containing iodine crystals in goose grease, with which you are all familiar. I have found it satisfactory. Lately, I have been using also a penetrating cleansing lotion of iodine and carbon tetrachloride. The patient must carry out the treatment intelligently and faithfully.

We are seeing a great many cases of ringworm at the Stanford Skin Clinic (and they come from all over the city), but we have not noticed any very marked increase in their number. It seems to me that Miller's rate of increase may be due to the rapid growth of his practice rather than to other causes. There are some children's institutions that seem to be regular incubators for this sort of thing. We can trace many of our ringworm, impetigo, and scabies cases in children to those places. We can keep on treating these cases successfully, but until the foci that exist here and there are cleaned up, we shall continue having many new cases.

DOCTOR MILLER (closing)—In general, the discussion of this paper has brought out the facts that I wished to emphasize. X-ray therapy of ringworm of the scalp should not be attempted by those who are not thoroughly familiar with its use, especially in the treatment of this disease. I purposely omitted the details of technique, to prevent anyone from attempting to treat the disease with only the data from this brief paper.

I wish to take exception to the statements that most cases of ringworm of the scalp can be cured by local applications in a month or two, and that the disease at the most is only a nuisance. I do not believe that the authority that I quote as to the average duration of the disease can be questioned. Darier's statistics of thousands of cases that

were put into an institution and kept there until well show that it takes an average of eighteen months to produce a cure without x-ray therapy. They were treated by expert attendants. Some were well in a month or two, others took three or four years, the average being eighteen months. I know very well that some cases can be cured in a very few months without x-ray therapy. In private or clinic practice we follow those that clear up quickly, while those of long duration are apt to consult others, in the hopes of a more rapid cure. If a child is forced to remain away from school for six to eighteen months or longer, and if he has given the disease to others who had to lose their schooling for a similar period of time, I think that the disease is not a nuisance, but a calamity.

If a child with ringworm of the scalp can be given constant and intelligent nursing and kept isolated from other children, that child may be treated successfully and rather quickly cured without x-ray therapy. Unfortunately, most of the cases occur among the people in poor circumstances and large families or in institutions. These patients, I believe, should have modern x-ray therapy, in which minute care is given to all details of technique.

THE SURGICAL TREATMENT OF THE OBSTRUCTING PROSTATE *

By FLOYD F. HATCH, M. D., Salt Lake City, Utah
(From the Inter-Mountain Clinic, Salt Lake)

*Analysis of twenty-eight cases.
Study of recent literature.*

DISCUSSION by Mark Brown, Ogden, Utah; W. G. Schulte, Salt Lake City; James R. Dillon, San Francisco.

THE radical surgical procedures that we employ in prostatic obstruction must more than counterbalance in percentage of safety the dangers of chronic bladder residual with infection and mechanical obstruction to the outflow from the kidneys, resulting in their gradual destruction. In simple language the probability of "cure" must not be worse than the disease.

To appreciate exactly what we are offering to the public and justify ourselves in proceeding with certain types of surgery or medicine, we should periodically classify and study our treatment and results and then act on the basis of our own statistics, and not upon those of famed contemporaries. It was with this idea in mind that I have prepared an analysis of my last twenty-eight cases of prostatic obstruction that have had radical surgical treatment.

The pathology and mechanism of prostatic hypertrophy, according to some authorities, is that the prostate proper atrophies in advanced life, while the submucous glands undergo hypertrophy. These proliferating peri-urethral glands spread in various directions and thereby intrude upon the prostatic gland, which, in consequence, undergoes further atrophy. The prostate itself often appears as a pseudo-capsule, about half a centimeter thick, which the microscope will identify as prostatic tissue. The correct term should be nodular hyperplasia of the peri-urethral glands which are located between the verumontanum and internal sphincter. Predominance of adenomatous or fibromyomatous features are of no real importance, as there is no pure formation of either type. The so-called adenomatous type is observed in about 90 per cent of the cases, while the hard sclerosed nodules or fibrosis, constituting 10 per cent, are secondary to inflammation of the

* Read before the Salt Lake County Medical Society, April, 1924.

prostatic tissue. The hyperplastic process cannot be considered a pathologic process. It is no more a disease than gray hair. The expansion of the proliferating glands encounters several mechanical hindrances. Toward the perineum the diaphragmaurogenitale (triangular ligament) presents an insurmountable barrier. At the posterior surface the prostate is quite an important obstacle, more pronounced in some cases than others; the only direction of little resistance is towards the bladder. This direction is along the prostatic urethra, which, in order to keep pace with the proliferating glands, undergoes numerous changes in regard to size, lumen and curve. The glandular undergrowth, as will be seen, shows a tendency to elevate the floor of the bladder, either in toto or in segments, associated with the upward dislocation of the internal sphincter. The internal urethra undergoes stretching often from one to four centimeters and takes on distortion of normal curve and narrowing of the transverse diameter. Urethral muscles become distorted and lose power and tone to aid in sphincteric control.

As there are many cases of mild obstruction not necessitating other than temporizing methods, I will outline briefly what in my mind constitutes the necessity for prostatectomy. A clear indication is afforded when there are urgent signs pointing to interference with function of vital organs. Oddly enough, the most urgent indications often do not direct our attention to the bladder, as in "cachexia urinaria." These patients may complain only of loss of appetite, nausea, vomiting, and loss of weight. I consider the smallest residual indicating operation to be a few ounces if the urine is clear, and only a small definite residual if the urine is infected. Acute retention, in my experience, is not as grave an indication for operation as chronic retention. Bleeding is an indication for operation if profuse or if the bladder fills with clots or when less profuse or continuous if the blood loss weakens the patient. These indications are all relative and must be applied to suit the individual case. A good surgeon with low mortality may operate with less urgent indications than a surgeon with limited experience in these cases. Subjective symptoms referred to the bladder, as frequent, painful and difficult urination, are less urgent indications for operation than cases with renal embarrassment. Cases should be subjected to surgery when they interfere with activity or comfort to any great extent.

Prostatic obstruction to outflow of urine from the bladder, whether from median bar formation, contracted vesical neck, middle lobe hypertrophy or generalized enlargement from hyperplasia of periurethral glands within the prostate, constitutes pathology.

Clinically, prostatic obstruction must be differentiated from stricture, diverticulum and intra-prostatic polyp. Any of these cases may cause difficulty in diagnosis, which is easily settled by the cystoscope and cystogram.

The preliminary care of cases selected for operation consists, in the main, of rest, bladder drainage, building up of kidney function and general body resistance, as determined by renal function and blood chemistry tests and general clinical study. I am con-

vinced that many cases with only a trace of p. s. p. and a high blood urea test can, by persistent drainage and clinical treatment, be made fair operative risks, as I have found evidenced in my cases. Hugh H. Young, in a recent paper, reported results in ten cases of continuous catheter drainage in cases of low p. s. p. and high blood urea tests, raising p. s. p. from a trace to 60 per cent in some cases and lowering the blood urea test from 140 to 26. The longest interval of preliminary drainage in his series of cases was ninety-eight days, the shortest twenty-nine days.

I select the operation to suit the individual case, as the punch operation in cases without prostatic enlargement, but with true obstruction about the internal vesical orifice as diagnosed by cystoscope, as this is a relatively simple procedure. It gives perfect results in properly selected cases and eliminates the great hazard, pain and persecution of an unnecessary major operation. Most cases of the so-called small fibrous prostate should be treated by this type of operation, as most of the pathology centers about the vesical neck and the trauma of enucleation is out of proportion to the benefit derived. In these cases the floor of the bladder is smooth or concave downward rather than elevated with a resilient glandular tumor. If the case has not been previously cystoscoped, the surgeon who finds this condition before him does well to appreciate the situation and circumvent possible disaster by removing a generous notch of the contracted fibrous vesical orifice posteriorly, assuring himself of patency below by the passage of a sound. It may be repeated that this type of case could have more suitably been operated by the punch method if proper preliminary cystoscopic diagnosis had been made.

Prostatic obstruction includes carcinoma of the prostate, and though many early cases subside sufficiently with different methods of radium applications to the prostate, if the obstruction persists and the patient's condition justifies, a partial prostatectomy is appropriate to eliminate the obstructive factor, and then radiation should be continued vigorously often with exceedingly satisfactory results. Treatment in all cases of carcinoma of the prostate is coming to be more radical with early partial perineal prostatectomy and large amounts of radiation, sufficient to cause considerable slough, where the patient's general condition justifies.

In hyperplastic obstructions, I propose to remove the nodular hyperplasia in the manner least likely to jeopardize the life of the patient and to secure the best possible functional results with the smallest number of complications. In an early case with a clear urine and good renal function and normal blood urea test, I feel that an immediate one-stage operation is appropriate. If there are factors indicating prolonged obstruction with injury to the renal mechanism, I drain with an inlying soft rubber catheter, about No. 16 F. with two or three eyes near the tip, if tolerated well, until renal and blood tests appear sufficiently near normal or as near as it appears they will approach, and then do a one-stage supra-pubic operation.

One of the most valid arguments against routine preliminary cystostomy (realizing that much can be said for and against both of the usual preliminary

drainage procedures), is that an old man is put in a condition of enforced inactivity. Many are positively made bed-ridden, rather than being kept up and about in a high state of physical and mental tone, as is allowed by a well-tolerated inlying catheter, which is synonymous with encouraged daily out-of-door exercise and activity up to the day of operation.

By irrigating with weak mercoxyl solution or by administering acriflavine by mouth, it is demonstrable that the severe reaction from foul septic urine is almost entirely avoided as a post-operative complication.

In cases of mildly infected urinary tracts, I follow the above routine in general. Some very good surgeons go so far as to state that they feel infected cases treated with careful pre-operative measures are better risks than their preliminary clean cases. They state that infection seems to produce an auto-immunization.

Where there is severe bladder or renal sepsis or bladder stones present, I feel that a two-stage suprapubic operation is often indicated, and do the first stage under novocain anesthesia and drain the wound high so there will be sufficient room above the pubis to adequately enlarge the drainage wound downward at the second operation, obviating the danger of opening into the peritoneal cavity.

The preliminary procedure is prefaced by giving a hypodermic injection of $\frac{1}{4}$ grain of morphine sulphate one-half hour before trans-sacral anesthesia with 1 per cent novocain is administered. I have found that 5 minims of adrenalin chloride (1 to 1000 solution) gives additional duration to my bloc anesthesia and prevents untoward symptoms of mild novocain reaction due to too rapid absorption of the drug into the circulation.

Trans-sacral anesthesia, combined with abdominal wall field bloc, is one of the greatest adjuncts recently advanced tending toward the elimination of shock and aiding in improved technic of our prostate operative methods. Blood pressure apparatus and cardiac auscultation during recent cases using this form of anesthesia have frequently recorded no change in the patient's blood pressure and rate, rhythm or tone of the heart-beat or respiration change during the enucleation, where previously we expected blanching of the patient's face, rapid irregular pulse, enormous drop in blood pressure, and rapid labored respiration—all characteristic of marked shock during this part of the procedure.

Approximately one-half hour from the time of the sacral injection, my aim is to proceed with the cystotomy under local anesthesia, the bladder in the meantime having been gently distended with warm, sterile solution.

After opening the bladder, if the trigonal area and prostatic urethra are not anesthetic to pressure of the finger, I inject novocain directly into the base of the bladder and prostate. Then I proceed with the enucleation, using gas analgesia or not, as the patient desires. It is vital that this shock-producing procedure of enucleation be as rapidly accomplished as possible, not to exceed two or three minutes in cases where the trans-sacral anesthesia is not absolute. My dissection is begun by splitting the thin

portion of the prostate forward from within the urethra and dissecting backward and downward on either side from the cleavage plane so provided until the hyperplastic mass is freed and delivered from the cavity thus produced without injuring more than is absolutely necessary the floor of the bladder and the membranous urethra. Strong pressure or gouging with the finger to sever the lower prostatic urethra is often necessary.

It is startling at times to note the rapidity with which the prostatic tissue proper (musculo-glandular capsule) contracts down to close the operative cavity and how completely it controls hemorrhage, provided one has not torn across the trigonal area in the dissection. Visualization of the cavity must be sufficient to be assured of cessation of gross hemorrhage. Unusual hemorrhage not controlled by visual hemostasis indicates the use of one of the various hydrostatic bags.

Closure can be made rapidly in the customary fashion over a three-quarter inch rubber tube, two or three inches in length, adjusted so that it will not make pressure of any kind in the base of the bladder or prostatic cavity.

The normal physiology of the urinary tract usually irrigates the bladder sufficiently for the first few days to keep it reasonably free from stagnant septic material. In about forty-eight hours the large rubber hose drain is removed and the gentlest kind of irrigation is given daily with warm boric acid or mercoxyl solution from a slightly elevated container with soft rubber tube and catheter attached, the latter passed gently into the bladder an inch or two through the sinus. This procedure prevents collection of mucus and purulent digestive accumulation in the bottom of the bladder and prostatic cavity, which is absorbed to some extent and intoxicates the patient to the point of grave danger. This condition is often unrecognized, especially with those who are prejudiced against irrigating the bladder after operation, and the sepsis in the prostatic cavity rapidly evidences itself in the symptoms of anorexia, pallor, weakness, temperature, etc. I condemn early passage of catheter or instruments through the urethra or inlying catheter in these cases post-operatively.

It is well to be constantly on the watch for rectal impaction, a complication which patients appear to be particularly prone to develop following prostatectomy.

Dehydration positively must be avoided. Patients should have very large amounts of fluids to keep up kidney function and elimination under the strain of operative trauma, shock, and post-operative reaction. Dehydration kills more surgical patients than operative shock. Sufficient fluids should be given so that if the kidney cannot eliminate nitrogenous products in concentrated solution they will be forced to function by the very consequence of excessive dilution and excretion. Water should be given by mouth, rectum, hypodermoclysis, and, in case of urgent need, by the intravenous method, as much as 500 to 1000 cc. or more as often as indicated.

In excessive hemorrhage, patients should be typed early and transfused generously, as from this condition as from no other can the patient's vitality be

sapped insidiously until he is weakened and shocked beyond recovery, if neglected.

Operative trauma, hemorrhage, dehydration, and sepsis are our four great enemies in prostatic surgery. These complications must be avoided one by one as they appear by giving intensive attention and constant study to every detail of operative and post-operative treatment. Individualization of cases, as in no other group of maladies, is demanded, as well as constant care and attention of the surgeon to keep down to the reasonable limits of safety, a procedure that, with carelessness, readily approaches the mortality statistics of the not far distant past that are appalling.

CASE REPORTS

The twenty-eight cases of prostatic obstruction were operated by the supra-pubic method. Twenty-five were prepared for operation by urethral catheter drainage, three by preliminary cystostomy.

There was one death—case No. 22, giving a mortality of 3.5 per cent. This case was a male, aged 70, with a hyperplasia and some vesical neck obstruction. Preliminary care in the hospital covered nine days; post-operative care, seven days. On entrance the blood urea nitrogen was 33 mgms., at operation 24 mgms., and the p. s. p. test 46 per cent. The operation was done with local novocain and gas oxygen anesthesia. A moderate post-operative hemorrhage, for which a transfusion was done on the second day, was followed by symptoms of low-grade peritonitis and partial obstruction. Autopsy showed a very localized pelvic peritonitis, with no evidence of any site of entrance of infection.

The average age of the patients was 65 years. The shortest period of preliminary treatment was 4 days, and the longest 58 days; the average, 15 days. The shortest period of post-operative treatment before leaving hospital with wound healed was 16 days; the longest, 132 days; average, 31 days.

The clinical tests of urinalysis, blood urea nitrogen, p. s. p. test, white blood count, hemoglobin, and coagulation time were determined frequently during the preliminary treatment and before operation in all cases. These tests were continued until the patient was in suitable condition before operation was proceeded with.

The symptoms included polyuria and nocturia in the majority of patients, usually dating back for years. Microscopic hematuria was present in many of the infected cases. Gross bleeding from the urethra not accompanying act of micturition occurred in three cases from ulceration of mucous membrane of the intra-prostatic urethra from pressure of the hyperplastic nodule on the opposite side. Usually dysuria, retention, loss of weight or appetite, uremic symptoms or hematuria brought the case to the doctor for medical aid.

These cases were all cystoscoped and important preliminary data obtained regarding the presence of contracted vesical neck, diverticula or stones, and operation varied accordingly.

The anesthetic used in six cases was local novocain and ether analgesia during enucleation. Fourteen cases had local novocain and gas analgesia during enucleation. Eight cases were given trans-sacral and local abdominal field bloc, with four of these

given gas analgesia during enucleation at the request of the patient.

The complications were hemorrhage in two cases; epididinitis in three cases; vesiculitis in two cases; bronchitis in one case; peritonitis and intestinal obstruction in one case, and fecal impaction in two cases. The Hagner bag was used in two cases.

Twenty-seven cases left the hospital in good condition; three have since died, all more than a year after leaving the hospital—one of acute alcoholism, one of acute lymphatic leukemia, and one of recurrent carcinoma, which was operated and radiated and was improved with continence until his death two years after the operation from metastasis. One reports being in poor health, but apparently his urinary apparatus is not at fault. All the rest report that they are in good health and have no remarkable urinary tract symptoms. No case of incontinence was reported.

Coincident with this series, I treated two cases by the Young punch operation, with complete and immediate cessation of symptoms and recovery.

On the face of this report it would seem that this class of case has a high percentage of complications, but when one realizes that the subjects of this study are all old men, more or less broken in health and reduced in vitality, it seems remarkable that one can succeed with such a plan of action that the formidable operative care can be administered and such a low mortality rate be maintained in the presence of so many possible complicating factors.

Inter-Mountain Clinic.

DISCUSSION

MARK BROWN, M. D. (Eccles Building, Ogden, Utah)—This article is very thoroughly prepared, and Dr. Hatch is to be complimented. All his patients were operated by the suprapubic method of Squier. This seems to be the most popular operation used by urologists and especially by general surgeons. The only indication for the perineal route is in the case of the small contracted fibrous prostate or those suspected of new growth.

I watched Hugh Young do about fifty, and must admit that he stands supreme in the perineal method. In 1912 I watched Dr. Squier perfect his suprapubic method on cadavers, and would like to say the most important step in the enucleation of the prostate is to insert the finger into the urethra until you reach the "cut-off" muscle, then work in that region with your finger in the roof of the urethra, instead of the floor, until you perforate the urethra. Now enucleate from that laterally around to midline on one side, then the other, without injuring internal or external sphincters.

In the last two years I have treated five cases of obstructing prostate of the adenomatous type by the deep x-ray. All these patients had cystitis, night frequency and retarded flow. I find the relief of the patient's symptoms as good as with surgery, but the compensation is, as the New Yorker says, "not so good." I think the retention catheter is good; yet in the last year I have seen two patients die from apparent infection from the catheter before the prostate was removed. In post-operative cases, when the patient gets an alkaline bladder with crusts around the incision and in the bladder, I find that Horsford's acid phosphate by mouth and by mild irrigations to the bladder is very effective.

W. G. SCHULTE, M. D. (Boston Building, Salt Lake City, Utah)—Prostatic hypertrophy is a loose term as generally used, and includes all those cases that show evidence of enlargement of tissues surrounding the bladder neck. It is true that the prostatic tissue usually undergoes pressure atrophy, as the tumor, myoma or adenoma, encroaches upon it, and presses it against the dense prostatic capsule.

While enlargement of the prostate is commonly found

during the fifth and sixth decades, among men leading a normal sexual life, I should not go so far as Doctor Hatch and compare it to gray hair. In a personal communication, the late Dr. J. T. Geraghty made the statement that, in his experience, simple prostatic hypertrophy was unknown among men who had abstained from sexual intercourse, but that celibacy was no bar to cancer of the prostate. That corresponds with my experience.

The indications for operation are about the same as those usually mentioned, and will depend upon the whole picture rather than on any one symptom. The cystoscope, when it can be used, is a great help in diagnosis and in deciding upon treatment.

I think most operators are agreed that some cases are safe risks operated without a preliminary cystostomy. The blood chemistry seems to be of even greater importance in determining these cases than is the P. S. P. test. Local anesthesia is becoming more generally used, and the combination of sacral and para-sacral, together with cutaneous infiltration, gives brilliant results. However, I cannot agree that the routine use of epinephrin in the solution adds to the safety of the procedure.

Doctor Hatch's emphasis on dehydration is a good point. The tendency on the part of the nurse is to neglect the fluid intake. The operator must closely check the urinary output, particularly during the first three days after operation.

JAMES R. DILLON, M. D. (516 Sutter Street, San Francisco)—Doctor Hatch has very well covered the more important points regarding pathology, symptomatology, and preparation for prostatectomy.

The prognosis of the prostatic patient is proportional to the best management, just as the successful result is proportionate to the accurate diagnosis of the pathological condition present. Refinements in diagnosis and treatment have reduced the mortality and morbidity on this basis to a minimum, and further advance must lie in the education and conviction of the general practitioner and layman that the patient should seek earlier surgical treatment and not be allowed to drift into a dangerous condition beyond surgical aid by the use of urinary antiseptics and bladder drainage by catheter. Next important to establishing the functional stability of the kidneys in the preparation of the prostatic patient is the study of the cardio-vascular system. Myocarditis, often secondary to damaged kidneys and a forerunner of uremia, is a dangerous contra-indication to prostatectomy under general anesthesia. In these circumstances it should be done under spinal or para-sacral anesthesia, after thorough preliminary preparation of the heart and kidneys.

Regarding the choice of operative technique, we find 65 per cent of prostatic patients are excellent risks, and, if carefully prepared, have good surgery and are properly managed post-operatively, should recover, no matter whether suprapubic or perineal routes are used. With the 20 to 35 per cent of poor risks, it is better to do the perineal prostatectomy under gas and oxygen or spinal anesthesia, and get those decrepit old men about in a few days to avoid pulmonary, cardiac, and renal complications. The punch operation should be reserved for fibrotic contractures of the vesical orifice, or median bar obstruction, as hypertrophy of Albarrans' glands, and is usually indicated in the fourth decade of a man's life. After the age of 50 the fibrosis has extended through the prostate, obstructing the whole of the prostatic urethra, and nothing short of a prostatectomy will give complete relief.

Suggesting a Revival of Medical Apprenticeships—
 "The old system of medical apprenticeship had many things to commend it, but it is out of date and cannot be adjusted to the needs of the times," according to E. H. Ochsner (American Medicine). "There is, however, a real need for a system of apprenticeship and junior partnership which only the organized medical profession as a whole can work out and make operative. Such a system should utilize the vast practical experience and ripe judgment of the older members of the profession and the better technical training of the men just entering the profession and could be made equally advantageous to both, as well as the public in general."

COEXISTING LARGE FIBROID AND PREGNANCY—CAESAREAN SECTION AND HYSTERECTOMY AT TERM.

REPORT OF A CASE

By C. A. DELANCEY, M. D., San Anselmo, Calif.

This rather unusual case record is published, not only because it has interesting features, but particularly because of the "wild" stories about it published in some newspapers, and its treatment in the alleged "humor column" of a medical journal.—EDITOR.

MRS. X presented herself for examination because of digestive disturbances of two weeks' duration. She complained of nausea and distress at sight of food, particularly in the morning.

Further history revealed that she had missed her last menstrual period on March 4, 1924, although she had previously menstruated normally. She gave her age as 42, had been married ten years and had had no previous pregnancies.

Physical examination was negative except that a large solid tumor mass extending from within the pelvis to the umbilicus was outlined. It was about the size of a six months' pregnant uterus. Questioning revealed that this mass had been diagnosed four years previously as a fibroid tumor by physicians who had advised operation. The patient, because of her desire for offspring, had refused surgical intervention.

On September 3, 1924, the patient called again, stating that she had not menstruated since March and thought she had felt life in her abdomen in July. Examination at this time revealed a soft cervix, bluish external genitals and the mass greatly increased in size, and of soft consistency. The solid mass was felt to the right and lower part of the abdomen, while to the left and lower the mass was softer. Auscultation revealed a uterine souffle and foetal heart sounds in the lower left quadrant. A diagnosis of a five months' pregnancy, complicated by a fibroid, was made at this time.

The patient's period of gestation was uneventful except for a slight nausea which she complained of during the early months. As the tumor rendered a normal delivery impossible, it was decided to perform a Caesarian section *at term*.

On December 8, the patient was admitted to the hospital and on the following day the operation was performed. A left rectus incision was made and the uterus exposed. This was incised over its thinnest portion and a normal seven-pound girl delivered. The large tumor mass, together with the uterus with which it was intimately incorporated, was removed. The accompanying picture shows the specimen.

Dr. F. E. Blaisdell, who examined the specimen, reports it as a post-partum uterus, measuring 18 cm. in length, 19.5 cm. in width, and 10 cm. in antero-posterior diameter. Anterior surface presents a Caesarian incision sinistral to center, which measures 9 cm. in length. On posterior surface, likewise, sinistral in position is seen a circumscribed tumor measuring 3 x 4 x 4.8 cm.; it projects 1.5 cm. above the surface. Midfrontal section of uterus shows a large



Post-partum uterus with Caesarean scar and large fibroid.

oval solid elastic well-described tumor measuring 12.5 x 18.5 cm. in diameters. It is intramural in position, as its outer surface is invested by a thin, compressed layer of uterine tissue, and the serosa and subserosa is distinctly recognizable external to it. The tumor is in the right uterine wall. The uterine cavity is 11 cm. in length. The left uterine wall is 7.5 cm. in thickness. Cut surface of tumor shows pearly white strands of tissue running and intertwining in all directions; in scattered or continuous areas a large amount of mucinous substance is found. The tumor cut with marked resistance. The smaller tumor shows a similar structure, except that it is subserous and contains no mucinous material, and is entirely independent of the larger one. Microscopical examination of frozen sections mounted in balsam shows: The general histological characteristics of a fibroid. Scattered through the tissue are seen groups of epithelial cells arranged in the form of glands. There is mucinous softening, and spaces varying in size are filled with the mucinous material (gelatinous after fixation). No mitotic figures have been seen. In small areas near surface, groups of round cells and leucocytes are seen. Tumors are well-defined and apparently benign. Diagnosis: Adenofibro-myoma (intramural). Small fibromyomas (subserous).

The interesting features of the case are the normal, full-term development of the fetus in a fibroid uterus: Patient ten years married without previous pregnancy; conception at the age of 42; excellent recovery of both mother and child, following Caesarean and hysterectomy; absence of hemorrhage during gestation; justification for hysterectomy at the age of 42; complete preponderance of fibroid over uterus.

TREATMENT OF FRACTURE OF THE NECK OF THE FEMUR

By ETHAN H. SMITH, M. D., *San Francisco*

I SHALL not go into any unnecessary description of the hip-joint, or the various methods of treating the above-mentioned fracture. One method alone will suffice for nearly all cases, if properly applied.

As soon as I mention the method, I can hear many of my confreres say, "That is old." The main features of the method are old. So is the discovery of the circulation of blood. So also is the sunshine old, but it is still good.

Weight and pulleys in the straight position, with sand bags of the proper dimensions, properly applied, give ideal results, which are unequaled or unexcelled by any other method.

This method can be applied by a doctor all alone, anywhere that he happens to come to a patient, if necessity compels. Of course, the ideal place is to have the patient in a modern hospital. I would not think of treating a patient elsewhere, unless positively obliged to do so by force of circumstances.

The bed should have some thin boards placed under the mattress and over the springs from the level of the patient's shoulder blades to the feet. These boards should not impinge on the side rails of the bed, and should cover the springs only. The boards off an orange-box would do admirably. An anesthetic is never necessary. This fracture can be properly reduced and dressed without any unreasonable pain to the patient. Anesthetics cause a large number of fatalities in elderly people. If there were no other reason to recommend this method above all others, the avoidance of an anesthetic is ample reason why it is better than any other method.

The lower extremity is put in a straight position. A good quality of real moleskin plaster must be used.

Use two thicknesses of plaster. Have the strips five to six inches wide at the top, tapering down to three inches at the foot. Notch the margins of the plaster so that it will fit without wrinkles over the thigh, knee, and leg. Bandage the foot *always*. Use flannelette bandages, two and one-half inches wide and six yards long. After applying the plaster, be sure that it projects below the foot fully five inches. Make two holes in each lower end of the plaster, into which button a spreader, forked at each end, so as to button into the plaster. Having the two prongs to button into the plaster prevents the plaster from wrinkling and making sores on the leg. To this attach a cord with from fifteen to eighteen pounds in the adult. Excessive weight will defeat the purpose for which it is applied, by causing muscular spasm, and affords great discomfort to the patient.

Next have the sand bags ready—one 5½ inches in diameter by 4 feet in length, and another 5½ inches by 3 feet in length. Two smaller sand bags, each 4 inches in diameter by 2 feet in length, and one small sand bag 5 inches wide, 3 inches thick, and 10 inches long. Have an assistant grasp the ankle and make traction while the surgeon places his hand behind the trochanter major. While the assistant gently rotates the foot and leg inward, the surgeon

lifts the trochanter forward, and places the smallest sand bag behind the trochanter.

This feature of the dressing is the new feature in comparison with the rest of the dressing. The lack of the sand bag behind the trochanter was the one weak spot in this dressing during all the years it was in use. About fifteen years ago I began using the small sand bag behind the trochanter. It gives ideal results. After placing the small sand bag behind the trochanter, the longest sand bag is placed beside the patient's hip from the waist down to below the foot. The next largest sand bag is placed on the inner side of the thigh and leg. (I omitted to mention that the thigh and the leg are laid on a pillow placed lengthwise from just above the heel to above the knee, so as to prevent pressure of the heel on the mattress. This pillow is brought up around the knee and leg, and the sand bag is placed outside of it. Then two small sand bags are placed one on either side of the knee, the middle of each sand bag being just about opposite the patella. The upper end of the large sand bag is fastened to the pelvis by means of a binder going around the patient's hips, and around the end of the sand bag. Pads are put in over the bony prominences wherever needed. Then the two large sand bags are tied by means of a strip of bandage around the upper third of the thigh, another strip just above the knee, a third just below the knee, and a fourth a few inches above the ankle.)

The patient's body can be raised and lowered without interfering a particle with the fracture. The patient can be placed in almost a half-sitting posture, thus giving relief to the pulmonary circulation. That is vastly more comfortable than any other dressing, fulfills every requirement, and is the safest dressing in use today.

Necessity for operation very rarely occurs in fracture of the neck of the femur.

Flood Building.

Significant Extracts From Letters

"We were looking forward to a new baby due to be born in February. My wife died last August. We are still receiving letters from two sources full of optimism and advice about baby clothes and other matters. What can I do to stop these grief-renewing epistles?"

"Dear Better Health Editor—What can a grief-stricken mother do to stop monthly letters of advice about what to do for my baby, originally expected this month, but which I lost two months ago?"

"Dear Better Health—I am expecting my baby in March. The lady specialist at the — Health Center has been telling me what to do and what to eat. One day, not very long ago, I felt very badly and the health center was not open. I went to see Doctor —, who told me my urine was very bad and my blood pressure 185. He said I needed better care than I had been having. Whom shall I believe?"

The Written Word Is the Doctor's Permanent Background—"Whatever work we may do, either clinical or investigative, it will do little general good and will lose much or almost all of its effect unless the noteworthy part of it is promptly and well reported in the medical press, which itself indeed cannot grow and prosper unless the profession gives it the material by which it can live and grow.—Charles L. Minor, M.D. (Southern Medical Journal).

EDITORIALS

LEGISLATION AND HEALTH

The California legislature now in session has before it some 2000 bills, of which more than 10 per cent are about health. Some of these laws are constructive, others are of indifferent value, and too many are destructive and some even vicious in their bearing upon health and welfare. The League for the Conservation of Public Health has examined these laws from the standpoint of their health value and has prepared a digest of some 100 of the more important of them.

This review is based upon the laws as first printed, bearing in mind that most of them will be more or less amended before they came to a vote. The review is published in full in the March issue (February 20) of BETTER HEALTH, and several of the more important laws are discussed editorially in the same issue. BETTER HEALTH of the April and May issues will continue the comment upon the doings of the legislature, and in the issues following the adjournment of the legislature will analyze the health laws that come out of the "hopper."

Readers of CALIFORNIA AND WESTERN MEDICINE who are interested in legislative matters are invited to send comments and suggestions to the League office. Copies of telegrams, letters, and personal advice given to members of the legislature will also be of assistance in legislative publicity.

OLD AGE AT ITS BEST

The widely known and much-beloved physician, Doctor W. W. Keen, passed his eighty-eighth milestone on January 19. "Young men shall dream dreams and old men shall see visions," says the Holy Word. Doctor Keen is not only seeing visions, but he is interpreting them in language that travels round the world. We catch a glimpse of a vision in his "The Ministry of the Biological Sciences" published recently, the opening and closing paragraphs of which read:

"The more the religious man, and especially the clergyman, knows of science, the broader becomes his vision. Through study of the heavens above by the telescope and the spectroscope; and of the earth beneath by geology, chemistry, physics, etc.; and of the inhabitants thereof by anthropology, archeology, biology and other sciences, the wider becomes his horizon. These sciences deal with the works of God and, rightly interpreted, they must agree with the message of God in the Bible (also rightly interpreted), for both have a common origin—Almighty God. Any clashing of these views must depend on partial knowledge, i. e., on our ignorance of much as yet undiscovered, either in the Bible or in Nature, or on a misinterpretation of either. That we have learned so much is a happy augury for future wider and profounder knowledge.

"Revealed religion links itself with biology, and proclaims the blissful certainty of the Immortal Life through the incarnation and the atoning death of our

Lord Jesus Christ, our Blessed Saviour, the divine Son of the ever-living God."

We get another glance of one of the visions of this great Christian physician in his article on "Freeing Mankind From Disease" (Collier's, November 8, 1924), in which after a concise summing up of what has been accomplished in health progress, he says:

"And we are advancing toward even more wonderful things. When it will come no man knows; but of one thing I am certain: the day is sure to dawn, when, after thousands of years of bondage, mankind will be emancipated from cancer and many other diseases."

THE FIFTY-FIFTY BUBBLE

President Coolidge has effectively exploded what is known in Congress as the fifty-fifty appropriations bubble. This "movement," now costing in excess of \$100,000,000 a year, was just getting started. "I am convinced," says our President, "that the broadening of this field of activity is detrimental both to federal and state governments. Efficiency of federal operations is impaired as their scope is unduly enlarged. Efficiency of state governments is impaired as they relinquish and turn over to the federal government responsibilities which are rightfully theirs. I am opposed to any expansion of these subsidies. MY CONVICTION IS THAT THEY CAN BE CURTAILED WITH BENEFIT TO BOTH THE FEDERAL AND STATE GOVERNMENTS."

Under this pernicious scheme congress appropriates funds to the states, and says to them in effect:

"You can have this \$100,000,000 if you also will appropriate another \$100,000,000 and use it as certain federal officials in Washington tell you to use it; but it must be used strictly in accordance with instructions from Washington and under Washington supervision."

Of all these sinister measures, what is now widely spoken of colloquially as the Sheppard-Towner bribe, is the least excusable and most mischievous. It was once popular with certain people, but never at any time had the substantial support necessary for the sustained promotion of health progress. Most of its one-time advocates now speak of it apologetically, and since the President's definite stand has been so widely and generally endorsed, Sheppard-Towners are hard to find. Several states never have accepted the provisions of the "subsidy" law. The reasons for refusal to accept its provisions have been well summed up by Governor Baxter of Maine, who said in a much-quoted statement:

"I protest against the Sheppard-Towner bill: Because it is an unwarranted invasion by the federal government of the sovereign rights of the state of Maine; because it establishes in Washington a federal bureaucracy that is not likely to be in sympathy with the government of this state and the citizens thereof; because it *invades the privacy* of our homes; because it infers that the state of Maine cannot and will not properly care for those of its mothers and children who need assistance; because it pauperizes our state."

Where Congress Gets the Money—Financial agents of state after state are now pointing out the

fact the fifty-fifty "Federal Subsidy Funds," or "bribe funds," as many designate them, are obtained in the first instance from the taxpayers, and that *only a portion of the money collected* ever finds its way back to the state that collected it. California is among the states that suffer the greatest loss between the amount of taxes paid to the federal government and the fifty-fifty returns. This has been repeatedly published in the press of the state.

The Operation of the Law—Of course, it is the principle rather than the amount of money involved that is most widely condemned, but there are some interesting, some humorous and some pathetic incidents connected with the enforcement of these fifty-fifty laws—and particularly of the Sheppard-Towner one—which has proved to be the straw that broke the fifty-fifty camel's back.

OBLIQUE ADVERTISING

This term needs no definition. It was the subject of serious discussion at the recent meeting of the British Medical Association in connection with the report of the Central Committee on Ethics. The report of the committee states that:

"During the past few years there have been brought to the attention of this committee certain journalistic developments which seem likely, if unchecked, seriously to undermine some of the most cherished traditions associated with medical practice, and to lower the reputation of the profession among the more thoughtful sections of the community."

Some abstracts of the various rulings of the association upon the various phases of oblique advertising are deserving of thoughtful consideration by all physicians:

Referring to the subtle and indirect method of giving publicity to certain medical practitioners through the public press, sometimes without and sometimes with the active consent of those referred to, the British Medical Association issued the following warning to their members:

"The practices by a member.

"(a) Of advertising, whether directly or indirectly, for the purpose of obtaining patients or promoting his own professional advantage; or, for any such purpose, or procuring or sanctioning or acquiescing in the publication of notices commending or directing attention to the practitioner's professional skill, knowledge, services, or qualifications, or depreciating those of others; or of being associated with or employed by those who procure or sanction such advertising or publication, and

"(b) Of canvassing or employing any agent or canvasser for the purpose of obtaining patients; or of sanctioning or being associated with or employed by those who sanction such employment; are in the opinion of the council contrary to the public interest and discreditable to the profession of medicine, and any member who resorts to any such practice renders himself liable on proof of facts to have his name erased from the Medical Register."

In discussing the whole question of oblique advertising and the action of the association, the *Lancet* says: "Examples of the newer methods are to be found in interviews granted to newspaper representatives, and in signed letters or articles sent to newspapers. In many of these, members of the profession, either by direct assertion of the journalists concerned, or by more indirect methods, are referred to as possessing, or allow it to be inferred from

their own words that they possess, methods of treatment superior to those practiced by others.

"It is the recognized duty and right of a medical man to take his share as a citizen in public life, but there is no reason why this should involve any advertisement of himself as a doctor, and, with due care, improper advertisement can be avoided.

"Publicity is rightly allowed to medical men not in actual practice of their profession, since they cannot be regarded as using this publicity for the purpose of promoting their own professional advantage, and in view of the official position of medical officers of health and other medical men who hold posts in either the public health or other public service, publicity is sometimes not only permissible but necessary for the fulfillment of their official duty. The presumption in all these cases is that publicity is not sought for the individual's own gain, though it is possible that the practice might be abused and the presumption therefore fail.

"The publication of books and the delivery of lectures on semi-medical topics which are of general public interest and require medical knowledge for their proper presentation have been recognized as legitimate, subject to the avoidance of methods which tend to the personal professional advantage of their authors. There are many things innocent in themselves which may, by the manner and frequency of their doing, gravely contravene the principle that medical practitioners should not advertise.

"Speaking generally, it may be said that the medical men most often quoted in the press are not those whose opinions carry most weight with the medical profession or with the educated public. It is natural that those whom the press representatives most eagerly seek to draw into their service and utilize for their own advantage are those who have some recognized position or well-sounding address or title. It is, therefore, especially important that a stand should be made by such practitioners, who perhaps do not realize that the example set by them may well be pleaded in justification by those in a less prominent position.

"The Association is convinced that, in taking up an attitude of determined opposition to these undesirable journalistic methods, the Association is acting in the best interests of the public as well as of the medical profession.

"The extension of the advertising habit among the profession in general would certainly destroy those traditions of dignity and self-respect which have helped to give the British medical profession its present high status, and would gravely undermine the amenities and harmonious working of medical practice.

"If only those whose reputation is mainly derived from the newspapers allow their names and opinions to be quoted or to appear as those of 'the eminent' physician, surgeon, or specialist, the practice will die a natural death."

SOMETHING TO THINK ABOUT

AN EDITORIAL CHAT WITH PHYSICIANS
ABOUT AUTHORSHIP

In speaking on medical publicity before the Kings County Medical Society of Brooklyn, Arthur Brisbane (Long Island Medical Journal) stated:

"Medical knowledge and publicity are to human life what knowledge of engineering is to the machine, or the knowledge of mechanics to his automobile. . . . The problem is to get the information you possess into the minds of the more simple. . . . Remember, *repetition is reputation*. What we hear over and over we know. I think in that way (short daily articles) you could solve the problem you put before me of medical publicity. . . . After all, every man is glad to give information. . . . I shall be very glad to co-operate (in medical publicity) and I have considerable publicity with which to do it. I may have to do it on a small scale as regards space, but the smaller the space the better. *If you can express yourself in a few lines, everybody will read your message, while if you put it in ten columns, not one in ten thousand will read it.*" Thus speaks one of the most experienced, highest paid and most widely read authors in the world.

Whether we believe what Brisbane says about many things or not is irrelevant. What does matter, and what we as physicians in particular may learn from Brisbane and numerous other widely read authors is, that "brevity" is still "the soul of wit."

Physicians are among the oldest and most prolific writers, and yet we appear to be slowest in learning the most important lesson of successful writing—brevity. Yet, as *readers*, the lesson is before us all the time. As readers we follow precisely the same instincts that govern other people: *we shun the long article*. Rather than wade through thousands of words to find something worth while, even in an article on an important subject by a well-known authority, we lay it aside and wait until someone has prepared a brief abstract and read that. No physician, even one who does nothing else, can do otherwise and keep abreast with medical news. This fact explains the growing number of successful businesses devoting all of their time to abstracting medical literature for their subscribers.

Should this not teach us a lesson? Every medical author writes from legitimate and commendable motives: The desire to contribute something to medical knowledge; the desire to be the contributor and the desire to extend his personal reputation among his colleagues. These are precisely the motivating influences of all writers, the only difference being that, in all other fields, the author also depends upon the income from his writings for a livelihood. Surely, our commendable motives for writing should be important enough to induce us to recognize and adopt the methods that make for success in authorship in other fields.

This most of us do not do. We are learning, but we must learn faster and more universally. Medical journals should be as interesting to physicians and others working in the broad field of medicine and health as are public magazines in their fields.

To bring this about requires that authors should give the same serious study to their written words that they do in their methods with patients. In the latter, they strive for the simplest, most direct methods, and the utilization of the smallest possible amount of the time of patients consistent with thoroughness. Interesting style, consistency, conciseness,

brevity are even more important to a medical author.

Progress in medical authorship is encouraging. It has moved faster during the past few years than in previous generations. The motivating influence is the growing invasion of the field of medical writing for public readers.

During the several years that medicine and health education publicity has been carried forward by physicians in California, through Better Health magazine and the San Francisco Examiner Better Health services, there has been a noticeable improvement in the writing of hundreds of physicians. We all frankly admit that it requires more effort to prepare a successful message for popular readers than it does for medical readers.

So it *does*, but *should* it? After all, the fundamental requirements for success are precisely the same.

SHALL WE HAVE TWO MEDICAL PROFESSIONS?

Shall PERSONAL HEALTH PHYSICIANS and PUBLIC HEALTH PHYSICIANS be developed into two separate professions or shall *public health practice* be continued as a *specialty of medicine*—as it always has been—constitutes one of the very important health progress problems.

It is everyone's problem, and it will be solved. As a matter of fact, it is moving toward solution constantly. What that solution may be cannot be predicted at present. But we can look dispassionately at the forces tending to influence the final solution and thus determine our duties and responsibilities as physicians and citizens.

Certainly, the larger majority of those physicians who consider their attainments as assets to be used primarily and with reasonable unselfishness in improving the general health welfare of humanity believe that *public health practice* should constitute a specialty of general medicine practice. On the other hand, a minority of physicians supported and largely led by great non-medical organizations and wealthy foundations are out definitely and openly to *split medicine into two separate professions*.

There is more propaganda given out under the guise of informative publicity supporting such a division than upon any other single phase of health. The burden of most of the arguments is to the effect that the seven years of special education above high school required of all Doctors of Medicine, while it prepares them to practice *personal* health medicine, does not prepare them to practice *public* health medicine. They argue that a few weeks or months extra study, usually in specially designated schools, does prepare the personal health physician to practice public health, medicine, and that even a much shorter course in certain schools will prepare students, *not medically educated*, to practice public health medicine. Or, in the parlance of the propagandists, it prepares these non-medically educated persons to become "efficient health officers."

Nor is this the whole aim of those promoting the idea of two separate and distinct medical professions. During the last year in *official* government documents and reports of voluntary organizations, the announcement has been frequently made that public

health medicine included personal health practice—"preventative AND CURATIVE."

This serious move concerns all people, and it is being actively promoted by powerful influences. In claiming broadly for everyone to read, that the education of a Doctor of Medicine "does not fit the physician to practice public health medicine," these propagandists are thus encouraging the non-medical public to arrive at the logical conclusion that if such a physician is incapable of serving the public health he must also be incapable of serving the family or individual health requirements.

WHAT ARE THE FACTS?

Out of over 3000 counties and over 6000 cities and municipalities in the United States, there are less than 500 that engage the full time of even an educated licensed physician "health officer."

We would like to suggest to these propagandists that before they criticize the educated physician too strongly as being incapable of doing for the *public* health what he is doing for *personal* health they get rid of the quacks and other incompetent "health officers" that have not even a medical education and who now hold authority in hundreds of places.

It also is appropriate to call their attention to the bad taste and perfidy of criticizing the thousands of educated physicians who are carrying on public health duties for the vast majority of our people in most places for a pittance of from \$5 to \$25 per month.

If there is not money to pay even the alleged incompetent doctor of personal health medicine enough to buy gasoline with, how do they expect to pay their specially and superiorly educated doctor of public health medicine to devote all of his time to such work?

Every educated physician endorses the idea of special education for specialists. This whether the specialty is surgery, obstetrics, or public health. *But the public welfare and the public health is not advanced by trying to reach an ideal by destroying what we have.*

The worthwhile public health physician still considers himself as much a part of the medical profession as does the surgeon, the obstetrician, or any of the other several specialists of a great profession.

MORE ABOUT FEE SCHEDULES

In commenting editorially upon the controversy which grew out of the fee schedule adopted by the District of Columbia Medical Society still going on in the public press, the Texas Journal of Medicine believes:

"The issue is whether doctors have a right to agree on the value of a service which even the most violent dissenter must recognize as strictly personal, and one involving both knowledge and skill."

The Dallas News, in criticizing doctors' fee schedules, editorially urges: "If the musician had to sing for his audience one at a time, his prices would be much higher, and his services would then be rendered under comparatively the same conditions as physicians who render individual service."

The threat is also made in this and other newspaper editorials over the country that, unless doctors

pause in this "unionized labor" method of "price fixing" and "working conditions," the public will force "open shop" methods through "collective service enterprises," such as "health insurance," "clinics," "health centers," and what not.

"The Dallas Chronicle agrees that doctors have the same right to fix their fees, a practice usually granted to plumbers and carpenters, and concedes that the doctor is just as necessary to the health of the community as the plumber."

Press clippings indicate an astounding public interest in doctors' "fee schedules," and at the same time a remarkable variety of opinions as to what should and should not be done. So extensive and energetic has been the nationwide reaction to the Washington doctors' fee schedule, that medical leaders would do well to restudy the problem. As stated in our last month's notices, papers in general sympathetic to organized labor practically all endorse the doctors' action and some predict that the next step will be affiliative with the A. F. of L. Other papers, for the most part, criticize the doctors and many of them are bitter in their denunciation. A substantial number of editors point out that it is actions of this sort that makes friends for those who are out to make personal and public health a "public utility" either operated by the state as education now is or operated by great corporations under state supervision. *It is pointed out that doctors appear to be blind to the progress being made in both these directions.*

Of course, most thinking physicians are not "blind" to either what is being done, who is doing it, nor to the plans that are still, for the most part, in the chrysalis stage. The trouble is that doctors are not really organized and there is little to indicate that they can be organized so as to do effective team work. This may or may not be a fault, but in any event it is a fact. It is largely explained by the fact that doctors, by education and in their life's work, are individualists. Their work is highly personal and they are thus personally competitive in the best meaning of that word. The nature of their service is calculated to make dictators out of them, and, as a matter of fact, every doctor, whether he appreciates the fact or not, becomes a benevolent dictator to his clients. It could not well be otherwise—nor should it. However, this spirit so essential in his life's work is calculated to make of him a "bad risk" as an organization man. In the aggregate, he is fine as a leader—when he has time—but he is not strong in accepting the reins of organization, however gently pulled by leaders of his own choice in his own organization, working to uphold and strengthen the cause he serves. In other words, he is a poor private, but a splendid and much-loved captain of those he serves.

We see the results quite clearly in any discussion of "fee schedules" and it is, of course, equally clearly demonstrated with almost any other question that requires both leaders and followers to carry out as a "team measure." *There is not now and never has been an effective "fee schedule" in any county, city or other community.* Only from 30 to 60 per cent of the physicians of the various communities are even members of their medical societies to start with, and

no "fee schedule" has yet been devised and made effective for all of those who are members, to say nothing of the others.

A percentage, not by any means small, of physicians believe that *a personal fee schedule is an essential and indissoluble part of the personal service that physicians render to their patients and clients.*

There are some tens of thousands of physicians who earn their livelihoods from salaries and by other methods and are not interested in fee schedules. Then there are many, many doctors who do their work under forms of commissions, so much per person per month, or so much per unit of service, all being fixed and managed by government, other employers, insurance carriers, officers of organizations or what not, and in no instance subject to control by physicians either individually or collectively.

These are only a few of the many reasons why we, as physicians, ought to rehearse several things pretty extensively among ourselves before we tackle the big Berthas of business and organization on the one hand, and the emotional, uncertain and fickle jade, public opinion, on the other, with important matters of organization policy and public welfare.

LEAD POISONING FROM ETHYL GASOLINE

Probably no other metal is used in so many different forms and on so vast a scale as is lead. The result is that actual and potential poisoning from lead is greater than from any other metal. It is greater today than at any previous time in the history of civilization. Various aspects of lead poisoning were discussed in a symposium before the Section of Pharmacology and Therapeutics of the American Medical Association in Chicago last June and also previously in these columns. These discussions leave the impression that much still remains to be learned about the nature and the treatment of lead poisoning. Until recently very little has been said about possible poisoning from the organic compound, lead tetraethyl, in its new rôle.

Lead tetraethyl is being used extensively as a constituent of "ethyl gasoline" and of various trademarked "anti-knock" mixtures. According to a recent investigation of the Bureau of Mines of the Department of the Interior in Pittsburgh, Pa., "ethyl gasoline" is ordinary motor gasoline to which has been added about 0.04 per cent of lead tetraethyl and 0.06 per cent ethylene dibromide by volume. The object of the lead tetraethyl is to eliminate the detonation or "knock" in internal combustion engines, thereby increasing the economy of fuel consumption and the mileage per gallon of gasoline and permitting the designing of more efficient engines. During combustion, the lead tetraethyl is converted in the presence of a halogen carrier, ethylene dibromide or trichlorethylene, to lead bromide or chloride, which is non-volatile, insoluble, and mostly deposited in the engine head and exhaust pipe in the form of scale or white deposit. The remainder is discharged with the exhaust gases, the larger particles falling to the floor or street, and the very small ones (approximately the size of smoke particles) remain suspended in the air. In addition, a good deal of the lead forms a sulphate, the sulphur coming from the

gasoline; some occurs as oxide, and a small amount as metallic lead. Hence, there is a possibility of lead poisoning from inhalation of atmosphere containing the exhaust gases. Another possibility is from handling the "ethyl" products and gasoline, owing to pulmonary and skin absorption.

The toxicological work of the Bureau of Mines deals with exhaust gases from engines using ethyl gasoline as commercially sold. The exposures were made to simulate the worst conditions as to time of exposure and concentration of gas in the air to which persons might be exposed without being poisoned by the carbon monoxide of the exhaust gases. The tests were continued over a period of eight months in order to bring out cumulative effects. Several species of animals (dogs, rabbits, monkeys, guinea pigs, and pigeons) were exposed for certain periods (up to six hours daily). Observations of growth, body weight, blood changes, symptoms of lead poisoning, pathological changes and lead storage in organs were also made. The amount of lead retained by men inhaling lead dust was also determined.

As far as retention of lead by human subjects was concerned, it was found that the inhalation of from 0.018 to 0.293 mgm. lead per cubic foot of inhaled air caused a retention of from 0.002 to 0.049 mgm. per cubic foot, or a range of from 8 to 27 per cent, average 15 per cent. It is stated that this behavior of the lead that remains in the air as suspended matter greatly reduces the dangers of lead poisoning. The investigators appear to regard the lead retention studied by their method as indicating pulmonary retention, but they also mention the possibility of retention in the nasal passages and throat and of swallowing or expectoration of the lead. The exact path of absorption is practically immaterial, because absorption of lead can occur from both the pulmonary and gastro-intestinal tracts. Probably the gastro-intestinal tract is of greater importance in man from the facts that contact with the hands after handling of lead is frequent and that certain investigators have demonstrated poisoning from the inhalation of a more volatile metal than lead, namely, mercury, without recognition of the metal in the lungs. Symptoms of chronic lead poisoning in man may develop only after continued exposure for months and years. Under modern conditions of intensive use of motor vehicles, for instance, in large and congested cities or on congested highways which teem with automobiles stirring the leaded dust and smoke for miles, day and night, the possibilities of both acute and chronic poisoning are apparent. In California, the passage of 60,000 automobiles in a day past a given point on a certain highway has been reported several times, and in this region the mitigating influences of rains and other weather conditions on the leaded dusts, etc., for the greater part of the year are absent. This puts the hazard of lead poisoning in a still different and menacing aspect.

As far as the exposure of animals to the different concentrations of lead that were used in the Bureau of Mines is concerned, poisoning, together with other changes in blood, body weight, etc., were negligible. Control or unexposed animals showed about the same changes, so that any changes could not be

attributed to the lead of the exhaust gases. With the exception of animals dying from causes ascertained to be other than lead, all remained normal as to activity, growth, appetite, and general signs of health. Any symptoms occurring were dismissed as not being in accordance with chronic lead poisoning. However, a period of eight months seems hardly long enough for ultimate determination of changes and symptoms of chronic poisoning, and the Bureau is continuing observations of certain animals for longer periods. It was found that lead storage in twenty-five analyses of carcasses, excepting digestive tract and skin, was of no significance from the standpoint of lead poisoning. The majority of the analyses showed 0.003 mgm. of lead in 100 gms. of body tissue, a quantity similar to that of unexposed or control animals. The investigators mention that considerably larger quantities (0.9, 2.08 mgm., etc.) than found in animals have been reported as occurring in proportionate weights of human tissue from individuals having no symptoms of plumbism and no recent exposure to lead. This suggests the possibility that ultimately lead may be regarded as a normal constituent of the tissues and excreta.

The results of the Bureau of Mines and other investigators indicate that lead is a constant constituent of unpoisoned and apparently normal animals, though it probably was not intended that way by nature. Such animals must have been, and perhaps most of us are, exposed to lead at some time. Even if man is not directly exposed to the metal, lead may conceivably occur in his tissues. An increase in the indirect occurrence perhaps may be looked forward to, for when the extensive and increasing use of motor vehicles, flying machines, etc., is contemplated, the spraying of our vast countryside with lead gives pause for thought. The leaded vegetation consumed by animals will produce stores of lead later to be consumed with meat, to say nothing of the direct consumption of certain leaded vegetables by man. In this connection, the reports of certain British veterinarians on the occurrence of lead poisoning in grazing cattle, in poultry, etc., and of the poisoning of land are of interest. This shows the problem of chronic lead poisoning in its larger proportions. The Bureau of Mines concludes that the only danger of lead poisoning from products of combustion from ethyl gasoline seem to be confined possibly to the mechanic who is continually cleaning carbon from motors, and although this is but a possibility, it merits precaution. In summing up the investigation it is stated that there has been no indication of plumbism in any of the animals used, though they were exposed for 188 days during a period of approximately eight months to exhaust gases from "ethyl gasoline" in concentrations with respect to lead content that are several times that allowable from the standpoint of carbon dioxide. Further work on lead poisoning in dogs and monkeys, and which it is hoped will cover the desired feature of greater chronicity, will be looked forward to.

It should be added that lead triethyl, which is closely related to lead tetraethyl, is poisonous to animals, but only after some time. That is, the lead is liberated gradually, and the occurrence of serious

symptoms is delayed. This was the compound originally used by Harnack in 1878 for producing experimental chronic lead poisoning. Further investigation along different lines may reveal, therefore, that lead tetraethyl, as a constituent of "ethyl gasoline" and similar mixtures, is a greater hazard than appears at present. When the difficulties of the diagnosing of early lead poisoning are borne in mind, the entire subject is certainly far from being closed. On the contrary, certain approaches are just being made, and, if confirmed and extended, may ultimately give a better understanding of the nature, prevention and treatment of chronic poisoning in man.

1. Sayers, R. R.; Fielding, A. C.; Yant, W. P.; Thomas, B. G. H., and McConnell, N. J.: Exhaust Gases from Engines Using Ethyl Gasoline. Reports of Investigations, Department of the Interior, Bureau of Mines, Serial No. 2661, Dec., 1924.

2. Craig: Vet. J., 1924, 80:26; Gimmell: Vet. J., '24, 80:45; Gardner: Vet. J., '24, 80:13.

3. Harnack: Arch. exp. Path. Pharm., 1878, 9:152.

THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA. CALIFORNIA MEDICAL ASSOCIATION

The above old and new titles of our state association form a baffling and elusive puzzle to the general membership of the California Medical Association. It recalls our childhood struggle to decide if Ernest Seton-Thompson was Ernest Thompson-Seton, or some other Ernest.

By a differential diagnosis, the points of similarity and of dissimilarity may be pointed out and the blurred picture become clearly defined.

POINTS OF SIMILARITY

1. Both the California Medical Association and The Medical Society of the State of California have been titles used for our state association.

2. Both societies have the same dues and the same fiscal year.

3. Both societies use the same secretary and almost the same membership cards.

POINTS OF DISSIMILARITY

1. The California Medical Association is the present name of our state association. The Medical Society of the State of California is the former name of the state society, now used by a society formed of a group of members of the California Medical Association who desired optional medical defense furnished by the legal staff of the state association.

2. The dues of the California Medical Association are paid to county secretaries. They are NEVER PAID TO THE STATE SECRETARY. The dues for optional medical defense are paid direct to the secretary of The Medical Society of the State of California who, to add to the confusion, is one and the same as the state secretary.

3. The stationery, membership cards, assessment statements, etc., of the state association are printed on white paper. The stationery, membership cards, assessment statements, etc., of optional medical de-

fense furnished by The Medical Society of the State of California are printed on brown paper.

SUMMARY

Pay California Medical Association dues and also your county dues at one time to your county secretary; pay your optional medical defense dues to The Medical Society of the State of California, with offices at 1016 Balboa building, San Francisco.

THE ATLANTIC CITY SESSION OF THE A. M. A.

Reduced Railroad Fare to Atlantic City

The rate of one and one-half fare for the benefit of members and Fellows of the American Medical Association who will attend the annual session in Atlantic City, May 25-29, has been granted by the railroads. The member, when purchasing his ticket pays the full one-way fare to Atlantic City, at the same time securing his certificate from the railroad agent. This certificate will be approved at Atlantic City by the secretary of the association, must be validated by a representative of the railroads, and will then entitle the holder to a return ticket at one-half fare. The validation desk will be located near the Registration Bureau on the Steel Pier.—A. M. A. Journal, February 14, 1925.

CALIFORNIA PIONEERS IN PHYSIO- THERAPY DEVELOPMENT

Hahnemann Hospital of the University of California did pioneer work in establishing a large, well-equipped physiotherapy department, with doctors to prescribe and trained physiotherapists to apply these instructions in the treatment of disease on a large scale.

Stanford University Medical School did pioneer work in establishing the first scientific course for the training of physiotherapy technicians. The California Association of Physiotherapists again were so far-seeing in their method of organization that their constitution and by-laws have largely been adopted elsewhere and by their national association. Columbia University has recently added courses of instruction modeled upon those of Stanford, and hospital physiotherapy departments modeled upon the one at Hahnemann are now widely scattered.

We have only recently heard that Robert A. Kilduffe has resigned his position as Medical Director of the Los Angeles branch of the Pacific Wassermann Laboratories, and contemplates returning to the East. Though Dr. Kilduffe has been in this state but a comparatively short time, he has firmly established his reputation as a careful and reliable serologist, as well as a laboratory worker from whom valuable contributions could be expected in his chosen field. As a matter of fact, the employment of men of the type of Dr. Kilduffe can only redound to the benefit of institutions seeking the patronage of reputable physicians, who in turn fully appreciate the value and limitations of laboratory assistance in their work, and know full well that only too often many so-called technicians employed in commercial laboratories are incompetent, untrained youngsters, far better equipped to act as messengers or janitors than as serologists. We almost feel that the profession in Los Angeles must have neglected its opportunities in permitting Dr. Kilduffe to leave their midst. It might be interesting to hear from them as to his reasons for going. Possibly the Pacific Wassermann Laboratories might throw some light on the matter.

Is It Too Late to Begin?—"It is useless to look to the courts alone for any material help in dealing with cults, double standards of professional education requirements, or the perpetration of frauds by crooked doctors. *The first thing to do in every state is to procure an act of the legislature that will reflect wisdom and justice,*" is the opinion of H. E. Kelly of the Chicago bar.

Medicine in the Public Press

Besmirching the Memory of the Beloved Pasteur—The author of a so-called health column in a San Francisco newspaper, in speaking of the illustrious Pasteur, says that he was a "man of shallow, showy parts and superficial acquirements, pre-eminently a self-seeking advertiser and money-changer."

"Are the Colonel's Lady and—"—"Some time ago," says Warden Johnson of San Quentin Prison, "comparisons were made between mental ratings given to various prisoners by the prison employes and those secured by mental tests. It was found that they were almost identical. Depending on your personal viewpoint, you could say that the psychologists had done very well in this case, or that the prison guards were very efficient."

When Will California Learn This Lesson?—Dr. Howe, Director of Medical Inspection of Public Schools in the State Department of Education, New York, insists that it is not the policy of the Department of Education to have medical and preventive work performed in the schools. They strongly oppose it and advise against it. The function of the schools is education in health and health matters, and all vaccinations, immunizations, corrective work, etc., should be done outside the school by the family physician, or at a dispensary.—New York State Journal of Medicine.

Increased Social and Moral Responsibility Rather Than Technical Skill Needed—"The school ideal must be shifted. The school must train not for efficiency alone, but it must be the instrument of liberal culture," believes Edward W. Bok (Scribner's); "the means of awakening and ministering to all the higher instincts; the means of refining the soul and purging it of all that is base and ignoble; the means of stimulating to the higher forms of unselfish social service."

"We shall continue to teach the vocational subjects. We shall still need the technical and trade schools. But the ideal ends to be gained must be changed. The vocational courses should have some time for literature, history, sociology, art, and ethics. The lawyer, doctor, engineer, and tradesman all need these as much as they do the technical branches. The great problems of the world which demand immediate solution, if our civilization is to endure, are not primarily questions demanding technical skill, but are social and moral questions. There is skill enough, scientific knowledge enough, available if there were only courage enough, honesty enough and unselfishness enough in applying the knowledge. No one of them demands any great amount of shrewdness or technical skill. A STRICT APPLICATION OF THE TEN COMMANDMENTS WOULD SOLVE ALMOST EVERY REALLY GREAT QUESTION CONFRONTING THE WORLD."

Some newspapers are treating seriously the sayings of another "celebrated psychologist" who claims that:

"There are no mental or moral differences between children at birth."

and that

"Likes and dislikes, courage and timidity, a mild or a violent temper, are all absent from the child nature when it is born."

Osteopaths Now Recognized by the Industrial Accident Commission—Under the terms of a recent ruling by the Industrial Accident Commission of California, osteopaths now have precisely the same rights and privileges as do doctors of medicine.

William Lyman Phelps Points a Moral—The most amusing French comedy now running in Paris is "Knock" (pronounce the initial "K") or, "Le Triomphe de la Medecine," written by Jules Romains. This is a delightful satire on physicians, on patients, and on humanity. Young Doctor Knock is just the opposite of Monsieur Coue.

Coue endeavors to persuade sick people that they are well; Knock persuades well people that they are sick, a much easier task. He enters a village where illness is practically unknown, but he soon has all the inhabitants in a sanatorium, by the simple process of beginning with *free examinations*. He shows his visitor a chart: "This is the way your liver ought to look," whereupon he exhibits another and most horrible chart; "and this is the way your liver really does look." Diagnoses take place on the stage; and the various village types that enter the doctor's office are amazingly well done. Those who come to scoff depart in terror, with a long list of medicines, appointments, and bills in store for them.—Scribner's.

Doctor! How Could You!—The patients of "Doctor" — appeared to be getting quite a "kick" out of "sun baths" taken in the nude plus a few shocks of electricity, until Mr. Carter of the Board of Medical Examiners took a "look see" at the SANITARIUM (?).

The Osteopathic Bloc in Women's Clubs—Like all great organizations, women's clubs have to deal with organized groups—blocs—within their own organization. The newly formed Osteopathic Women's Association now beginning to function in California, said to be devised to "promote the welfare of women and children," gives promise of interesting developments.

Is This the Result of "Health Education"—People who now use tobacco have been widely, expensively, and intensively "educated" from earliest childhood about the alleged iniquitous influences of tobacco upon health.

Is it in consequence of this "education" or in spite of it that the consumption of tobacco has increased fourfold in the last two decades? We are now consuming, according to official government figures, 63,000,000,000 cigarettes annually, and the consumption is increasing in direct ratio to propaganda for suppression of the "vice" (?).

"Health education is great stuff."

California Board of Health Endorses Birth Control—Doctor Dickie, executive officer of the California Board of Health, is widely quoted in the public press as saying that:

"Fifty per cent of infant deaths may be attributed to congenital debility, malformation, premature birth, injury at birth, and other causes which are the consequence of unfit mating. Until such time as we may be able to control the growth of our population, infants will continue to die from congenital diseases. The health department can do little to reduce these cases. It is a problem in eugenics."

This statement will be discouraging to "prenatal hygienists," Sheppard-Towner "obstetricians," "health centers," "clinics," and other agencies who claim to be making such rapid progress in promoting "positive health."

A Severe Arraignment—American civilization is commonly regarded as essentially materialistic. It is said of us that we have contributed little or nothing to philosophy and to religion. Our symbolic products are Ford cars and standard plumbing fixtures. . . . And yet no people of modern times have struggled so poignantly to find spiritual expression. The evidence to this is ample, but unrecognized. That Americans are churchgoers and, in a large measure, members of the various orthodox Christian churches, everyone knows. But outside the orthodox ranks there are thousands, even millions groping toward God—struggling to relate themselves to the Infinite in some way that is satisfying to them. Out of these struggles have arisen the many new religions of America.—Jules Bois (The Forum).

Hospital Costs—This is the season for the publication of hospital reports for the year 1924. Most good hospitals report that the cost of service was a little higher for 1924 than it was for 1923. California State hospitals claim to be exceptions, and, according to press notices, they have decreased their costs.

There are two methods by which such reports can be made, and neither is anything to be proud of.

Are Chinese Herbalogists Above the Law?—Cal-

fornia law provides in effect that no one shall diagnose or treat, or hold himself out to diagnose or treat, infirmities of humankind without license from the appropriate state authorities. Every day, in the newspapers of California, Chinese herbalogists advertise and ask patients to come to them for "scientific diagnosis and for treatment by Chinese herbs, guaranteeing remarkable results, etc." There can be no question of doubt but that these herbalogists are violating state law in the claims they make in the advertisement published in the newspapers. There is no reasonable doubt but that they are also violating the law in practicing what they offer to practice in their advertisements.

We ask again, are they above the law and if so, why?

We are going pretty strong when we allow illegal practitioners of medicine to advertise publicly their illegal wares. We are informed by the Board of Medical Examiners, whose duty it is to prosecute these law violators, that punishments are too hard to secure. The reasons why this is so are whispered around and gossiped about wherever citizens gather. There is nothing mysterious about it, and CALIFORNIA AND WESTERN MEDICINE is very much disposed to put the whole truth regarding some of the instances into bold-faced type for the world to read. We hereby cordially invite the Board of Medical Examiners to supply us with the FACTS, and we will publish them regardless of consequences.

Unfortunate Publicity—The past few weeks have been merry ones in the exploitation of scientific work and scientific workers in the news columns. We feel sure that Doctor Herbert M. Evans and Doctor Martha R. Jones regret as much as do their friends the news slants given to their serious studies of serious subjects.

"He Who Breaks a Beehive Will Lick His Hand"—George W. Pratt (Survey) uses the statements and conclusions made in that glaringly misleading "Survey" of San Francisco's Health Condition made by Haven Emerson, in an attack upon the physicians and other health-serving people of the city. Pratt reiterates Emerson's untruthful statements that:

"Practically nothing is spent for health education (in San Francisco), hardly anything is done for mental hygiene; there are practically no visiting nurses for the bedside care of the sick. Hospital and dispensary services are reported as fairly adequate in quantity, but are submitted to much criticism as to quality. One wonders whether adequate educational forces exist to develop the higher standards in hospitals and dispensaries, and in social and health services, that are suggested at many points by this survey."

Members of our medical organizations; some of our good hospitals, and many of our physicians who are just as well prepared and just as well known in *scientific circles* as these self-appointed critics resent imputations like the above that are given wide publicity. If the Emersons and Pratts will actually show some peculiarly creditable results in health improvement in their home towns, we will be glad to adopt them and equally pleased to credit them with the original discovery. In the meantime, why not omit some of the blah-blah?

Hospitals Secure Advertising Through Society Columns of Newspapers—The cheap and unethical custom of certain small town hospitals to secure advertising for themselves and the doctors by featuring their patients and their illnesses in the local newspapers is too reprehensible to discuss in temperate language. Marked copies of newspapers carrying this disgusting form of advertising are numerous in the editor's mail. Some of these papers are accompanied by notes of protest apparently from the patients. There are effective methods of stopping these violations of good taste and ethics, and they ought to be utilized.

The present-day mocking appeal to an infant that he give expression to himself represents the abdication of education. This appeal might just as well be directed to a physical vacuum. To starve youth by depriving it of intellectual and moral nourishment, and to cripple and disable it by depriving it of the discipline of experience,

are among the newest and most popular forms of cruelty that have been devised to make education impossible. The results are apparent on every hand.—Nicholas Murray Butler, President Columbia University.

Disease Still Increasing—Some years ago, the American Association for Labor Legislation compiled the following startling estimations based upon the occupied males and females in the United States at that time:

Estimated number of cases of sickness among persons exposed to risks, thirteen and one-half millions.

Estimated social and economic cost of sickness per annum, a billion dollars.

Estimated number of days of sickness per annum, two hundred twenty-five millions.

"Full Time" School Physicians—The public school authorities in New York are employing "full time" doctors at \$1000 a year to look after the health of school children. They also have "full time" "nurses, health teachers and other experts," but they pay these more than they do their doctors.

They call attention in print to this "progress" as something to be proud of.

Physicians Attacked for Not Giving—A Community Chest speaker at a recent Community Chest luncheon in San Francisco drastically criticized the doctors, among others of the "semi-rich" or "great middle class," for not "coming across" with more money for the "chest." Newspapers quote the speaker as saying:

"It is the big class of professional and semi-rich. It is the lawyers, doctors, dentists and other professional men who send their office assistants out to talk to those who are devoting their time to collect the funds needed to adequately care for San Francisco's needy.

"We should shame these people into giving. If they knew that a list of those subscribing was to be published, they would feel obligated to come across. I become blind with rage when I know the needless obstacles our workers are meeting."

The reaction against this tirade was prompt, widely spread; and the end is not yet. As has been repeatedly published, the doctors of San Francisco and elsewhere as well, give to charity in *service*, figured as nominal value, every year more than the entire collections of the Community Chest. Doctors don't want any special commendation for such helpfulness. It is part of every day's work with every one of them; but they do resent deeply and widely ill-advised criticism of the kind mentioned.

One of the most prominent and most beloved physicians in the city informs us that on the very day that doctors were being publicly attacked at this chest luncheon, he saw nine poor patients in his office, and performed major operations upon two persons, none of whom would ever receive a bill for either medical or hospital services. Incidentally, the hospital thus giving its charity is one dismissed by that notorious Haven Emerson "survey" for the Community Chest as "commercial" and, therefore, by implication beyond the pale. According to the statements of certified public accountants, that hospital rendered free service to the poor last year that cost them over \$75,000 to give. Other similar stories of individual and group interests in the welfare of dependent citizens could be told and verified—but what's the use?

The constantly increasing difficulties of raising sufficient funds to carry forward the program of the Community Chest is, of course, apparent to all. The chief reasons ought to be equally apparent to any competent observer. The dangerous tendencies and the reasons therefor should be fairly evaluated, and the policies and methods of the fundamentally fine principle of uniformity in collecting and allocating charitable funds and services be revised accordingly.

Free Birth Control Health Centers Halted—Just when the free "clinics" and "health centers" devoted to "birth control" get well started, the courts of Illinois take all the joy out of "careless love" by declaring these "free health centers" as illegal because they are practicing medicine without a license.

California Medical Association

GRANVILLE MacGOWAN, M. D., Los Angeles...President
EDWARD N. EWER, M. D., Oakland.....President-elect
EMMA W. POPE, M. D., San Francisco.....
.....Secretary and Associate Editor for California

THE ANNUAL SESSION, C. M. A., YOSEMITE,
MAY 18-21, 1925

To the average person unfamiliar with the mountains, the term "cabin resort" conjures up some dreadful vision of sleeping on the ground and eating from a tin plate. Let it be said here, for the benefit of those who will attend the 1925 convention of the Medical Society of the State of California in Yosemite National Park, May 18-21, that such a trip involves no hardship or sacrifice of comfort.

"Why, it isn't like the mountains at all," exclaimed one woman from the East, a guest at Yosemite Lodge, when she learned that she could have her breakfast, piping-hot, served at her bedside any morning that she desired to give the order.

Such a comment was not intended to mean that the noble cliffs and waterfalls of Yosemite Valley had been ruined by the erection of buildings out of keeping with the natural surroundings; rather it was a spontaneous compliment to service rendered at the Lodge, fifteen miles from a railroad, service that measured up to standards of city hotels and far exceeded what the visitor had found at mountain resorts in other sections.

Yosemite Lodge is a little city in itself. "A charming colony of redwood cabins under the pines at the foot of Yosemite Falls, the cabins being grouped around a community center of office, dining room, lounge, writing-room, dance pavilion, theater, swimming pool, children's playground, and nightly camp-fire," is the description usually given of it.

The Lodge has its own postoffice, the name of which is Yosemite Lodge, California, and mail so addressed is delivered direct from trains without the delay of going through the main office in the village, the name of which is Yosemite National Park, California. The Lodge otherwise has its own telegraph station, Yosemite Lodge, California, and long distance telephone facilities. Baggage can be checked straight through to Yosemite Lodge.

In the American Plan dining-room of the Lodge, there is individual service for each guest. The dining-room linen is snowy white, and waitresses and bus boys are uniformed in white.

The other public rooms and broad verandas of the Lodge main group need no special mention, but a word should be said here about the services in the swimming pool group, just across the plaza. The pool is 120 feet long, filled with crystal mountain water which is heated to a comfortable temperature by steam. Suits can be rented. After a plunge, there is a barber ready to serve the men, a beauty parlor with all modern equipment for hairdressing, facial treatment, and manicuring for the women. The laundry, in the same group, offers high-class service, including the cleaning and pressing of clothing.

Every evening there is an entertainment of merit

at the Lodge free to all guests. Every evening except Sunday there is dancing to the music of an excellent orchestra.

A word also should be said about the "cabins" which make up the Lodge's living quarters. Three types of cabins are provided.

The first type is built of redwood in rustic style that harmonizes with the tall pines and spruces around. A generous porch gives entrance to a bedroom with twin beds and other furniture of special design and finish. Dressing room, closet or wardrobe provides ample space for hanging up clothes. The bathroom includes tub, washbasin, and sanitary flush toilet of spotless porcelain; in a few of the cabins there are shower baths. Many of these cabins also have screened and curtained sleeping-porches on the rear. Electric stoves furnish heat at a turn of the button. American Plan rate, \$8.50 per day per person.

Redwood cabins without bath make up the second group. Like the cabins with bath, they are furnished with twin beds. Bowls and pitchers are provided, and small stoves burning fragrant cedar or pine wood are used for heating. American Plan rate, \$6 per day per person.

Canvas cabins form the third group—and do not confuse the Lodge's canvas cabins with tents. Canvas cabins here are all that the name implies—houses with canvas for walls. They are floored, have electric lights, a screened door, and six screened windows with awnings and curtains. Furnishings are similar to those in the redwood cabins without baths. European Plan rate. (lodging only) \$1.50 and \$2 per day per person. American Plan rate (with meals in Lodge dining-room), \$6 per day per person.

Maid service in all cabins assures plenty of towels and, in the cabins without bath, fresh water also. Hot water for the morning toilet may be had without extra charge by those living in cabins without baths, by leaving number of cabin and hour desired at the office of the Lodge.

YOSEMITE LODGE RATES

Yosemite Lodge is a colony of redwood cabins and canvas cabins in the pine woods, with central group buildings, including dining-room, office, lounge, writing-room, swimming pool, tennis courts, laundry, children's playgrounds, etc.

Redwood cabins with bath have front porch, living-room with twin beds, and many have in addition screened sleeping-porch with twin beds. Redwood cabins without private bath have living and sleeping compartments and twin beds. Canvas cabins have twin beds, are electric lighted, and have windows.

Redwood cabin, with bath, three or more persons in a single cabin, or half of a double cabin, per person per day, American Plan.....\$8.00

Redwood cabin, with bath, two persons in a single cabin, or half of a double cabin, per person per day, American Plan.....\$8.50

Redwood or canvas cabin, without bath, two persons in cabin, per person per day, American Plan.....\$6.00

Canvas cabin, without bath, two or more persons in cabin, LODGING ONLY, European Plan, per person per day.....\$2.00

European Plan guests will be served meals in cafeteria. Tub and shower baths in detached rooms.....50c

Send all reservations direct to L. H. Marks, assistant to general manager, Yosemite Lodge, Yosemite National Park, California.

TRAIN SERVICE AND FARES TO YOSEMITE LODGE

From San Francisco, Oakland, Berkeley, and Alameda to Yosemite Valley and Return

Tickets good leaving starting place on a Friday, Saturday, or Sunday only, \$20.25. Return limit, 16 days.

Tickets good leaving any day, \$21.75. Return limit, 90 days.

From Los Angeles to Yosemite Valley and Return

Tickets good leaving starting place on a Friday, Saturday, or Sunday only, \$29.75. Return limit, 16 days.

Tickets good leaving any day, \$33. Return limit, 90 days.

From San Francisco, the train service will be as follows:

Southern Pacific, No. 84

Lv. San Francisco, 8:40 a. m. Ar. Merced, 1:15 p. m.

Santa Fe, No. 22

Lv. San Francisco, 9 a. m. Ar. Merced, 1:25 p. m.

Southern Pacific, No. 50

Lv. San Francisco, 3:40 p. m. Ar. Merced, 8:55 p. m.

Santa Fe, No. 42

Lv. San Francisco, 5:15 p. m. Ar. Merced, 9:48 p. m.

Santa Fe, No. 2

Lv. San Francisco, 11 p. m. Ar. Merced, 3:40 a. m.

Southern Pacific, No. 86

Lv. San Francisco, 11:40 p. m. Ar. Merced, 5:35 a. m.

Southern Pacific, No. 84

Lv. Merced, 1:40 p. m. Ar. Yosemite, 7:15 p. m.

Santa Fe, No. 22

Lv. Merced, 1:50 p. m. Ar. Yosemite, 7:15 p. m.

Southern Pacific, No. 50

Lv. Merced, 8 a. m. Ar. Yosemite, 1:15 p. m.

Notes—

Southern Pacific train No. 84 carries diner.

Santa Fe train No. 22 carries diner and parlor car.

Southern Pacific train No. 50 carries diner.

Santa Fe train No. 42 carries diner and parlor car.

Southern Pacific train No. 86 and Santa Fe train No. 2 carry standard Pullman sleepers to Merced. Sleepers are detached at Merced. Occupants will not be obliged to vacate until just time enough to get their breakfast and depart from Merced on Yosemite Valley railroad at 8 a. m.

From Los Angeles, the train service will be as follows:

Southern Pacific Train No. 59

Lv. Los Angeles, 6:15 p. m. Ar. Merced, 5:35 a. m.

Lv. Merced, 8 a. m. Ar. Yosemite, 1:15 p. m.

Note—

Southern Pacific train No. 59 carries standard sleeper to Merced. Sleeper is detached at Merced. Occupants will not be obliged to vacate until just time enough to get their breakfast and depart from Merced on Yosemite Valley railroad train at 8 a. m.

Pullman Rates—

San Francisco to Merced:

Parlor-car seat, \$1.05; lower berth, \$3; upper berth, \$2.40; drawing-room, \$10.50.

Los Angeles to Merced:

Lower berth, \$3.75; upper berth, \$3; drawing-room, \$13.50.

ATLANTIC CITY

Train information for members who plan to attend the A. M. A. meeting at Atlantic City from May 25-29.

Southern Pacific "Overland Limited"

Lv. San Francisco, 11 a. m., May 22. Ar. Chicago, 8:55 a. m., May 25.

Pennsylvania "Broadway Limited"

Lv. Chicago, 12:40 p. m., May 25. Ar. No. Philadelphia, 7:54 a. m., May 26.

Pennsylvania

Lv. No. Philadelphia, 9:56 a. m., May 26. Ar. Atlantic City, 11:05 a. m., May 26.

Lower berth, San Francisco to Chicago.....\$23.63
Upper berth, San Francisco to Chicago..... 18.90
Compartment, San Francisco to Chicago..... 66.75

Drawing-room, San Francisco to Chicago..... 84.00
Lower berth, Chicago to Philadelphia..... 8.25
Upper berth, Chicago to Philadelphia..... 6.60
Compartment, Chicago to Philadelphia..... 23.25
Drawing-room, Chicago to Philadelphia..... 30.00

Extra fare, Broadway Limited, \$8.40.

One-way fare to New York via Atlantic City is \$108.90. Summer rates commence May 22. Round trip to New York via Atlantic City is \$151.15.

Delegates, alternates, Fellows, and members of A. M. A. are entitled to one and a half regular rate.

Should a party plan to leave on a given date, reservation for a special car can be made.

The above schedule gives the shortest time between San Francisco and Atlantic City. Many other trains are available.



ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer, secretary)—The regular meeting of the Alameda County Medical Association was held January 19, H. B. Mehrmann presiding. After the reading of the minutes the program arranged by G. G. Reinle, consisting of a case report and a symposium on diseases of the urinary tract, was presented.

In his case report, W. B. Palamontain gave a brief review of bilharzia, and described the symptoms of a man extending over a period of twelve years before a diagnosis of bilharziosis was made. The case cleared up completely following some twelve injections of tartar emetic.

In the first paper of the symposium, "Kidney Function and its Relation to Nephritis," S. V. Irwin gave a brief outline of our present views on the anatomy and physiology of the kidney, after which some of the various theories concerning the process of urine production were discussed. The bearing of some of these facts upon kidney function and their relation to kidney function tests was then taken up with a review of the newer work of Richards on glomerular secretion, with a discussion of the practical application of this newer work.

Gertrude Moore, in her paper, "The Pathologic Kidney and Its Function," briefly reviewed the pathology of the kidney and discussed kidney function tests, the conclusion being reached that no single test could be relied upon, it being necessary to study both the retention products and the excreting power of the damaged kidney before surgical procedure.

In his paper, "Management of Prostatic Obstruction," G. G. Reinle said that the mortality rate for the operation of prostatectomy is: For the occasional surgeon, 25 per cent; for surgeons of all classes combined, 15 per cent; for surgeons using all known precautions, 3 per cent minus. He stated that the 15 per cent would be materially reduced by adequate preparation and post-operative care. The speaker thought it was merely a matter of individual preference as to whether an operator employed the supra-pubic or the perineal method of enucleation, though giving personal preference to the supra-pubic route.

It was pointed out that all prostatic obstructions do not require enucleation of the gland, and the other proper surgical methods of relief were discussed.

A full discussion of these papers was participated in by Thomas Addis (by invitation) of the Department of Medicine of Stanford University, W. S. Kuder, Mark L. Emerson, and others.

After the transaction of business the meeting adjourned to the lower hall, where refreshments were served and an hour of good fellowship enjoyed.

Fabiola Hospital Association—At the annual meeting of Fabiola Hospital Association the officers and directors re-elected were: Mrs. J. H. P. Dunn, president; Mrs. Wallace Everson, first vice-president; Mrs. J. H. Knowles, second vice-president and financial secretary; Mrs. Allen D. Wilson, third vice-president; Mrs. D. E. Easterbrook, recording secretary; Mrs. Q. A. Chase, treasurer; Mrs. James G. Allen, assistant treasurer; Mrs. John Shuey, corresponding secretary. Directors: Mrs. H. C. Taft, Mrs. E. A. Whitaker, and Mrs. Violet Whitney.

A gift of \$5000 was presented to the hospital by Mrs.

Carlotta Carson Tyson in memory of her parents, William and Sarah Carson. Dr. Daniel Crosby obtained a free laboratory fund of \$500 for the hospital, while Dr. W. L. Bell donated one of his fracture tables to the institution.

During the past year 694 children were treated with 730 days' free care, and 513 patients received medical care free of charge, which cost the hospital \$12,107.43. The yearly report of the treasurer of the hospital showed disbursements to the amount of \$428,712.94.

One of the official reports read, in part, follows:

"Many young women from all parts of the state are applying for admission to our school for nurses, but we are unable to accept all of them as our nurses' home is filled to capacity.

"Children to be restored to health and happiness always make the greatest appeal, and every effort is being made toward that end.

"The new maternity unit has been busy beyond all expectations. A total of 1101 babies were welcomed last year, and included in that number were twelve sets of twins.

"Another year has passed into the history of this institution—the forty-eighth, a year that may be considered the banner year of its existence, in point of service and development. May we be given the power to press on to still greater achievement for our blessed Fabiola."

Dr. L. H. Buteau Heads Society of Surgeons—Dr. S. H. Buteau is president of the Surgeons' Society of Oakland, which was organized recently. C. A. Dukes is vice-president and E. Spence DePuy is secretary-treasurer.

The purpose of the society, as described by O. D. Hamlin, chief of staff of Providence Hospital, is to discuss for mutual benefit the latest advances in surgery technique through the reading and discussion of papers on the subject, and the exchange of papers with similar societies in Eastern cities.

Eighteen local surgeons are enrolled in the society. A committee is now at work preparing a constitution and by-laws.



CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The regular monthly meeting of the Contra Costa County Medical Society was held at the offices of F. L. Horne at Crockett on the night of January 31.

An illustrated lantern slide lecture was given by Nathan G. Hale of Sacramento on the pathology in general of the kidneys and ureters. Special attention was given to obstruction and blocking of the ureters. Great care and work was shown in the preparation and subject matter of the slides.

The following members and friends were present at the meeting, and gathered at the hotel for refreshment afterward: John Beard, Martinez; Denninger-Keser, Richmond; J. Emmett Clark, Walnut Creek; F. L. Horne, Crockett; Nathan G. Hale, Sacramento; William A. Rowell, Crockett; Rosa A. Powell, Richmond; Elizabeth Redmond, R. N.; L. St. John Hely, Richmond.



FRESNO COUNTY

Fresno County Medical Society (reported by T. Floyd Bell, secretary)—Two special meetings of the Fresno County Medical Society were held January 17; a noon luncheon at the Hotel Fresno; and a meeting in the evening at the General Hospital of Fresno.

Those present were: Aller, Anderson, Bell, Binkley, Couey, Cross, Craycroft, Diederich, Ellsworth, Goldberg, Jones, Jorgensen, Lamkin, S. M. Long, Manson, Mathewson, Miller, Montgomery, Mitchell, Mordoff, Morgan, Millholland, McPheeters, Pettis, Pomeroy, Pisor, Schottstaedt, Sheldon, Staniford, Stein, Scarboro, Tillman, Tobin, Trowbridge, Tupper, G. W. Walker, and Willson. Visitors: Drs. George Piness, E. R. Lewis, Hyman, Miller, Dau, and Mr. Alles.

At the noon luncheon George Piness of Los Angeles presented a very interesting and instructive discussion on "Allergy." He spoke of allergy in general, and also in relation to such specific conditions as eczema, migraine,

angioneurotic edema, urticaria, abdominal allergy, and so-called "arthritis" due to allergy.

Three papers were read on hay-fever and asthma at the evening meeting.

Dr. Hyman Miller of Los Angeles discussed protein sensitization and anaphylaxis. He described and illustrated the skin tests as he uses them. He emphasized the absolute specificity of protein reactions and the necessity of testing with the exact type of protein to which the patient is exposed. He insists that there is no doubtful reaction in the skin test. Any reaction showing pseudopodia like the extensions from the central wheel are to be regarded as positive. All others must be considered negative. Miller discussed the lung findings in his cases of fatal anaphylaxis and in severe asthma.

Mr. Gordon Alles read a paper on the chemical aspects of anaphylaxis and allergy.

George Piness gave the principal address of the evening on clinical aspects of allergy. He described the method of complete examination of patients sometimes extending over a period of years, the histories taken, the laboratory tests, the studies made of the patient's surroundings and habits. A number of very interesting cases were cited in which a distinctly local protein was responsible for the trouble. Methods of treatment, both palliative and specific, were given.

The regular meeting of the Fresno County Medical Society was held February 3 at the nurses' home of the General Hospital.

There were thirty-four members and eighteen visitors present. Members: Aller, Anderson, Bell, Barr, Couey, H. O. Collins, Deiderich, Dearborn, Dahlgren, Ellsworth, Goldberg, James Jorgensen, Kjaerbye, Larson, Manson, Maupin, Miller, Morgan, Nedry, Nider, Peterson, Pettis, Ransom, C. A. Robinson, Schottstaedt, Sciaroni, Stein, Scarboro, Tillman, Tupper, J. R. Walker, Webster, Weddle, and Wiese.

Drs. H. Robertson and N. J. Dau were unanimously elected regular members.

The board of censors and the state secretary having reported favorably on the application of Dr. H. O. Collins for associate membership, he was unanimously elected.

President Anderson announced the standing committees for this year, as follows:

Program Committee—Madden, Barrett, and Manson.

Board of Censors—Morgan, Pomeroy, and Wiese.

Committee on Ethics—Tupper, James, and J. R. Walker.

A communication from the Gorgas Memorial Institute of Tropical and Preventive Medicine was read and ordered laid on table.

A letter from Dr. O. W. Steinwand was read, thanking the society for conferring upon him honorary membership.

A communication was read from Dr. Ellen Stadtmuller, director Bureau of Child Hygiene California State Board of Health, in regard to examination of children entering school for the first time. Dr. Morgan moved, Dr. Madden seconded, that the board of governors work out a plan for caring for this matter. Carried.

J. R. Walker spoke briefly against the practice of consulting and working with any members of cults in treating patients.

Emmet Rixford, Professor of Surgery Stanford Medical School, gave a very interesting and instructive lecture on "The Mechanics and Production of Fractures, With Special Reference to Spiral Fractures of Long Bones." Dr. Rixford is especially capable of dealing authoritatively on this subject, as he received an academic education in mechanical engineering. He dwelt at some length on the mechanical results of traction and twisting of various materials. He showed how these same principles applied to fractures, especially the spiral fractures of long bones. He showed his personal treatment of these spiral fractures, how easily the fragments could be held in position by open reduction. While the talk was highly technical, yet it was very logical and in the end simple.

A buffet luncheon was served after the meeting.

The annual meeting of the staff of the General Hospital of Fresno County was held January 13 at the Sequoia Club at dinner. There was a good attendance. Dr. Frank Tillman acted as toastmaster of the evening.

A communication from Director H. O. Collins was read.

Frank Curtin, a local attorney, gave a very humorous talk entitled, "Glass Eyes I Have Known."

The following officers were elected for the ensuing year: President, Thomas F. Madden; vice-president, Guy Manson; secretary-treasurer, Charles A. James.

Annual Report (presented by T. Floyd Bell, secretary, December 31, 1924)—The regular and two special meetings of the Fresno County Society were held during the year 1924, with a total attendance of 413, or an average of 34.4 members to each meeting. The two special meetings were noon luncheons, started in November, which have proven popular with the men. Scientific programs were given at all the meetings except one—a get-together meeting on December 2.

One year ago the secretary reported 118 active and six honorary members. During the year seven members have been dropped for non-payment of dues: Drs. Brown, Hoare, Minas, Stammers, Steinwand, Flora W. Smith, T. D. Smith. Three new members paid for the year 1924: Drs. S. M. Long, H. M. McNeil, and G. C. Nedry. The total active members for 1924 were 114, and six honorary members. R. M. Jones was transferred to the Kern County Medical Society. A. B. McConnell was lost through death last August.

The following physicians were recently elected: G. K. Nider, R. W. Dahlgren, and C. B. Cowan. The application of O. P. Pisor having been passed on favorably by the state secretary, will be voted on January 6, 1925.

During the past year we have had many interesting programs presented to us by able men, most of them from medical centers. Those who attended the meetings know the merits of these scientific papers.

Early in the year a movement was started to re-establish our medical library, which is housed and taken care of by the Fresno County Library. Due to the generosity of several members, subscriptions to the various periodicals were renewed and some of the old files completed. It is hoped that a small amount of money will be expended each year to keep the files intact, as they will be invaluable as time goes on.

Noon luncheons held once a month bring about a better understanding among the members of our profession, and create firmer friendships and more constant and effective general co-operation between the men. Out-of-town men are urged to attend whenever possible.

LOS ANGELES COUNTY

Hollywood Hospital Accredited by American Medical Association—The Hollywood Hospital has been placed on the list of hospitals accredited by the Council on Medical Education and Hospitals of the A. M. A. We welcome this new addition to the hospitals that are devoted exclusively to the promotion of scientific medicine.

PLACER COUNTY

Placer County Medical Society (reported by Robert A. Peers, secretary)—The Placer County Medical Society held its February meeting at Auburn, Saturday evening, February 14. The following members and visitors were present: Members—Doctors H. N. Miner, L. B. Barnes, R. H. Eveleth, H. M. Kanner, C. E. Lewis, J. G. Mackay, R. F. Rooney, R. O. Schofield, G. H. Fay, R. A. Peers. Visitors—P. D. Barnes, R. N. Bramhall.

At the close of the regular business, R. N. Bramhall of Sacramento delivered an address on diabetes. Dr. Bramhall took up the history of the work done on the pancreas from the first pathological reports published in the late eighteenth century down to the recent work by Banting and Best. He described very fully and very clearly the physiology of digestion of carbohydrates, proteins, and fats, and explained the break in the normal physiology of digestion which resulted in a train of symptoms known as diabetes. He also outlined the chemistry of the blood and concluded with a resume of the present methods of treatment, both dietetic and by insulin, paying particular attention to the treatment of diabetic coma. After the address there was an informal discussion in which all the members took part.

SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by Bert S. Thomas, secretary)—The January meet-

ing of the Sacramento Society for Medical Improvement was held at the new Sutter Hospital. Thirty-five members attended. There were four visitors.

Presentation of Cases—Dr. Schoff presented two patients. The first was that of an epithelioma of the nose. The patient was presented to show the results of radium treatment. This patient had had three treatments in the last year. It demonstrated that the Prickle cell type keeps growing despite the treatment, the radium merely quieting it for a short time. The second patient showed a most diffuse psoriasis. He was shown to call attention to the marked likeness of the lesion to a papulo-squamous syphilid.

Dr. Rulison presented a five-pound degenerated myoma that had been removed at a transperitoneal Caesarean section for a full-term baby. The case had been seen at the third month and had raised a question as to the possibility of a bicornuate uterus.

Dr. Hale reviewed four cases of traumatic hematuria. One, of an upper pole rupture causing a capsular hematoma. This case required nephrectomy. The second, a hemorrhage from the kidney pelvis, was controlled by the introduction of a 3 per cent AgNO₃. The third bled from the veins immediately adjacent to the kidney pelvis. Here a hematoma was removed and an iodoform pack controlled the hemorrhage. The last was of a buckshot lesion of both kidney and ureter. This was controlled by transfusion plus the introduction of a ureteral catheter, which was left in place for three days. Dr. Snyder remarked about the interesting fact of being able to obtain the rare Type 1 donor for this last case, who was also a Type 1.

Dr. J. Roy Jones presented a most interesting paper. His subject was "Nasal Headaches." He stressed the supreme importance of the nasal sinuses in connection with his subject. Despite the goodly supply of blood vessels and lymphatics, the nerves are the 100 per cent offenders in the distribution of the distress. Special attention was directed to the great ramification of the fifth nerve in this regard. As direct causes, toxemia and pressure were shown to be of first consideration. The latter manifests itself by first, pressure on points impinging on the sinuses; second, by malposition of structure; third, pressure by congestion within the sinuses; fourth, pressure due to pus; and lastly, by negative pressure, i. e.: that due to a blocked outlet. This usually occurs in the frontals and ethmoids. All the above causes may be precipitated by acute coryza. Here all the elements of the blood are found in the cavities by transudation. These, in turn, become infected. Extra body strain, abuse of alcohol, indigestion, and constipation, all exaggerate the picture. Though most writers suggest that the headache itself is not caused by the peripheral irritation, Jones takes issue with this statement.

Under treatment of the conditions causing "nasal headaches," Jones discussed the palliative treatment by inhalations. This may be used diagnostically. If relief is thus afforded, it most surely points to accessory sinuses or their adjacent orifices as involved. This is particularly effective when thickened secretions enter the picture.

In the discussion, George Briggs differentiated between the suppurative and non-suppurative type. He pointed to the narrowed nose, giving turbinate pressure and blocked openings, as an important factor. McKee suggested that practically all sinus infections are associated with some deformity, and called attention to the fact that immediate treatment of numerous childhood injuries would obviate a good many later difficulties. He also complimented the orthodontists on their good work in preventing these later conditions. Turner considered irritation of a recently discovered portion of Nerve 1, called the terminal nerve, to be an important factor; also, ostealgias about the nerve openings.

Dr. Miller discussed Ewings' sign. Harris inquired of the value of chlorine gas in treatment. Jones stated that he believes chlorine gas treatment of these conditions will not be successful.

The board of directors reported the election of F. N. Scatena as president and W. W. Cress as vice-president. A program committee, consisting of Drysdale and Dunlap, was appointed.

Communications were read from Dr. Dickie, inquiring

as to the local status of endemic goiter, and from Hartley Peart, regarding group insurance.

Resolutions to perpetuate the memory of Doctor James were prepared by Drs. Simmons and Hall, and ordered spread upon the minutes.

Dr. Parkinson called attention to the fact that the magazine BETTER HEALTH was being placed on a self-supporting basis.

Immediately after adjournment, a real surprise was in store. Dr. June Harris presented a most beautiful piece of statuary to Dr. W. H. Beattie. The piece is entitled "Maternity" and depicts a mother with two babies. The mother is fondling one, and there is an appeal from the other, now much older, to be fondled. This beautiful work of art was exhibited by the kindness of Mrs. Spreckels at the Panama-Pacific International Exposition, and was to be placed in the De Young collection until Dr. Harris was fortunate enough to obtain it for presentation to Dr. Beattie. The piece will be given a prominent place in the Sutter Hospital.

Local Notes—Dr. Thom, recently on the x-ray staff of the University of California Hospital, is established here with Dr. Zimmerman.

Dr. Edward S. Babcock's many friends of the Bay region will be pleased to hear of the arrival of "Miss Phillis" on January 19.

The beautiful new Sisters' Hospital of 150 beds intends opening its doors on January 25.

The staff of Sutter Hospital has named E. T. Rulison chief, and James R. Snyder, assistant.

E. C. Turner has returned from European clinics and is established in his new offices for the practice of ear, nose, and throat work.

R. G. Scribner has affiliated with the local society. He comes from Hammononton.



SAN DIEGO COUNTY

San Diego County Society (reported by Robert Pollock, editor)—The recent meeting of the Southwest section of the American College of Surgeons was a most noteworthy affair. That talks on medicine can so attract the public as to draw 4000 people and turn away hundreds who could not be accommodated, is sufficiently unusual to be noteworthy in itself. The speakers at these public meetings are doing a valuable work; valuable not alone to the public, which needs to be better informed upon the ideals and human issues and contacts of scientific medicine, but valuable also to the members of the profession who are induced to think in terms of human interest and social tendencies, as well as in the daily grind of scientific thought. California and Southwest medicine owes a debt of gratitude to Dr. Franklin H. Martin and his aides, Drs. Craig and MacEachern, as well as to Dr. George W. Crile and Father Moulinier. The scientific sessions to which the medical profession as a whole were welcomed were distinctly stimulating, and brought together a distinguished gathering of the leaders in surgery in the Southwest, San Francisco, Los Angeles, and other California cities contributing liberally their quota. Among other things brought out was the fact that San Diego can boast fifteen Fellows of the college. San Diego's newer hospitals, all of which conducted clinics during the convention, were greatly admired by visiting surgeons.

Through the generosity of John D. Spreckels, one of San Diego's foremost citizens, Mercy Hospital will be enabled to add an extra wing, leading from the south of the main building, to balance the recently completed north wing. This wing, which is a memorial to the late Mrs. Spreckels, will add much to the beauty and symmetry of the whole.

The officers and committee members of the San Diego County Medical Society for 1925 are as follows: President, George B. Worthington; vice-president, T. F. Wier; secretary, C. O. Tanner; treasurer, W. O. Weiskotten; editor, Robert Pollock; associate editor, W. H. Geistweidt, Jr.; librarian, Mrs. Mildred S. Farrow.

Delegates to State Society—Thomas O. Burger, two years (1924-5); Robert Pollock, two years (1924-5); Martha Welpton, 1925.

Alternates to State Society—M. C. Harding, two years (1924-5); L. H. Redelings, two years (1924-5); Lillian Mahan, 1925.

The County Medical Society has enjoyed some excellent programs at recent meetings, some of which are herewith mentioned: An illustrated lecture on "Non-Surgical Types of Backache," by P. B. Magnuson, M.D., of Chicago; A symposium on the treatment of tuberculosis with demonstration of artificial pneumothorax, and other features, furnished by the medical staff of Camp Kearny were very favorably received, upward of 100 members of the county society motoring out to the camp on the occasion of this annual treat.

It is of passing interest that the San Diego County Dental Society on January 15 centered its discussion around a paper on "Metabolism in Its Bearing Upon Dentistry," by Dr. Harvey Jackson, who is a member of both the medical and dental societies.



SAN FRANCISCO COUNTY

Meeting of the Eye, Ear, Nose, and Throat Section of the San Francisco County Medical Society, January 27, 1925—At the meeting of the Eye, Ear, Nose, and Throat section of the San Francisco County Medical Society on January 27, Dr. Pischel reported further progress in a most unusual case, the resume of which is as follows: A fine piece of copper from a dynamite-cap explosion lodged inside the eyeball on the ciliary body. The accident occurred twelve years ago. The eye at present shows copper deposits in the lens and glaucoma.

The foreign body was localized according to Sweet's improved eye localizer in the ciliary body 8 mm. below the center of the cornea, while localization with Dr. Pischel's markers (California State Journal Medicine, Vol. 18, October, 1920, p. 408) put it just inside of the sclera on the ciliary body.

December 16, 1924, a vertical incision through the sclera upon the foreign body was made; no foreign body was seen or felt. An extensive cyclodialysis was then added.

As the tension remained high, in spite of adrenalin injections, iridectomy upwards was performed December 19, 1924. A few days afterwards the patient went home. He reported January 6, eighteen days after the iridectomy. Tension was 30; eye pale, with the exception of the point of the incision, for the iridectomy under the upper lid, and there under the conjunctiva, was seen, with Zeiss Loup, a fine sharp-edged foreign body showing reddish reflex under the corneal microscope. The roentgen picture showed only this foreign body; none in the former location below the limbus. After slitting the conjunctiva, the foreign body was removed and proved to be a very fine piece of metal 1 mm. long.

How did the foreign body get there? Dr. Pischel's explanation is this: At the cyclodialysis the foreign body was pushed into the anterior chamber, and at the iridectomy it floated under the conjunctiva and became lodged there.

Franklin Hospital Staff Meeting (reported by Ewald H. Angerman, secretary)—The monthly staff meeting of the Franklin Hospital was held in the hospital on Friday, January 30, W. H. Heinzman presiding. Officers elected to serve for the ensuing term are: Chairman, Frank R. Dray; vice-chairman, Otto Westerfeld; secretary, Ewald H. Angerman.

The paper of the evening was ably presented by Irving S. Ingber, who chose for a subject, "Duodenal Diverticulitis," illustrated by appropriate lantern slides; also a presentation of case reports. The subject was discussed by Dray, Werner, and Yoell.

Southern Pacific General Hospital Clinical Meeting (reported by W. T. Cummins, secretary)—The monthly clinical meeting of the Southern Pacific General Hospital, San Francisco, was held in Huntington Hall, on Wednesday, February 4.

"Fulguration in Questionable Tumors of the Bladder," George L. Eaton. He spoke of the importance of this type of therapy and the careful following up of the patient, with subsequent diathermy every two or three weeks if necessary. Frequent lavage of the bladder with mercuriochrom, nitrate of silver, or potassium permanganate is an essential. Fulguration in some instances has caused considerable fibrosis and contraction of the organ. He disclaimed any advantage attending the use of deep roentgen

therapy or radium. The paper was profusely illustrated with colored plates.

"Chronic Cholecystitis," James A. Guilfoil, who emphasized the importance of the pathological work done by Graham, Heyl, MacNeal, McCarthy, and others in promoting our knowledge of cholecystitis, its sequelae and treatment. He stated that cholecystitis is always accompanied by hepatitis, which may be primary or secondary, through extension by the lymphatics, and further extension may be productive of choledochitis and pancreatitis. A vicious circle may be established in the maintenance of two or more of these lesions. Owing to the position of the liver in the blood vascular system, it may be affected by infectious and toxic agents carried by the arterial and portal channels. It has been established that there is a relationship between gastric and duodenal ulcers and appendicitis, and cholecystitis, but there undoubtedly exists also a relationship between focal infections (teeth, tonsils, sinuses, rectum, and prostate) and cholecystitis, the infectious, toxic agents, or both being carried thereto by the blood stream. Many cases of hepatitis, with or without cholecystitis, will subside with appropriate measures directed toward the primary focus of infection, together with the establishment of a suitable diet.

"Roentgen Demonstration of Cholecystitis," Frederick H. Rodenbaugh. Roentgenologists have been much interested in extending the diagnostic field of the alimentary tract from organic to functional disturbances and the recognition of the fact that diseases of the biliary system produce profound disturbances of the gastro-intestinal functions, will be a great help in the diagnosis of these important diseases. Dr. Rodenbaugh also believes in the associated hepatic pathology and stated that the appreciation of the role played by focal infections in producing biliary-tract diseases might do much toward the treatment of these biliary disorders.

St. Joseph's Hospital Discusses Post-operative Complications—St. Joseph's Hospital staff, San Francisco, considered "Post-operative Complications" on February 11, A. S. Musante and W. T. Cummins presiding in turn. A. W. Hewlett spoke on "Medical Post-operative Therapy," summarized as follows:

The treatment of post-operative pneumonia has not altered in recent years. The various improvements suggested from time to time have later been discarded, so that we must still depend on the methods used twenty years ago. The advances in our knowledge of heart disease have a bearing on post-operative problems. Heart disease seldom is an absolute contra-indication to operation—rather it increases the hazard. If the operation is imperative, the chance must be taken. If the operation is one of choice, the increased hazard must be considered by the surgeon before he decides. Most serious are the signs of failing circulation—pronounced dyspnoea, distended veins, swollen liver, albuminuria, and edema. Of cardiac murmurs, the systolic in themselves can be disregarded, while the diastolic—whether of aortic insufficiency or of mitral stenosis—are always serious. Of irregularities, extrasystolies in themselves are inconsequential, but auricular fibrillation is more serious, and a preliminary course of rest and digitalis should be given if the heart rate is rapid. Chloroform should not be used if there is cardiac disease. The occasional sudden cardiac deaths in the early stages of anesthesia are due to ventricular fibrillation, which is more apt to occur when chloroform is used. In these overdoses epinephrin, intravenously, may be tried; also cardiac massage from beneath the diaphragm if the abdomen is opened.

Circulatory failure after operation is usually due to hemorrhage or shock. In either case not enough blood returns to the heart to enable this organ to maintain the circulation. Most important is the administration of large quantities of liquid. Salt solution by rectum or subcutaneously is required and, in case of emergency, intravenous injections of liquid. Gelatine, acacia, and glucose (10 per cent) solutions or whole blood may be used, but the reaction with chill is a disagreeable and sometimes dangerous sequel. Epinephrin is valuable, but transient. Tyramin hydrochloride in doses of 0.04-0.08 every 20 to 30 minutes will sometimes rescue an apparently hopeless case. Strychnine and camphor are useless. Caffeine is of doubtful value.

Cardiac failure is difficult to differentiate from shock. In some instances an abnormal rhythm, such as auricular flutter or fibrillation, calls for rapid administration of digitalis. Paroxysmal tachycardia may sometimes be checked by vagus pressure. As a rule, where cardiac failure is suspected, digitalis should be rapidly given. Intravenous injections are dangerous and are to be avoided. If no digitalis has been given previously, a dose corresponding to from 12 to 16 cc. of the tincture, according to weight, should be given immediately. Absorption from the rectum is as rapid as orally. Subcutaneous injections are effective, but painful. These large doses should not be repeated. They become effective in two to six hours. At present it is difficult to estimate the value of digitalis in post-operative circulatory failure, but our knowledge of the drug indicates that only large doses can be expected to be beneficial.

Dr. C. A. Walker spoke on "Post-operative Surgical Complications," abstracted below:

Careful attention to pre-operative, operative, and post-operative details will prevent or make one anticipate later complications. Complications may be immediate, intermediate, or remote; e. g., a hemorrhage almost immediately after an intestinal obstruction within one to two days or obstruction even months later from adhesions.

Post-operative Hemorrhage—Primary type begins at operation and continues for some time, suggesting a blood dyscrasia. Reactionary type appears often when consciousness is returning and may be due to a ligature slipping. Secondary type shows up later, often in wound infections and arteriosclerotics. Symptoms, according to rapidity and amount of bleeding, are a quick, short cry, rapid, weak pulse, subnormal temperature, air hunger, thirst, impending feeling, pale, clammy skin, restlessness, dilated pupils, and collapse. Treatment includes prophylaxis, checking bleeding and preventing its recurrence, and aiding recovery. Morphine and replacement of lost blood by transfusion of whole blood, or acacia, normal or hypertonic salt, gelatin (1 to 2 per cent in saline), and Hogan's solutions are used—cautiously with unligated vessel. Elevate the feet. After treatment for secondary anemia is needed. Locally, apply clamp and ligature and, if small or persisting bleeding, iodoform packs. Hot water, extreme cold, caustics, and thromboplastin may help. Slow oozes may be stopped by subcutaneous horse serum, coagulin and other coagulants.

Post-operative infections may remain localized, spread to contiguous parts or cause parotitis, empyema, septicemia, etc., and treatment must be accordingly. In gas bacillus and tetanus infections use free incisions and remove necrotic tissue. Anti-tetanic serum is potent.

Post-operative ileus and the more readily amenable and transitory pseudo-ileus must be differentiated. True ileus has septic and mechanical types—former from peritonitis and later from angulation of bowel. Ochsner treatment, overcoming of dehydration, gavage, establishment of fecal fistula are indicated for septic form and relief of obstruction and correction of cause in mechanical type, though palliative enterostomy may be best at first. Post-operative disruption of wound, sinuses, and fistulas are not uncommon and demand appropriate treatment.

Alex Keenan and P. Collischonn discussed the topic, and R. M. H. Berndt and William Quinn presented case histories, respectively of nephritis-carditis, with Cheyne-Stoke breathing long before death, and influenzal (pneumococcal) meningitis, lasting forty-five days.

The program for March 11, "Medical Economics Night," follows: "Approved Investments for Doctors," Percy A. Woods; "Best Methods of Handling Doctors' Accounts," Attorney J. F. Denman; and "The Doctor as a Better Business Man," C. A. Mariani.

The San Francisco Polyclinic—At the annual meeting held recently, President H. A. L. Ryfkogel announced that the clinic served 35,000 ambulatory patients free of charge during the last year.



SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by Alex C. Soper Jr., secretary)—Thirty-four members, with the six house officers of the Cottage Hospital, Mr. Curtis the superintendent, Dr. Charles F. Mills, president of the San Luis Obispo Society, and Drs. B. E. Merrill and C. E.

Schultz of Santa Paula as guests, assembled at the Hotel Carrillo January 12 for the annual banquet.

Addresses were made by Drs. L. W. Hotchkiss, H. F. Pierce, Allen Williams, Franklin Nuzum, and Henry J. Ullmann, on various and sundry subjects, some of them serious, some of them humorous. Dr. Samuel Robinson, the president, held down the chair.

The banquet was succeeded by a series of moving picture scenes taken by Dr. Ullmann, first of which was a procession of staff doctors leaving the Cottage Hospital, and second, a comic section devoted to the antics of "Felix the Cat." Drs. Robinson and Soper had also prepared some caricature of the idiosyncracies of certain members of the society, which, in the form of lantern slides made by Dr. Ullmann, were put upon the screen.

The election of officers for 1925 resulted in making Franklin Nuzum president; H. E. Henderson, vice-president; and E. D. Smith of Solvang and O. C. Jones of Lompoc, vice-presidents-at-large. The secretary-treasurer was re-elected. The election of delegates to the state convention was postponed, due to the late hour. No action was taken on the dues for the ensuing year.

Santa Barbara County Medical Society Meeting, February 9, 1925 (reported by Alex C. Soper Jr.)—This meeting was held at the Cottage Hospital, with President Nuzum presiding. Present, nineteen members, one interne, and Dr. Hagen of the house staff, as well as Dr. Allen, president of the County Dental Society.

Moved, seconded, and passed that the censors of the ensuing two years be appointed by the Chair. The president reserved action for consideration.

Moved, seconded, and passed that the annual dues be the same as in 1924, namely, \$12 for both county and state.

Henry J. Ullmann was elected delegate for the state convention, with William J. Mellinger as alternate.

Communication regarding the Gorgas Memorial Fund was, by vote, laid on the table.

Letter from the State Board of Health regarding examination of school children reported, and the secretary instructed to reply. Another from the board, in re incidence of endemic goiter, to be answered in due time, after asking each member of the society, through question inserted in the notices of meetings. In this connection, W. D. Sansum reported briefly on evaporation—analysis of waters in the vicinity supplying the community, stating that the city supply gave fifteen parts; Montecito, 8000; and a private well 400 of iodine—according to work recently done at the hospital.

A letter from a member, calling attention to the frequent appearance of press reports of physicians giving lectures to the laity, and asking for a discussion of the subject, brought out considerable talk pro and con. The consensus of opinion was finally to take no action in the matter, since the state society emphasized the value of such lectures outweighing the advertising of quacks, if given by physicians of standing in the community, whose names necessarily added weight to their subject matter.

The paper of the evening was by Joseph D. Lewis, M.D., Santa Barbara, on "Neoplasms of the Larynx," illustrated with lantern slides. This long and interesting exposition was discussed thoroughly by Schurmeier, Freidell, Ullmann, Means, and Profant.

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SONOMA COUNTY

Sonoma County Medical Society (reported by G. A. Hunt, secretary)—The first regular meeting of the year was held in the Hotel Petaluma, in Petaluma, January 8. Thirty members and four guests were present. A duck dinner preceded the regular meeting.

Doctor V. H. Podstata, superintendent of Livermore Sanitarium, gave an interesting and instructive address on "Psychotherapy and General Medicine." Few speakers have been more thoroughly appreciated than Doctor Podstata. It may be that doctors feel their need for psychotherapy as well as their patients.

NEW HEALTH OFFICERS APPOINTED

Ernest Dozier, M. D., of Redding has been appointed health officer of Shasta County, succeeding Sherman T. White, who has occupied the position for many years. Doctor Dozier is licensed to practice medicine in Cali-

fornia, and is a member of the California Medical Association.

Alex M. Lesem, M. D., has been appointed city health officer of San Diego, succeeding George B. Worthington, M. D. Doctor Lesem is also county health officer for San Diego County. He is licensed to practice medicine in California, and is a member of the California Medical Association.

Carl P. Jones, M. D., health officer of Nevada County, has recently been appointed city health officer of Grass Valley, to succeed Paul D. Barnes, M. D. Doctor Jones is licensed to practice medicine in California, and is a member of the California Medical Association.

Alfred L. Phillips, M. D., has been appointed health officer of Santa Cruz County, to succeed W. H. Keck. Doctor Phillips is licensed to practice medicine in California, and is a member of the California Medical Association.

CHANGES IN MEMBERSHIP

Deaths

Bacon, Charles Evan. Died at Los Angeles, February 4, 1925, age 60. Graduate of Kansas City Medical College, 1890. Licensed in California in 1898. Doctor Bacon was formerly a member of the Los Angeles County Medical Society, the California Medical Association, and the American Medical Association.

Franklin, Berte Vosburgh. Died at San Diego, January 16, 1925, age 50. Graduate of the University of Southern California College of Medicine, Los Angeles, 1901. Licensed in California the same year. Doctor Franklin was a member of the San Diego County Medical Society, the California Medical Association, and the American Medical Association.

Harry, Charles Rees. Died at Stockton, February 6, 1925, age 62. Graduate of Cooper Medical College, San Francisco, 1890. Licensed in California the same year. Doctor Harry was a member of the San Joaquin County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Nichols, Albertus Bentley. Died at Oakland, February, 1925, age 46. Graduate of the College of Physicians and Surgeons, Maryland, 1904. Licensed in California in 1921. Doctor Nichols was a member of the Alameda County Medical Society, the California Medical Association, and the American Medical Association.

Smith, Thomas Hardy. Died at Pomona, February 10, 1925, age 70. Graduate of the Washington University Medical School, St. Louis, 1882. Licensed in California in 1888. Doctor Smith was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

NORMAN BRIDGE, M. D.

1844-1925

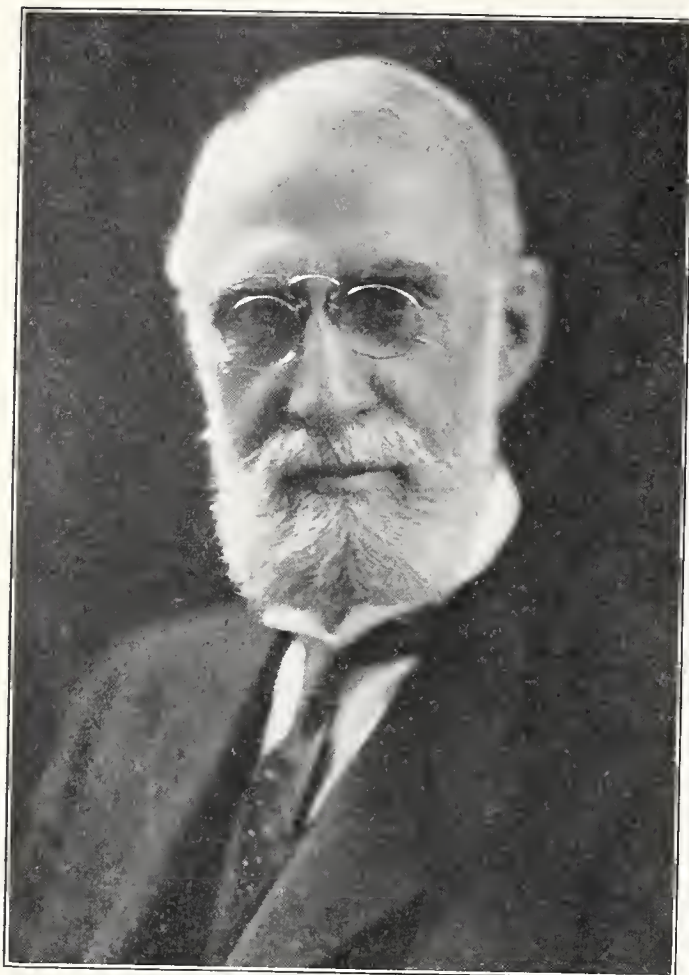
Coming to Los Angeles nearly thirty-five years ago, Doctor Norman Bridge soon won for himself a place of distinction, not alone in the medical profession, but among his fellow-citizens.

Having been for many years professor of medicine in Rush Medical College, much work in medicine was referred to him by graduates of that institution, and his practice soon grew to dimensions that required all his physical strength. For a number of years he returned to Chicago to continue a three months' course of lectures at Rush.

In later years he became interested in the Mexican Petroleum Company, after making several trips to Mexico, and his work in this line gradually extended until during the last few years it had absorbed most of his time.

His writings along medical lines have been extensive. In addition to this he has written a number of volumes on other topics. One of his latest works, "Marching Years," is a modest and fascinating autobiography.

His interest in educational affairs has been such as to lead him to become a most liberal contributor to several institutions of learning—notably the California Institute of Technology and Rush Medical College. His philanthropies have been many and varied; the great majority of which have been known by few of those most intimately acquainted with him. In short, it may be said that



NORMAN BRIDGE, M. D.

his great life work has been along those lines conducive to the uplift of humanity.

But it is to those most closely associated with him that the true dignity of a most noble and elevating character, free from guile and the foibles of ordinary men, can be most fully realized and comprehended. Charitable as to the opinion of others, but firmly true to his own convictions, undeviating in the course of righteousness to God and fellow-man, unflinching in staunchness for the right of all things, he has always been an example worthy of emulation by those associated with him. Legions mourn his loss and realize that a strong, brave, noble character has passed out from our material presence and to his reward.

There are too few such characters in the world, and all who have had the fortune to be closely associated with him have been lifted to a better life than had they not been recipients of his friendship.

GEORGE L. COLE.
ANDREW STEWART LOBINGIER.
HENRY W. HOWARD.

STIMULANTS, DEPRESSANTS, HUMOR

"Shall We Pray?"—Louise Collier Willcox's answer to this question (Harper's) is "good medicine" for many a weary one.

"No arrow is shot but hits somewhere; no song is sung but echoes on in someone's heart; no pebble falls but the stars tremble."

1-19—Of the 87,000 babies born in California in 1924, one of each nineteen of them is scheduled to die of cancer, unless they grow up with a higher order of intelligence than has this generation.

Garlic as a Deodorant?—Try as we may, we cannot follow the "scientists" who are now widely advocating the virtues of garlic as a deodorant: so we notice it here.

"Eventually"—The victim of the quack eventually reaches the physician; and when he does, it is usually

with a condition which has arrived at the chronic stage and which requires prolonged treatment for a cure—even if a cure be possible at all.—S. J. Kopetzky, President New York Medical Society.

Professor—And what did the poet mean by "Wind Along the Waste?"

Practical Pre-Med.—Gas on the stomach, I guess.

"Should evening clothes ever be worn at bridge parties?"

"No, in playing cards it is only necessary to show your hand."

Dear Doctor—I have your letter returning my manuscript, and frankly say to you that I have been mistreated in this matter. I desire that you know that I resent this, and from now on you need not call upon me for any paper or other help, and I shall leave the State Society, retaining my fellowship in the American Medical Association by virtue of my commission in the army.—X., Los Angeles.

Some Consequences of "Health Education"?—One physician reports that a young woman patient consulted him about her "orgasmus retardatus"?! Another patient consulted her physician about her "anomalous sex life," which was caused by her husband's "ejaculatio praecox"?! Every doctor can tell incidents of this type that are "new" and are always directly traceable to the so-called health education.

Real health education by competent teachers is as commendable as it is old, but we are only beginning to see the consequences of much that goes by the name of "education."

Because your wife is forty is no sign you can exchange her for two twenties.

Sons—This is the title of a short story by B. H. Lehman (Harper's) that has a moral, several lessons and heart throbs that every doctor will enjoy.

A Glanded Car

A negro was up before the judge on a traffic charge.

"Black boy, how fast were you traveling?"

"Wal, jedge, I reckon it was close to seventy-fo' miles an hour."

"Nigger, what kind of a car do you drive?"

"A Ford, sah."

"Boy, don't you know that no Ford will go that fast?"

"Jedge, yo jess doan' understan'; dis Ford am different—it's got Packard glands."

Enclosed herewith is my discussion of Doctor —'s paper, and with it please accept my apologies for the delay. I shall never let it happen again.—Dr. —, San Francisco.

Too Much Steam—They were discussing a certain undefeatable and irrepressible politician.

"Well," summed up the smoke-room philosopher, "I'll tell you this about him. He might have typhoid and recover; he might have pneumonia and recover; he might have yellow fever and recover; but—if he ever had lock-jaw, by gad, he'd bust!"—The Doctor.

There is as much policy as there is ethics in withholding the names of physicians from public print which records their sayings and doings. The profession as a whole will harvest more of the fruits of publicity by allowing its lay advocate to hold up before the public achievements that speak for themselves and by permitting the public to construct its own argument.—Bulletin San Diego Medical Society.

Osteopathic Literature—"Exercise, air, rest, water, natural eats, and an osteopathic doctor make for life, health, and prosperous days."

"Ashes to ashes, and dust to dust;
If the Medics can't fixe me, the
Osteopaths must."

CALIFORNIA ACADEMY OF MEDICINE

At the first meeting of the year, held at a dinner at the Palace Hotel January 24, the following officers were elected to serve for the calendar year 1925: President, Herbert C. Moffitt; vice-president, William Ophuls; secretary-treasurer, J. Marion Read.

The president has appointed the following executive committee: Harold Brunn, R. Knight Smith, Morton Gibbons, E. W. Twitchell, A. W. Hewlett, Elbridge J. Best.

All communications should be addressed to the newly elected secretary-treasurer, J. Marion Read, at 870 Market street.

Utah State Medical Association

SOL G. KAHN, Salt Lake City.....President
WILLIAM L. RICH, M. D., Salt Lake.....Secretary
J. U. GIESY, 512 Felt Bldg., Salt Lake City,
Associate Editor for Utah

NEVER TOO OLD TO LEARN

We imagine that if our grandfathers, who were perchance physicians, could live today and enjoy the facilities of diagnosis and practice now at our disposal they would burst into tears of delight.

The diagnostic laboratory, the x-ray, more modern and standard methods of examination and history taking, have in a measure revolutionized the work-up of the average case with which we come in contact, though heaven knows some of those old boys were bears at physical examination and seemingly carried eyes in their finger-tips.

Be that as it may, times change, and we ought to change with them. Nowadays the average patient is from Missouri, no matter where he was born, and it is high time that we adopted the Missouri standard among ourselves.

Never too old to learn is a motto every doctor ought to pin in his hat or over his desk, or somewhere, capable of being seen at least daily. It's a sort of preventive from falling into a rut. And ruts are bad things, on a road or in a practice. Today more than ever we should be vigilant. There is just one thing of real interest to the patient and that is—the end-result.

Therefore, we should learn, and keep on learning, and in every community with three or four medical men there is a ready means to this end. Get together—organize a "Review Class." Meet once a week or every two weeks and compare notes, review current literature, write up some interesting subject or case and read it together and discuss it after that. Friction brightens even while it grinds. This is as true of mental processes as of machinery, and if you don't believe it try the experience of going up against some confrere who knows more about a given matter than you do and see if it doesn't—grind! It will, but it will brighten at the same time—it will prove a mental stimulant.

The writer has had the privilege for some years of attending such a class. It has done more than any one thing to help him to keep at least in touch with the profession, and not entirely lose step. There is only one time when a doctor knows it all and that is the first week after he graduates. After that he will, if normal, admit a sense of bewilderment as to just how the men who passed him into the field of medicine happened to make such a whopping mistake. No, we're never too old to learn. So let's get busy learning. And there is no better way for the average man than to organize or gain admission to some already organized review class.

Incidentally, every man in Utah who can make the grade ought to begin now to prepare to attend the session of the Utah Association at Salt Lake in September, and to remain long enough to avail himself of the excellent program being arranged for the immediately following course in post-graduate work.

Utah Hotes (reported by J. U. Giesy, associate editor)—The dates for the Utah Medical Association meeting to be held in Salt Lake City have been definitely set as September 7, 8, and 9, and on September 10, 11, and 12. A course in graduate instruction will be held for all physicians attending the meeting who may desire to avail themselves of the opportunity of enjoying the excellent program now being arranged.

Thus far Doctors Hamaan of Cleveland, Ohio, surgeon; Walter T. Williamson, chairman of the board of trustees of the A. M. A. of Portland, and Brassch of Rochester, Minnesota, have promised to be on hand. Other names are on the list of possible available lecturers now being corresponded with by Doctor Frank Steel, who has this part of the arrangements in hand.

Governor George H. Dern and Health—Instead of following the usual custom of discussing finance and politics in his inaugural message, Governor Dern of Utah secured extensive nationwide publicity because he chose health as his subject. The doctors of Utah are much pleased at having their work thus recognized in a way that will produce wholesome results.

Shriners' Hospital for Crippled Children Opened—The entire south wing of St. Mark's Hospital, Salt Lake City, has been leased by the Shriners and remodeled as the Salt Lake unit of their hospitals for children. The Mystic Shrine has erected six hospitals exclusively for children, and the seventh is in process of construction. In addition, in smaller communities, half a dozen such havens for crippled children have been opened—as the one in Salt Lake. As is the case with the other hospitals supported by this mystic organization, this unit will be devoted to the care of the sick children of Utah. A. L. Heuther, M. D., has been appointed head of the institution. Miss Mabel Torgeson has been appointed day superintendent and Miss Nena Williamson, night superintendent.

Recent Admissions to Practice Medicine in Utah—Results of the recent examinations for student pharmacists, physicians and surgeons were announced recently by J. T. Hammond, state director of registration.

Vernon F. Houston of American Fork, N. Henry Savage of Ogden, C. R. Cornwall of Salt Lake, A. L. Huether of Salt Lake, E. L. Christensen of Salt Lake and Norman Olsen of Salt Lake, who took the examination for physicians and surgeons, will be granted licenses. All of the persons who took the examination passed.

R. G. M. Ehlers was granted a physician's and surgeon's license through reciprocal agreement with the United States Army. Others who will be permitted to practice in Utah because of such arrangements and the states in which they had been licensed, follow: L. E. Gowney, Nebraska; C. A. Parker, Kansas; David Maeth, New York, and Nelson Adam Young from Minnesota.

J. T. Hammond, state director of registration, announced that he received \$1150.50 in fees last month.

Doctor Murray Rockwell Stewart, City Commissioner, died recently, following an illness extending over a period of two weeks.

Dr. Stewart was a member of the Salt Lake County Medical Society and of the Salt Lake Chamber of Commerce. He was elected to the city commission more than three years ago, and was head of the department of parks and public property.

His parents are both dead, the only surviving relatives being his widow, Mrs. Nellie Walker Stewart of this city, and his brother, Charles T. Stewart.

Box Elder County Medical Society (reported by W. Leroy Smith, secretary)—The Box Elder County Medical Society met January 28 in their annual meeting, and elected the following officers: President, R. A. Pearce, Brigham, Utah; vice-president, T. E. Betensen, Garland, Utah; secretary-treasurer, W. Leroy Smith, Brigham, Utah. Delegate to the State Medical Association meeting, Odeem Luke, Tremonton, Utah. Alternate, R. A. Pearce. Board of censors, E. A. Weymuller and E. H. White.

These were the same officers that presided the past year, they having given such satisfactory service in establishing the new society in our county, that it was the

unanimous opinion that they should continue another year to give the organization a good start.

During the past several months that we have been organized, we have had two luncheons that were well attended, and we have had three meetings at which excellent papers have been prepared and read by the members. One paper by R. A. Pearse on carcinoma of the breast was most interesting. The essayist gave an enthusiastic report of the numerous cases, and illustrated the great amount of increased suffering that is always caused by operating on an inoperable carcinoma that has metastases far from the original tumor, presenting histories of such cases. Another paper by Odeem Luke on the relation of the general public to the present publicity given to venereal diseases and their prophylaxis opened up general discussion of the subject, as it applies locally with very promising effect. And at the last meeting E. A. Weymuller gave a very good paper on some of the minor details in acute and chronic endocarditis.

The members of the society all feel that the meetings have been very beneficial and the attendance has been good, although some of the members have long distances to travel. This difficulty has been overcome by having some of the meetings at the outside points.

Salt Lake County Medical Society (reported by L. J. Paul, acting secretary)—A meeting of the society was held January 26, at the Holy Cross Hospital, Salt Lake City. President John Z. Brown presided, with 49 members and 19 visitors present.

Four clinical cases were presented.

Applications for membership by Leland R. Cowan and Ralph M. Tandowsky were read and referred to the board of censors.

The meeting was then turned over to M. M. Nielson, chairman of the Holy Cross Hospital program committee. A. A. Kerr presented two clinical cases showing successful skin grafting, and discussed a case of acute purulent infection of the gall-bladder. Wilford W. Barber presented and discussed a case of coeliac disease and a case of intermittent subacute intestinal obstruction. The cases were discussed by Root, Stevenson, Tyree, and Brown. John W. Sugden discussed a clinical case and presented post-mortem specimens showing congenital polycystic kidneys. H. P. Kirtley discussed a clinical case of acute prolapse of the uterus in a primipara with forward displacement of "sixth" lumbar vertebra. Specimens were presented, and discussion given by H. P. Kirtley on a case showing absence of a cervix, as well as an absence of opening into the uterus in a patient of 23 years. W. G. Schulte discussed a case showing the value of pyelograms in nephrolithiasis.

The applications for membership of Alfred Blumberg and J. E. Day, having been favorably reported by the board of censors, were accepted by formal vote by the society.

The following committees were appointed:

Medical Liability Insurance Committee—F. A. Goeltz, chairman; Sol G. Kahn, S. D. Calonge.

Medico-Legal Committee—E. F. Root, chairman; H. P. Kirtley, J. C. Landenberger (three years); A. C. Behle, S. H. Allen, W. S. Ellerbeck (two years); M. C. Lindem, C. L. Shields, F. Leaver Stapffer (one year).

Following the meeting, the Sisters of the Holy Cross Hospital served apple cider and wafers.

Salt Lake County Medical Society Meeting of February 9, 1925—A regular meeting of the society was held February 9, at the Commercial Club, Salt Lake City. President John Z. Brown presiding. Members present, 48. Visitors, 3. No clinical cases.

Clinical Program—Frank B. Steele read a very interesting and instructive paper on the treatment of pneumonia, mainly taken from his own practice, corroborating much of the work reported in the literature. Discussion opened by Perry G. Snow and L. W. Snow.

John F. Sharp discussed very effectively the principal complications of pneumonia from the surgical standpoint, stressing especially the treatment of empyema. He contrasted the opened and closed methods of draining the empyema cavities. He strongly advocates the closed method, which he described in detail, presenting a case on

which both methods had been used. Discussion by Roy Groesbeck.

A letter from our oldest honorary member, Salathiel Ewing, thanking the society for the birthday remembrance to him which he stated was very, very much appreciated, was read.

Report of the medico-legal committee on the case against Spencer Wright was given by Chairman E. F. Root.

The following new members were elected to the society: Leland R. Cowan and Ralph M. Tandowsky.

Nevada State Medical Association

W. M. EDWARDS, M. D., Mason.....President
CLAUDE E. PIERSALL, M. D., Reno.....
Secretary-Treasurer and Associate Editor for Nevada

Nevada Notes (reported by C. E. Piersall, associate editor)—The staff of the Elko General Hospital met at the hospital staff rooms on January 13. The following officers were elected for the year 1925: Chief of staff, J. R. Eby; vice-chief of staff, C. E. Secor; secretary, John E. Worden.

Immediately following the staff meeting, was the meeting of the Elko County Medical Society, which was called to order by the vice-president, J. R. Eby. The officers for the year 1925 were elected, and are: President, A. C. Olmstead; vice-president, J. R. Eby; secretary-treasurer, John E. Worden.

Washoe County Medical Society (reported by Henry Albert, secretary)—The society met in regular session in the rooms of the Chamber of Commerce February 9, President Muller presiding.

Program—Dr. Henry Albert presented a brief report on "The Immune Reaction to Smallpox Vaccination." Paper was discussed by Pickard and Morrison.

The paper of the evening was by C. P. Caples on "Genito-urinary Tuberculosis." Discussion by Lewis, Morrison, and Albert.

New Business—M. A. Robison presented a draft of a bill to create a state bureau of health in a department of public welfare. On motion, this was referred back to the committee for revision and resubmission at some future meeting.

Doctor Robison also referred to the County Hospital Bill. On motion, the following committee was appointed to assist in securing the passage of said bill through the legislature: Robison, Chairman, Robinson, Pickard, West, Morrison, McLean, and Caples.

Robison also referred to the following items, which are before the legislature for consideration: (1) To change the word "misdemeanor" in the Medical Practice Act to "gross misdemeanor." (2) To change the word "may," referring to revoking a license to practice, to "shall." (3) To prohibit the sale of paregoric and certain other drugs except on a physician's prescription.

There was a general discussion of the control of transmissible diseases. Dr. Samuels offered the following motion: That a committee be appointed to confer with the County Commissioners within twenty-four hours if possible, and demand that the County Isolation Hospital be put in proper condition to receive all kinds of communicable and infectious diseases at once, and that the results of the interview with the County Commissioners be published in both of the city dailies as paid advertisements, and that the bill for same be paid by the Washoe County Medical Society. Passed.

The following committee was appointed: Samuels, chairman, Pickard, Morrison, West, and Tees.

Attendance—Adams, Albert, Brown, Caples, Fuller, Lewis, Morrison, Muller, Pickard, Piersall, Robinson, Robison, Samuels, Stadherr, Thompson, Tees, Walker, and West.

Medical Economics and Public Health

A Sane and Just Appeal—A case sufficiently suspicious to call for antitoxin is suspicious enough to be reported to the health officer for isolation and investigation of contacts for possible carriers. Without such co-operation on the part of every physician, no health department can ever hope to eliminate the disease from the community.—John J. Sippy (California Health Bulletin).

"Economics teach the biologist that the prolongation of life beyond the age of effectiveness is a perversion. Man should be a contributor to the dynamics of his community and not a burden," says N. Philip Norman, M.D. (New Jersey Medical Journal). "On the other hand, there can be no doubt of the biologic desirability of increasing the health span of the individual and ultimately that of the race."

A. M. A. Bulletin—Don't forget, doctor, that the Bulletin of the A. M. A., which goes to every member free, is the most useful medical publication in existence. No doctor can afford not to read in its entirety the January, 1925, issue. It is easy reading, and the matter is of the utmost importance. The authors, for the most part, are those we have elected as our leaders. Harken to what they say.

Nourishing, Well-Balanced Diet for Thought—Wouldn't it be possible for you to be a little more simple when you come into the sick-room and use a vocabulary, even if it is somewhat of a strain, of words that can be found in a comprehensive dictionary, and, in telling the patient what is the matter with him, to try to do it in language used in the home? . . .

When you come to my house and I have a sick child and you sit down and lay out the things that you want us to do, may I be bold enough to suggest that you do what the quack doctor does—leave a little literature. Not only is my understanding feeble, but my memory is short. If I have a child with measles, the sixteen-page booklet of the American Medical Association, costing 5 cents, might be left at the house; it only costs you a nickel, and you are going to take away \$150.—Will B. Forbush, Ph.D. (Long Island Medical Journal).

Selling Indirect Service—There is a great tendency today, which is growing very rapidly, for this personal or direct service to be interfered with by commercial organizations, to be taken away from the individual physician by a corporation rendering to the individual an indirect service. By indirect service I mean a service based on what information someone else may get from the person who is in actual contact with the individual. It is perfectly evident, it seems to me, that any such indirect service is to the detriment of the welfare of the individual, *because it can never be as valuable to him as a like service rendered personally.*

These organizations claim that they are not dealing with the sick, but only with the well, and that their service is not the practice of medicine. In the very next breath, in order to show the necessity of their business, they claim that 97 per cent of those whom they examine are not well, that they have some physical defect or some disease which has not been recognized by reason of the fact that the individual has never been examined, and it is their duty to be the intermediary between the individual and the medical profession. I never knew that the medical profession needed a go-between.

They not only have these individuals examined, but they say they amplify the knowledge which they get from the doctor, just like speaking through a megaphone, and that the description sent in by the doctor is muddled over by a number of individuals who have not seen the patient and know nothing about him except what has been told them, and that that has greatly increased the value of the physician's examination. In other words, A REAL EXAMINATION BY THE INDIVIDUAL WHO HAS PERSONAL CONTACT

WITH THE ONE EXAMINED IS WORTH SEVERAL TIMES AS MUCH AFTER IT HAS BEEN TRANSMITTED TO SOMEONE WHO HAS NEVER SEEN THE PATIENT.

These institutions not only tell the individual what the matter is with him, but acknowledge that they advise him as to his diet, as to his exercise, and as to the type of medical treatment which he should seek. If diagnosing the case, advising as to the hygienic measures, diet, and any medical treatment which they might think he needs is not practicing medicine, none of us is engaged in the practice of medicine.

Some of these institutions claim that they are not commercial, and that the motive back of them is purely altruistic, but to show that the commercial idea has not been lost sight of, one of them is going to start branches in at least one new state in the near future, and already has started a branch in one state. It is negotiating for a branch in another state; and its method of creating these branches, as I understand, is through the sale of stock, 7 per cent preferred stock. It is to be presumed that the profits from the work will furnish ample means to pay 7 per cent interest on the stock issued. If that isn't a purely commercial proposition, it would be difficult to find one. The idea seems to be to sell a part of this preferred stock to certain doctors in the neighborhood, who would thereby become a part of this organization and help it along.

The service furnished is an indirect one, and any indirect service to an individual is not furnishing him the kind of service to which he is entitled and for which he pays. That can be only a personal and direct service.—M. L. Harris (A. M. A. Bulletin).

"Must the Doctor Answer a Call?"—"The following," concludes Joseph J. Lilly of the New York bar (Medical Economics), "may be stated to be the rules which govern the initiation and termination of the relation of physician and patient:

"1. The physician is under no legal obligation to accept and care for a patient, no matter how grievous the necessity of the patient may be.

"2. If the physician accepts the patient, only for temporary care, as e. g., where he gives immediate treatment to the sufferer from an accident, he should make it clear that further treatment will have to be given by another physician.

"3. The patient may discharge the physician at any time, and from the moment of the discharge the physician is relieved of all liability for future care or treatment.

"4. The physician and the patient may agree to terminate his employment.

"5. The physician may of his sole election terminate his employment, provided timely notice, according to the particular circumstances of the case, be given to the patient to procure another doctor.

"6. When the condition of the patient is such that further medical attention is no longer necessary, the physician may discontinue his services, but should, of course, so advise the patient."

New York Is Attempting to Put This Into Their Industrial Accident Law—It shall be the duty of every employe or applicant for employment in any of the employments enumerated herein:

1. To submit himself to medical examination as herein provided.

2. To furnish true information to his employer or prospective employer regarding his past employment in the employments enumerated herein. The industrial board shall, if necessary, make rules for carrying into effect the provisions of this section.

From One Who Ought to Know—As a result of the indifference of the average pediatrician to child welfare work, his domain has been encroached upon by outsiders not trained in medicine, but keenly alive to the necessity and opportunity for this line of work. The social worker, the nutrition expert, and the public health nurse have entered in and in some instances monopolized the field. . . .

There is a feeling of distrust and perhaps jealousy on the part of some pediatricians toward the child welfare clinics. They learn that one of their little patients has

been taken to a child welfare conference. That the visiting nurse has followed the case in the home and that the mother has become a regular attendant. The family physician feels, and *justly so*, that he has lost a patient.—Henry L. K. Shaw (New York Journal of Medicine).

The Young Doctor and the Medical Society—Dr. Gordon S. Fahrni, in his presidential address before the Manitoba Medical Association, said: "Too little guidance is at hand for the young man just out of college who is suddenly thrown on his own resources. This association should at once endeavor to procure this man's membership, as we need his support and he may be in need of ours. I would, therefore, suggest to this meeting the advisability of giving membership to doctors during their first year's practice at half the regular fee, or even less. The benefit, I feel sure, would be mutual."

The director of the American Red Cross Association says that the principles that should be observed by every reputable health nurse are:

1. Public health nurses do not diagnose, do not prescribe drugs, and do not give treatment without a doctor's orders.

2. Public health nurses do not give nursing care after the first visit without a doctor's orders.

3. Public health nurses do not recommend individual doctors, but advise patients to go to their family physician.

4. Public health nurses do not recommend that patients change doctors or seek hospital care when they have a family physician.

These principles are highly commendable and probably have the endorsement of most nurses. The trouble is that many nurses are employed by and, therefore, take their orders from political bureaus and uplifters that consider the director of the Red Cross Association old-fashioned and out of date.

"Financial success that has its foundation based upon industry, efficiency, and the best kind of professional work is not only admirable, but it is and should be a source of healthy inspiration to all physicians," says Edward Beardsley (Journal of Medical Society of New Jersey). "An income from the medical profession, however, that is acquired as a result of, consciously or unconsciously, lowering one's professional ideals and, more particularly when gained at the potential sacrifice of the health of patients, as a result of careless and insufficient clinical study, is not to be envied."

Springing from a secretive priesthood, medicine for countless ages maintained a similar secretiveness, surrounding its activities with linguistic and other presumably imposing formalities. Some of that influence lurks about our work still—in our Latin prescriptions, in our nomenclature of disease processes, in our reluctance to enlighten the public, and in our star chamber consultations.—David Riesman (A. M. A. Bulletin).

Then and Now—When the British took possession of the Colony of New York, a law was promulgated by the Duke of York which forbade practice upon the people without the advice and consent of accredited physicians. Moreover, the consent of patients was conditioned as well. The object of the law was stated to be "to inhibit and restrain the presumptuous arrogance of such as, through confidence of their own skill or any other sinister respects, dare boldly attempt to exercise any violence upon or toward the body of young or old, one or another, to the prejudice or hazard of the life or limb of man, woman or child.

Here we are well into the twentieth century, and fond of assuming that we have moved very far along the path of social evolution, yet the law which we have quoted betokens a far higher civilization than our own.—Medical Times.

The private physician is more or less familiar with the patient's interests and environment and, therefore, better able to render health service to the individual than is the case when the examinee comes as a stranger to a strange physician. This is important—the success of a

health examination depends more upon the rapport between physician and examinee than does a diagnostic examination.—Long Island Medical Journal.

Fitting Health Departments into Medicine—"Preventive medicine and curative medicine should go hand in hand," believes George W. Duvall, M.D. (Medical Economics). "The all-important factor, insofar as a whole-time health department will become either an asset or a liability to the physicians of the community, depends on the training and spirit of its head—the health officer. *The health officer who carries a thermometer, hypodermic syringe, or who has need of narcotic and whisky prescription blanks, is clearly out of his field.* He has need of a stethoscope, but for indigents only. He has need of the bacteriological laboratory in his office, but not from the standpoint of diagnosis, unless called upon by the physicians. He is in the field of free clinics, but they must be conducted so that they will not reflect discredit in the minds of the men of the profession.

"The whole-time health officer is a public servant whose work is educational, with the power to enforce health laws and regulations, and who, while not subservient, assists physicians in maintaining personal and public hygiene, isolation, and quarantine."

Health is the wage-earner's working capital. It represents the surplus on the balance sheet of his life. When by carelessness, neglect, or indifference, he allows it to fail, he topples into physical bankruptcy. His few remaining human assets are in jeopardy, and the heavy liability of despair settles upon him.—Thomas V. Gould (Long Island Medical Journal).

Why Fee Schedules Won't Work—The range of skill, knowledge, and judgment in the medical profession is precisely that of the range of skill, knowledge, and judgment in engineering, in business, in law or in any other human occupation in which a high, low or mediocre degree of human intelligence may be brought to bear upon any given situation.

"The public should be free to choose anything from a Galen to a chiropractor, in accordance with advice given by a grandmother or through choice made after an investigation similar to that customary with trustees of estates when buying bonds," says Medical Review of Reviews.

When Doctors Really Get Busy—"The University of Colorado School of Medicine recently announced the opening of the Colorado Psychopathic Hospital. The bill authorizing this hospital was enacted in 1919, but the legislature failed to pass an appropriation for its construction. In order that the project might not fail at this point, the Colorado State Medical Society secured a sufficient number of signatures to a petition initiating a bill with an appropriation of \$350,000. This bill was referred to the voters in November, 1921, and approved by a majority of about 100,000.

"The hospital is located at Denver and is an integral part of the University of Colorado."

PRACTICAL THERAPEUTICS AND THE ART OF MEDICINE

Mr. Felix Lengfeld of the Lengfeld Pharmacies of San Francisco, Dr. Fred R. Fairchild of Woodland, Dr. Henry H. Lissner of Los Angeles, Dr. E. Paul Cook of San Jose, and Dr. William E. Musgrave, editor of CALIFORNIA AND WESTERN MEDICINE, comprise the group of alumni instructors for 1925 in the course on Practical Therapeutics and the Art of Medicine given at the University of California Medical School. This course was given during the spring semester of 1924, and was so successful it was deemed advisable to repeat it in 1925. In general, the instruction will be the same as that given last year, each instructor spending a week at the hospital, taking part in ward rounds, assisting in the instruction of the students, holding seminars, and giving one talk to the student body and house staff on some problem in Medicine.

"She that hath no children doth bring them up well," says an old English proverb.

CORRESPONDENCE

AFRICAN ARCHERY NOTES

This is the first of a series of letters to California and Western Medicine from Saxton Pope, unfolding the "romance" of hunting Big Game in Africa with the bow and arrow. Those who have read Pope's delightful book, "Hunting With the Bow and Arrow," have gained an added respect for these primitive weapons in capable hands, and will look forward with eager anticipation for the exploits of this group of famous hunters.

Dear Dr. Musgrave—By the time this appears in print we shall be sailing over the briny deep on our way to the Big Game Hunt in Tanganyika, and at your request I start a series of periodic reports of our experiences.

This adventure is part of a sabbatical year, which I have taken to celebrate my twenty-five years in the practice of medicine—the theory being that a man should take his long dreamed of holiday when he can enjoy it and not wait till physical incapacity and loss of interest in life settle upon him. Usually a doctor waits so long that he takes his vacation in a wheel-chair, with a clinical chart carried at a convenient distance by a trained nurse.

So it might be said that I felt so well, I just had to go to the mountains, for I started, as all good Californians should, by seeing America first. Six months of this sentence was spent exploring in the mountains and hunting with my bow and my dog. Part of the time I was with Captain Cassius H. Styles, U. S. A., late of the Aviators Corps; part with Tom Murphy, the bear hunter, or Monte, the Klamath Indian, and part with Stewart Edward White, the author.

Mr. White became converted to archery after reading my famous book, "Hunting With the Bow and Arrow," and he has grown rapidly into an accurate shot. Already we have hunted geese, deer and bear together, and it is through his insistence that we journey to Africa to add glory and honor to the bow.

So, at the special invitation of Leslie Simson, who is now in British East Africa, Arthur Young, Mr. White and I go to join him on a safari into Tanganyika, an unexplored portion of what was German East Africa.

We leave New York March 6, sailing for Cherbourg, France. From Marseilles we embark upon the Mediterranean and go through the Suez Canal, Red Sea, into the Indian Ocean, landing at Mombassa. From here we take the train to Nairobi, Kenya Colony, at which point we motor in Ford cars over the open plains for three days' journey south near Lake Tanganyika. From this point we go on foot with native packers into the jungle.

This requires six weeks' travel, and we expect to be gone six months, hunting. Our object is not of scientific interest—it is purely a romantic adventure. It is true that Doctor Terry has requested me to investigate the distribution of the gall-ducts in the various game animals coming under our observation and thus to supplement an interesting study in comparative anatomy, started by Dr. Mentzner of Rochester. I have agreed to work out the diagram of the gall-bladder and ducts on part of the ninety-six species that inhabit this part of Africa.

Our prime object is to hunt with the bow and arrow the many small game, water bucks, antelope, and other herbivora of the Tropics. We are not attempting to make any foolhardy assaults on lions, elephants, rhinos, and buffalo. The probabilities are that an arrow will kill all of these fearsome beasts, and, under favorable conditions, we may try the experiment. But here (it is only part of sanity) we shall be backed up with "life insurance," the big cordite guns, and it must be remembered that we go in company of two of the greatest African hunters of the age, Simson and White. The latter is considered by Roosevelt the best shot that ever entered the country.

Natives, of course, do kill lion with spears, and the in-

cidence of homicide is fairly small. Still, we are not looking for that form of excitement.

In our equipment, besides a complete medical and first-aid kit, we take four or five bows apiece with 300 arrows. Materials for making 3000 arrows we carry, to be assembled later, with assistance from the natives. Tropical clothing and camp luggage complete the outfit.

Our hunting will take place on the elevated plateau of Tanganyika, where the nights are very cold and the days about as hot as the San Joaquin Valley in midsummer.

So, if it will amuse you, from time to time I shall send a letter spinning across the globe, carried first by a naked, sweating African, running with a spear in one hand and the mail in the other; then by dusty, creaking ox-cart and funny jerk-water Uganda railroad; then ships surging through the mighty deep, transcontinental rail and air-mail to you in San Francisco, telling you how we fare in the far-off land, what strange sights we see, and what adventure we meet.

Yours, as ever,
SAXTON POPE.

ECONOMIC CASE REPORTS

Case 1—One of the organizations located in an Eastern city and practicing medicine illegally in California is energetically "sampling" and "circularizing" our people with propaganda about curing rupture by local application.

As a work of art, read this from their claims:

"The free sample treatment is, of course, not sufficient in quantity to be of any permanent benefit. It is sent so you may know what — is like and how easy it is to use. But if it is possible for this small quantity to organize a normal process of repair, you will understand just how so many thousands have been able to report lasting freedom from rupture after using the full self-treatment supply in connection with my perfect holding Comfort Support."

The submission of this class of stuff to doctors by their patients is a wholesome sign of increasing intelligence of the public.

Case 2—Another Chicago concern is telling our people how they can have their lives extended ten years—for a fee. They claim that:

"Our work is not a fad of an hour. It is not a course in physical culture; or dietary, or drugless healing. We make a thorough examination of the urine, tell you what we find and explain the significance, and keep a copy of all reports so that the subscriber gets with each report a statement of the present condition and a comparison with the previous reports."

Many Californians are sending their good money and their "canned urine" to concerns of this class, and are trusting these "health by mail" "doctors" to guide them in preserving their most precious asset—HEALTH.

Case 3—And They "Fall for It"—The following is reading matter in a widely read women's magazine which conducts a health club headed by a doctor of medicine:

"This doctor (not the editor of the medical department, but another one) has never had a failure. He discovered his process for removing hair in treating a skin disease on a man who wore a beard. He invented a machine which perfected the process, and for twelve years his twenty-four machines have been in constant use. There is absolutely no return of the growth, and women in a highly nervous condition have found the treatment beneficial to their general health. *We should be glad to send you privately any information you wish in regard to this matter.* We feel how great is this man's gift to women, freedom from sensitiveness and self-consciousness. As we have said before, we think that self-consciousness, and not money, is the root of all evil."

If you can beat that—outside of radio health land—we would like to hear from you.

In this world if you do not say a thing in an irritating way you may just as well not say it at all, because people will not trouble themselves about anything that does not trouble them.—Bernard Shaw.

Medicine Before the Bench

Findings and Comments of the Courts on Acts and Omissions of Doctors

(EDITOR'S NOTE—*The law reports contain many interesting decisions, involving the reputations and fortunes of doctors. In this column in each issue a brief summary of one or more decisions and comments of the several courts of last resort upon the cases will appear. The matter will be selected by our general counsel, Hartley F. Peart, who, with Hubert T. Morrow, attorney for Southern California, will contribute from time to time.*)

In a case where a physician was charged with having negligently failed to remove a sponge from his patient after the performance of an operation for appendicitis, the interesting question was presented as to whether or not the statute of limitations commenced to run from the time the sponge was negligently sewed up in the plaintiff's abdomen, or from the time that the physician ceased to treat the plaintiff and the relationship of physician and patient had terminated. It appeared that the operation was performed on November 1. The physician neglected to remove a sponge which had been used in the operation, but thereafter continued to treat the plaintiff until March of the following year. The statute required actions of this character to be brought within one year. The defendant's counsel contended that when the sponge was negligently left in the patient the statute commenced to run, and the subsequent failure to remove it did not arrest the statute or give rise to a new or independent cause of action. The Supreme Court of the state where the cause was pending refused to follow this reasoning, and followed a previous decision involving the liability of a veterinary surgeon, holding that it was the defendant's duty to give to the case such continued further attention, after the operation, as the necessity of the case required. The court says:

"This, we believe, is a sound and salutary rule to govern the relation existing between the patient and the surgeon, who practices his profession and undertakes the serious operation described in this record. If such care is due to a dumb animal, it is surely due to a human being. . . . If we call malpractice a tort in this case, it is a tort growing out of a breach of contract which the law implies from the surgeon's employment and undertaking to perform the operation. We have seen that it was a continuous obligation and recognized by the law, and it was alive and binding so long as the relation of physician and patient subsisted. If so, it was the ever-present duty of the surgeon to remove the sponge from the body of the patient. It was a constant and daily obligation to use ordinary skill and care, and if by omission or negligence he had left a foreign substance within the walls of the incision at the operation, it behooved him to afford timely relief. Neglect of this duty imposed by a continuous obligation was a continuous and daily breach of the same, and, as the facts show, caused continuous, increasing, daily and uninterrupted injury. Should she (the patient) have brought her action immediately following the sewing up the walls enclosing the sponge? If she had done so, there were as yet no injurious consequences and but nominal, if any damages, could have been recovered. The injury consisted not so much in leaving the sponge within the cavity, as negligently continuing it there, or allowing it to remain there from day to day for about a year and until he dismissed her from his attentions. The grievance of the plaintiff was not alone confined to the negligence in the operation, but also in the painful consequences which followed, and which, as he repeatedly assured her, would soon disappear, if she would but patiently wait. . . . The facts in the case at bar show a continuous obligation upon the plaintiff in error, so long as the relation or employment continued, and each day's failure to remove the sponge was a fresh breach of the contract implied by the law. The removal of the sponge

was a part of the operation, and in this respect the surgeon left the operation uncompleted."

It was held that the action was not outlawed, if brought within one year after the defendant ceased to treat the plaintiff.

Decoys not Permitted to Ensnare Innocent into Committing a Crime—The legal privileges of decoys for ensnarement was an important point in the recent trial of a doctor for violation of the Harrison Anti-Narcotic law. The legal status of "ensnarement" was presented by the court in the following language:

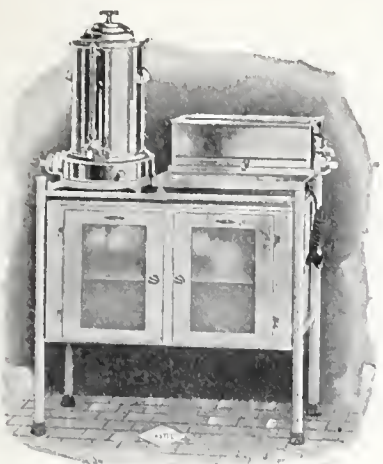
"The court instructs the jury that, while it is permissible for government agents and officials, through detectives and decoys, to entrap criminals, or to present opportunity to those having intent to or who are willing to commit crime, it is not proper for government officials, agents or decoys to incite to or create crime, for the purpose of prosecuting it or punishing it, and if the jury believe from the evidence that the government's agent and witness, John Walter McDonald, through false statements made to the defendant to the effect that he was suffering from a disorder of the stomach and required morphin for the purpose of relieving the pain incident thereto, or that he was an addict or had been an addict, and found it necessary to occasionally take small doses in an attempt to cure himself from the drug habit, and through such statements, which were false, procured from the defendant the morphin for the dispensing of which the defendant stands indicted, and the defendant, believing the statements made by McDonald were true, was induced thus to violate the law, and that said defendant was not theretofore willing thus to violate the law, and would not otherwise have violated the law, then the jury should find the defendant not guilty."—Journal A. M. A.

California Association of Physiotherapists (reported by Florence C. Burrell)—Uses of the head-sling in physiotherapy and treatment of flat-foot were the subjects at the monthly meeting of the San Francisco branch of the Association of Physiotherapists at the Ethel Moore Health Center, Oakland.

H. W. Hitchcock, M. D., gave five types of disabilities that could be relieved by head traction given with hot packs over the spastic muscles during suspension. First, the relaxed child with loose ligaments who often gets a kink in the neck, with accompanying muscle spasm. Second, the carnivorous, often neurasthenic, type with poor posture and pain in the back. Third, those with sudden low-back strain, with negative x-ray findings, who may be relieved by strapping during suspension. Fourth, those with hypertrophic changes in the spine who have headache and pain. Fifth, used in applying plastic collars, etc. Relief of muscle spasm is the object of the treatment.

W. F. Holcomb, M. D., spoke on the various stages of static foot deformity and their treatment. He brought out the fact that most of the common disabilities of the foot are due to improper uses of the foot, with especial regard to the attitude of the feet during locomotion. The progressive stages of the deformity were (1) abduction of the forefoot with its consequent ligamentous and muscular strain, (2) lowering of the longitudinal arch with its consequent loss of elasticity, and (3) rigidity of the foot in the deformed attitude. Correction of the first stage is entirely possible by the common supportive means along with instruction, exercises, and proper shoes. Plates were discussed with regard to treatment of the second stage. It was brought out that the Whitman plate was rather a corrective brace than a support, while the Boston foot plate was a support without any idea as to the correction of the existing deformity. Shortening of the tendo-achilles was to be looked for in every case of flat-foot, for without treatment of this condition relief was not always afforded. For rigid flat-foot and congenital flat-foot (pes planus) open operation or manipulation under anesthesia was deemed necessary.

Patriotism cries, "God give us men," but the parties say, "Give us votes and offices," and Congress proceeds to create a commission. Thus responsibilities are shirked and places are multiplied.—Henry Waterson (recent biography).

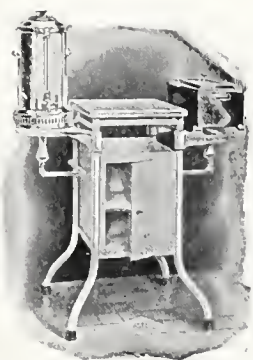


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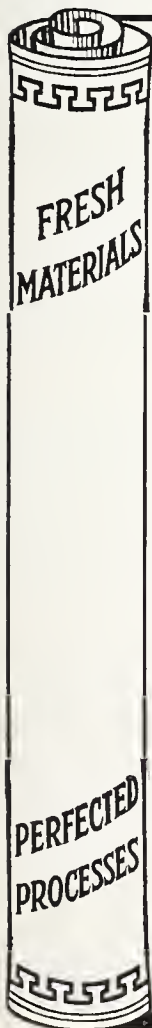
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MEDICAL STRAWS

By THE EDITOR

Experience is fallacious and judgment difficult

Henry V Said of the Doctor—"In peace he works in stillness for the saving of the human life, but in war his fierceness to save in the midst of destruction has no parallel."

It Depends Upon Whose Ox—"They tell us that when Henry Ford established fixed fees and put the physicians of his hospital on a salary, the plan worked well until his grandchild had mastoiditis. A hurried call was then sent to Detroit for men whose fees are fixed by themselves."

IT SEEMS to me that a great tendency exists (among physicians) to work for a selfish progress, that we are not sufficiently interested at heart in the collective advancement of our profession, that a spirit of rivalry is too manifest, that co-operation exists only in small cliques, that seldom do we apply the Golden Rule in regard to our fellow-practitioner.—H. M. Higgins (Journal of the Arkansas Medical Society).

CHARITY is contemptibly easy both to give and receive, but helpfulness costs even to receive.—Henry Ford.

IT IS significant that most of the men that come here have no trade and have never learned to work steadily.—Warden Johnston (to Commonwealth Club on a visit to San Quentin Prison).

Send them to "Habit Clinics" if you must, but, for the sake of civilization, be careful about rejuvenation."

DR. EUGENE KELLEY, STATE COMMISSIONER OF HEALTH OF MASSACHUSETTS, SAYS THAT WE MUST TAKE THE LETTER "R" OUT OF FREE AND PLACE THE HYGIENIC WORK ON A FEE BASIS.

THE fundamentals of preventive medicine as applied to the individual are entirely different from those of public health activities, as they are from those of curative medicine.—J. Pentado Bill (Boston Med. and Surg. Jour.).

COMMERCIALIZED health examinations are bad for patient and doctor. Periodic physical examinations will be commercialized by institutions and capitalized by the quacks, unless the medical profession meets the growing demands.—Long Island Medical Journal.

Is This So?—"Formerly," says the New York Board of Health, "the health of the baby was a local problem and emphasis was placed on family care. Today the complex character of living conditions causes it to assume a much broader aspect, and community control cannot be avoided."

Is removing the responsibility of the child's health from the parents and family physician to "community control" likely to benefit the baby? Poor babies.

TIME flies nowadays, and doubtless a man could pick up a genuine antique Mah Jongg set if he looked around.—Detroit News.

SOME folks haven't sense enough to know that some things can't be done, so they go ahead and do them."

IT BEHOOVES the medical profession to offset and hold back a rising tide of popular demand and sentiment for free examinations and advice.—Henry L. K. Shaw (Nation's Health).

THERE are enough people in the world now, too many, who believe they have done something when they have only made a speech about it or written another law on the statute books.—Angelo Patri (Liberty).

PERHAPS the most revolutionary conception in medicine is that serious diseases, functional disorders, and organic inferiority of diverse types, may be caused by a deficiency or excess, or a combination of deficiencies and excesses, of certain food constituents.—N. Philip Norman (Journal of the Medical Society of New Jersey).

What About Tomorrow?—*The welfare federation of today* is to all intents and purposes the *cabinet of the unofficial government of the city*, supplementing the official government with quick resource, with experiment, demonstration and unselfish non-political public work.—Haven Emerson (The Survey).

EVOLUTION is defined by Henry Fairfield Osborn (Forum) as "a continuous creation of life fitted to a continuously changing world. The process consists of new forms and combinations of energy in the animal world, of new means of enjoying the rest of the universe both in the animal and in the human world, of new moral, spiritual, and intellectual powers gained sometimes slowly, sometimes suddenly."

Attention, W. J. B.!

IN MASSACHUSETTS any physician who associates himself with an unregistered person for the purpose of carrying on the practice of medicine is open to prosecution and may be fined or suffer loss of his registration.—Boston Med. Surg. Jour.

YOU may, if your arithmetic is erratic, add up a column of figures a dozen times and get different sums. Only one is correct. It is necessarily the same about the more complicated problems of life, only we cannot see it so clearly.—Edwin S. Slosson (Scientific Monthly).

UNLESS a man knows something about the patient who has the disease, it is not going to benefit him to know everything about the disease.—Illinois Medical Journal.

THE annals of mankind show that disciplined men have built powerful nations that undisciplined men have allowed to perish from the earth. In these times thoughtful people are wondering whence will come the disciplined men of the next generation. From the average American home, discipline has all but disappeared along with the old-fashioned fireside.—Thomas H. Russell (Red Book).

What About This?—One of our state governors, in replying to requests that he appoint a physician to an important post in one of the state health organizations, said, according to Boston Med. and Surg. Jour., that "physicians nowadays were so narrowly trained in their various specialties that he did not know where to turn to secure the services of one who could take a broad view of any public matter."

THE most serious indictment of medical practice today is that it is superficial. Unless guidance of the public in this direction is to be left to sociologists, and among these, enthusiasts, faddists and blundering well-meaners, the medical profession must be not only better educated, but *differently* educated.—Henry B. Favill, M.D.



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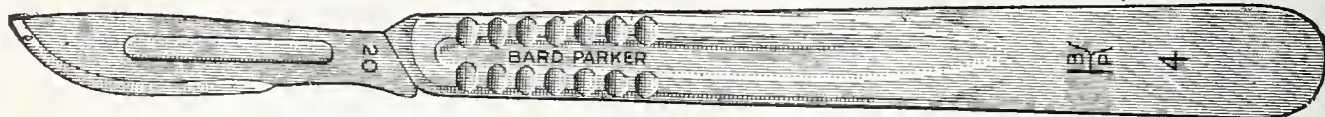
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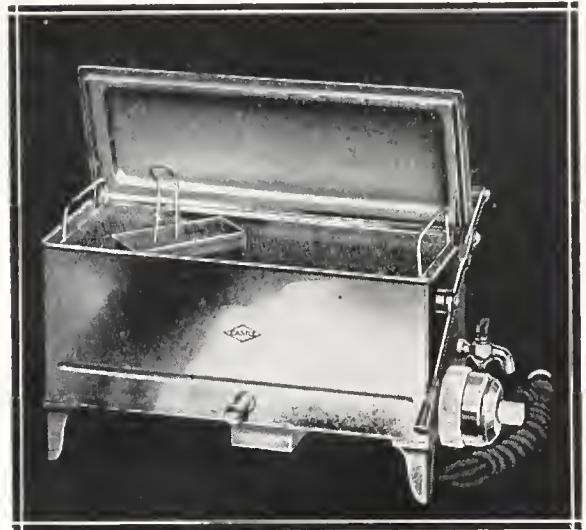
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BOOK REVIEWS

This column is conducted solely in the interests of California and Western Medicine readers. Critical comment, favorable and unfavorable, purely from the standpoint of the interests of the medical reader, will be made about books selected from the larger number acknowledged in the Books Received column. The advertising columns are open to book publishers who wish to make additional statements about their publications.

Manual of Psychiatry. For the medical student and general practitioner. By Paul E. Bowers. 365 pages. Philadelphia and London: W. B. Saunders Company. 1924.

Definitions have long been out of fashion, but here we see a revival, there being one for every type of mental disease with one for insanity to start off with. The book has the appearance of being got up for students who were cramming for an examination, and it would serve excellently for that purpose, but it would never entice an indifferent reader to explore the mysteries of psychiatry. There are no fresh viewpoints, none of those pleasant surprises that one comes upon in the inspired book. There open up no new vistas that beckon one on to distant enchantments. The cause of psychiatry is not to be advanced by such means. The adding of such a manual to the already groaning shelves is uncalled for at a time when even the publishers are beginning to cry out for "fewer books and better ones."

The one chapter which rises above mediocrity is that on the relationship of insanity to crime. E. W. T.

Pediatrics. By Various Authors. Edited by Isaac Abt. Vol. III, 1051 pp. Philadelphia and London: W. B. Saunders Co. 1924.

This third volume of Dr. Abt's reference work on pediatrics upholds the standard of subject matter and editorial excellence attained by the preceding ones. When one considers the enormous difficulties under which this large piece of work was accomplished, credit can not be too generously given not only to the contributors, but especially to Dr. Abt.

As a reference work the book is extremely valuable
(Continued on Page 352)

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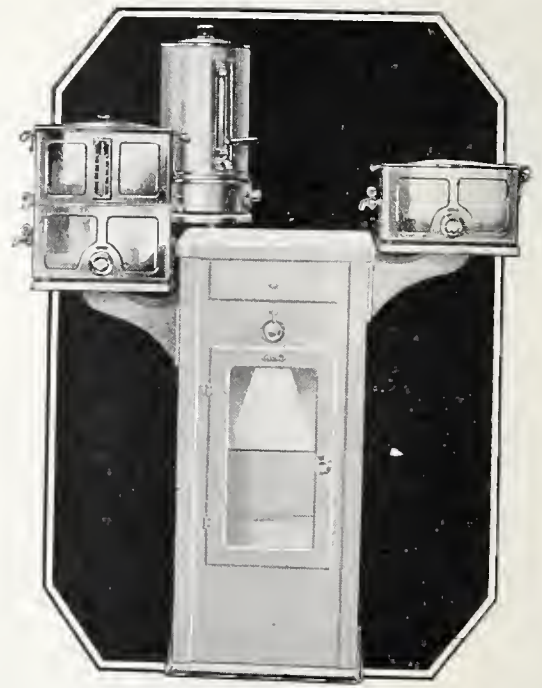
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BOOK REVIEWS

(Continued from Page 349)

and is exceedingly well indexed, which is such an essential attribute.

I should like particularly to recommend the most excellent chapter on orthodontia by DeVries. This subject is of vast importance to pediatricians and should be so recognized. The great advances made in recent years in this field have very definitely favored the progress made in correcting the nutritional disturbances of children.

Hayes has an intelligent and reasonable discussion of the function of the tonsil and the present status of treatment of its pathology.

Dr. Abt's chapter on the nutritional disturbances of infancy is a particularly lucid and entirely up-to-date exposition of the modern ideas of these derangements and of their therapy.

The internist in children's diseases will find the whole subject of surgery of the gastro-intestinal tract excellently presented.

The physiology of respiration and Byfield's chapter on chronic infections of the upper respiratory tract are well worth reading.

C. F. G.

Normal Bones and Joints Roentgenologically Considered. Annals of Roentgenology, Vol. 4. By Isidore Cohn. 219 pp. Illustrated. New York: Paul Hoeber. 1924. Price, \$10.

One of Hoeber's beautifully printed atlases. It illustrates the various stages of ossification of the shoulder, elbow, wrist, hip, knee, and ankle. It is an invaluable book of reference for radiologists, surgeons, orthopedists—for anyone who is called upon to study roentgenograms of children's and young people's bones and joints. L. E.

A Treatise on Orthopedic Surgery. By Roual Whitman. 7th ed. 991 pp. Illustrated. Philadelphia and New York: Lea & Febiger. 1923. Price, \$10.

A new edition of a valued text. Some of Whitman's femoral conditions are more fully treated—his treatment for fractured femoral necks, his astragalectomy, for instance. His own ideas, at times differing from those of many other orthopedic surgeons, are brought forward. This is no defect, but an advantage in a textbook. A chapter on military ratings will also be of interest to industrial surgeons. L. E.

Essentials of Prescription Writing. By Cary Eggleston. 3rd ed. 146 pp. Philadelphia and London: W. B. Saunders Company. 1924.

A not unuseful little manual. Almost a quarter of its

(Continued on Page 354)

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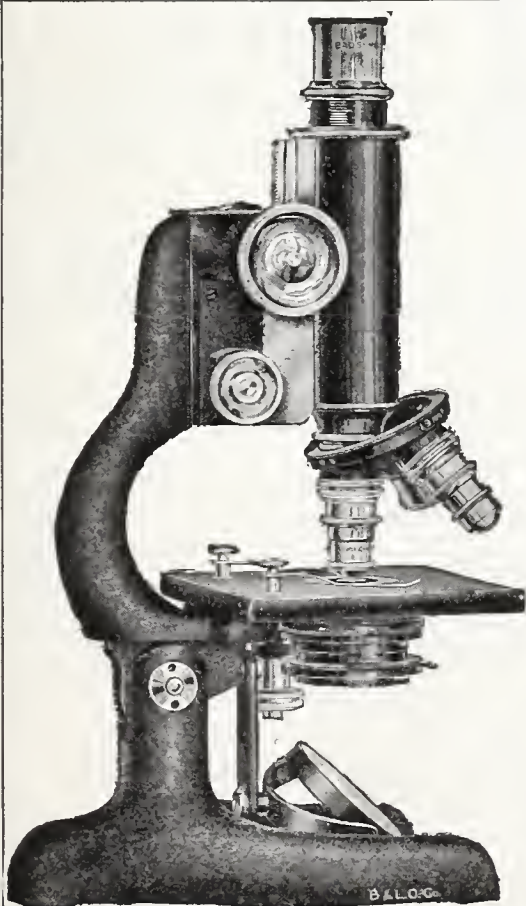
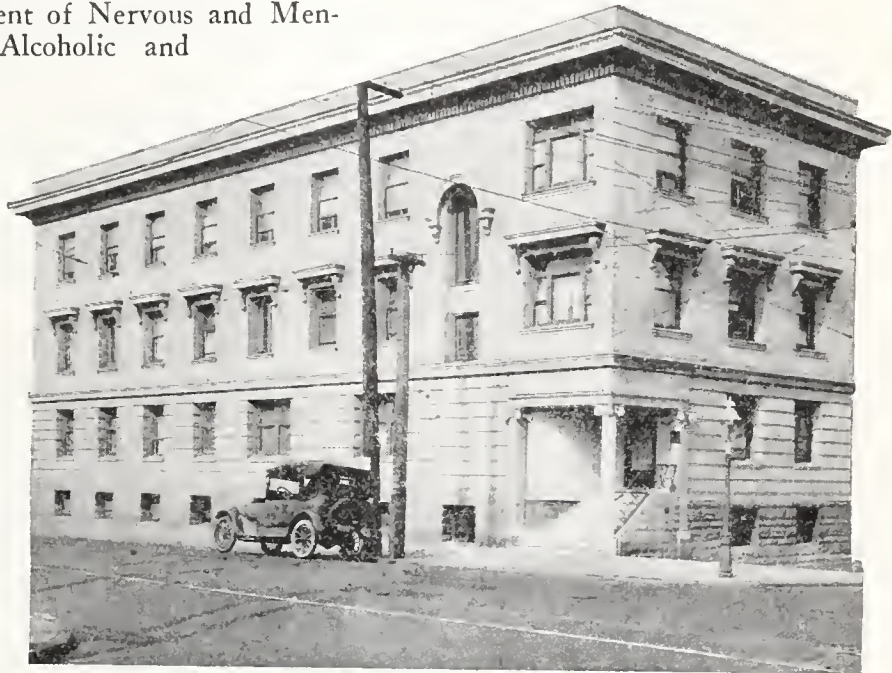
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BOOK REVIEWS

(Continued from Page 352)

pages is taken up by a grammar and vocabulary of dreadful dog Latin, remnant of the late Middle Ages, kept alive by doctors and licorice-scented pharmacists' clerks in their prescriptions. It is a good thing that the art of medicine has not yet lost all of its alluring flavors of magic or mysticism. L. E.

Students' Guide to Operative Surgery. By Alfred T. Bazin. 126 pp. Montreal: Renouf Publishing Company.

A classroom guide for students at McGill University, to whom its usefulness will be confined. It cannot compare with von Bergmann's or other standard guides. L. E.

Safeguarding Children's Nerves. A handbook of mental hygiene. By James J. Walsh and John A. Foote. 272 pp. Philadelphia and London: J. B. Lippincott Company. 1924.

Dr. Walsh is a scholar who touches little that he does not adorn, and this book is an example of it. His scholarship sticks out from beginning to end of this little volume. The wholesomeness of viewpoint is very noticeable throughout, and there is none of the mawkish sentimentalism which so often offends in books on kindred subjects. There is a welcome freedom from faddishness, and while words are not minced and there is frank facing of ugly things, the morbid insistence upon sex that pervades much of the stuff of the past decade, is missing.

It is an excellent guide for anyone who has at heart the mental welfare of the child. E. W. T.

Modern Methods in the Diagnosis and Treatment of Renal Disease. By Hugh MacLean. 2nd ed. 110 pp. Illustrated. Philadelphia and New York: Lea & Febiger. 1924.

This is not a compilation of methods used in the diagnosis and treatment of renal disease. Only three pages are given to surgical diseases of the kidney. It is really a very brief review of certain simple methods which the general practitioner may use in the diagnosis of Bright's disease, and even in this narrow field little is said, and

(Continued on Page 362)

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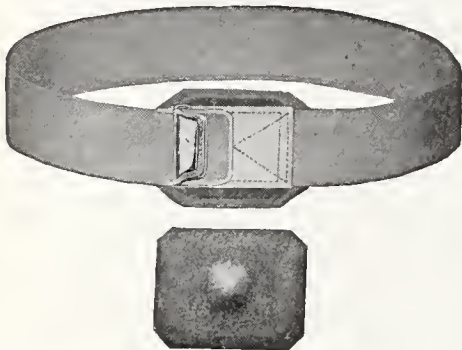
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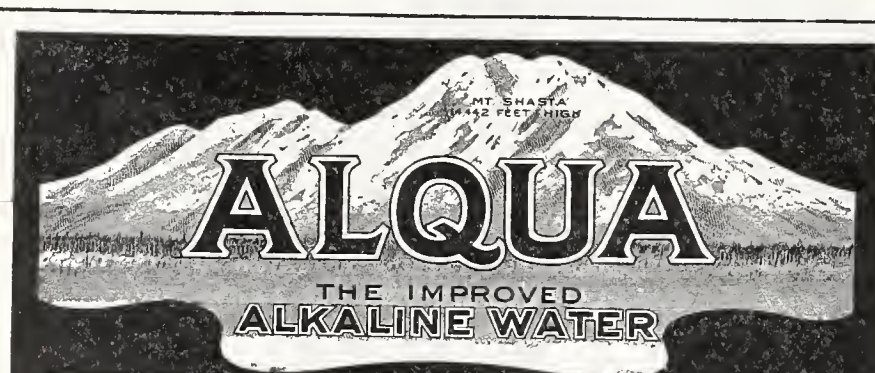
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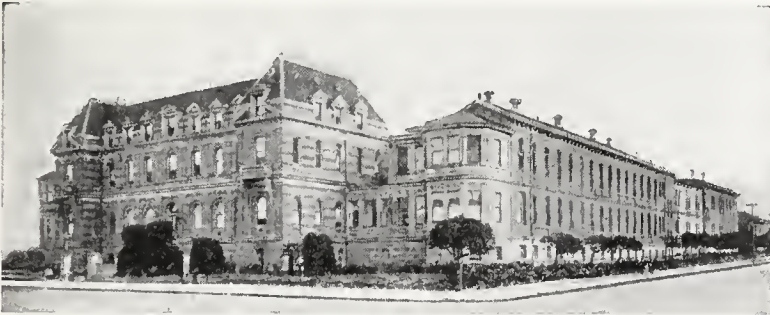
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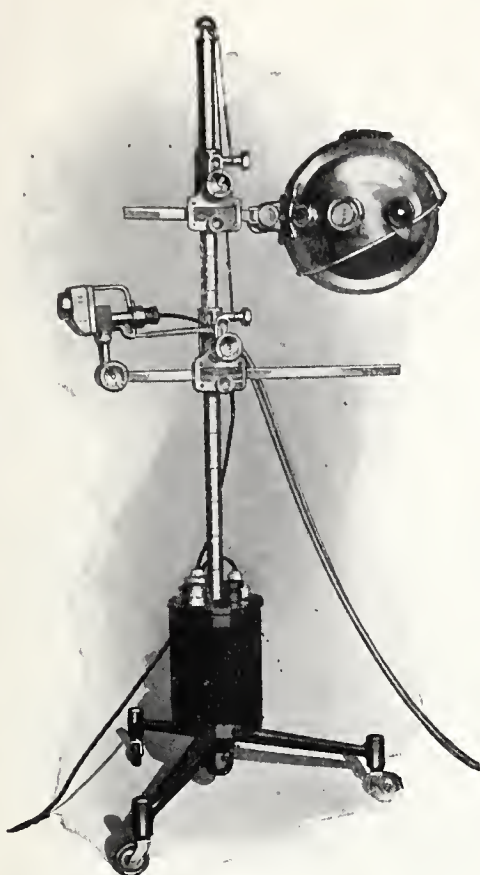
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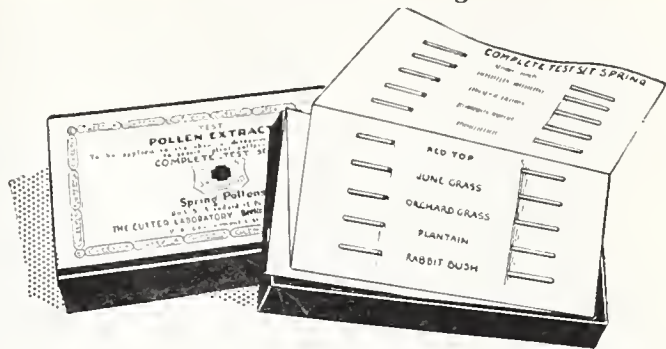
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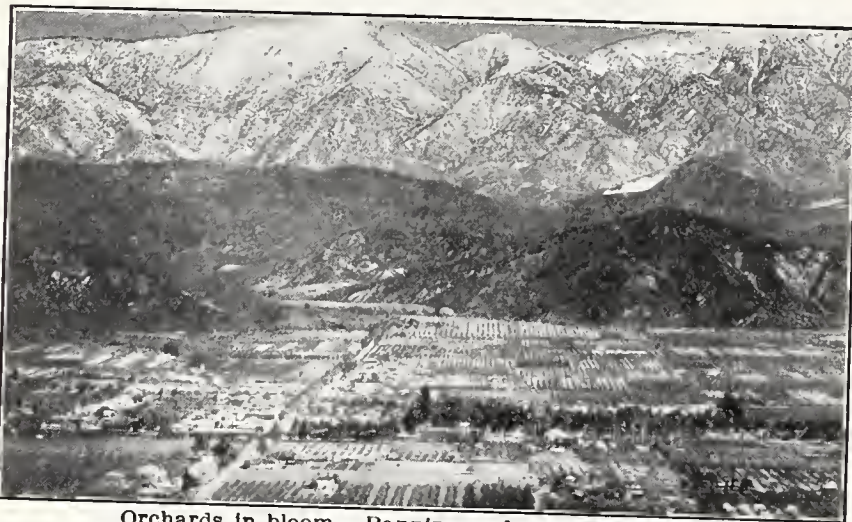
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BOOK REVIEWS

(Continued from Page 354)

that little with no assurance. The rough clinical estimation of the concentration of urea in the blood and urine is recommended. The only other test described in detail is the determination of diastase in the urine, but elsewhere the author admits that he has little confidence in the results. There are a few pages on the histology of Bright's disease, but there is no attempt to relate clinical and pathological observations. The somewhat archaic division into parenchymatous and interstitial nephritis is retained for clinical diagnosis. There are some very sensible remarks on the possible fallacy of conclusions based on blood urea determinations. There are some first-hand observations on the incidence of albuminuria and casts in apparently normal individuals. Aside from these two instances, the chief virtue of the book is its attitude of half-suppressed skepticism and its chief fault that the underlying doubt is not allowed to come to full fruition. T. A.

Medical Gynecology. By Samuel Wyllis Bandler. 4th Ed. 490 pp. Illustrated. Philadelphia and London: W. B. Saunders Co. 1924.

The fourth edition of Bandler's Gynecology has appeared. It does not profess to be anything but a medical gynecology and, therefore, has a limited scope. Valuable chapters have been added by Dannreuther, Mannheimer, and Highman which are instructive, although Dannreuther's statement in regard to Heitzmann's criteria in the diagnosis of the site of origin of epithelial cells seen in urine will not find general acceptance. The chapter containing the use of electricity should have been revised and brought up to date. As it stands, it creates the feeling that galvanism is a sure cure for every ailment of the generative organs, while we know only too well that its use is confined almost exclusively to the trophic disturbances of the uterus. This chapter also lacks an intelligent explanation why electricity is of some use in the treatment of women.

The chapter on the endocrine glands is fanciful and often hazy in its deductions. It could stand material condensation and is in need of a thorough house-cleaning. It is unnecessary to point out that up to date gynecology should not advise atmocausis, while it should contain the recent advances in diathermy, the dangers of x-ray treatment of functional disorders of young women, a more

(Continued on Page 366)



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References

Royal Whitman, M. D., New York
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BOOK REVIEWS

(Continued from Page 362)

thorough discussion of the patency tests of the Fallopian tubes and disturbances of the urethra. I noticed that the cystoscopes spoken of are still of the type where the window points upward. In the treatment of gonorrhea, I miss a thorough discussion of dye treatments.

Aside from this, the book contains many helpful hints for the medical treatment of the generative disturbances of women. But since, on the other hand, it is impossible to separate medical from surgical gynecology, it is questionable if the book will give full satisfaction to anybody but a student or a beginner in the practice of medicine.

L. A. E.

Pellagra Information—Doctors Goldberger and Tanner (Public Health Reports) conclude their interesting inquiries into the cause and prevention of pellagra in these words: "A liberal supply of protein, presumably of good biological quality, does not completely prevent, though it may modify, the clinical picture of pellagra by notably delaying or preventing the development of the distinctive dermatitis. This modifying action may be of an indirect, sparing nature. In the prevention (and presumably causation) of pellagra, there is concerned a heretofore unrecognized or unappreciated dietary factor which we designate as factor P-P. This may be effective with but little, possibly without any, co-operation from the protein factor. Factor P-P may possibly play the sole essential role in the prevention (and causation) of pellagra. Factor P-P is present in brewers' yeast, in milk (on the basis of our experience with fresh meat) in lean beef; it is very low or lacking in dry soy beans, dry cowpeas, butter, cod-liver oil, and canned tomatoes."

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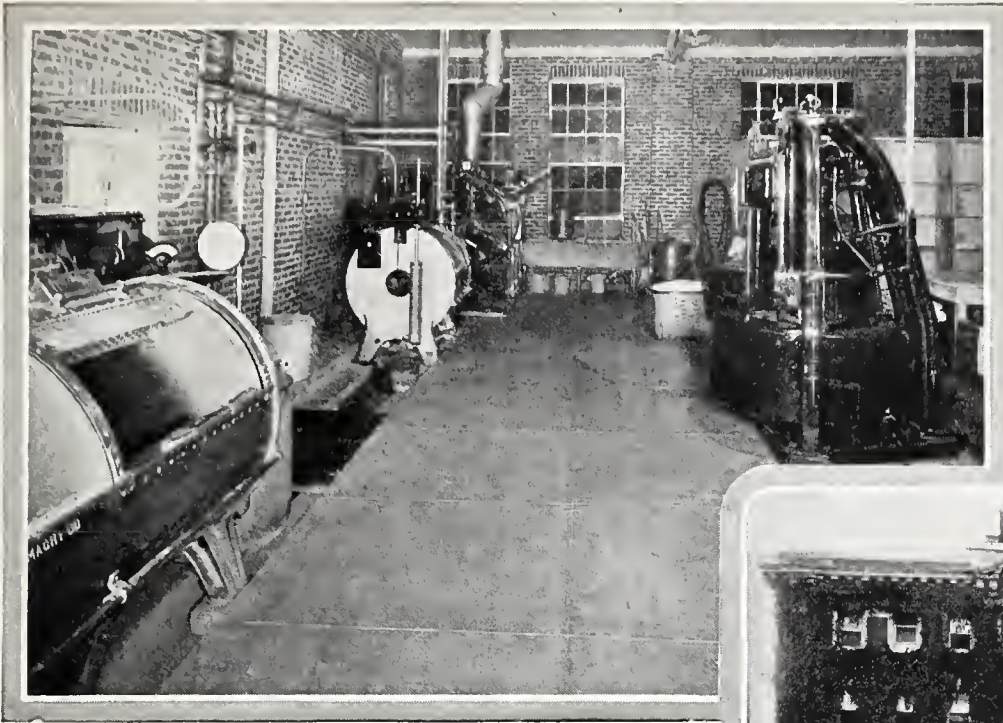
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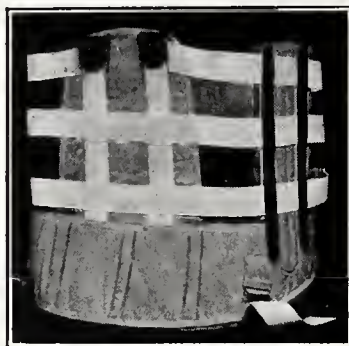
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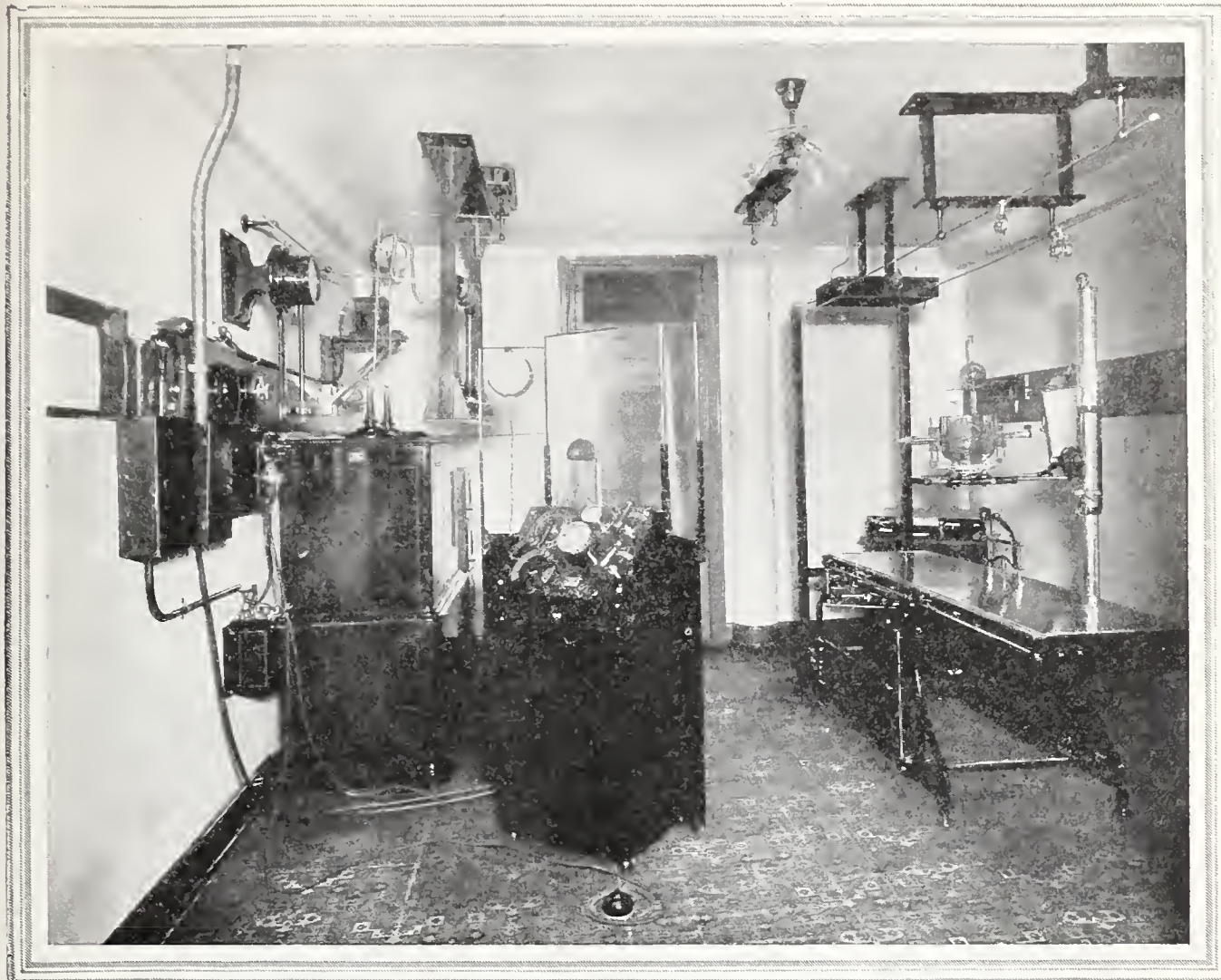
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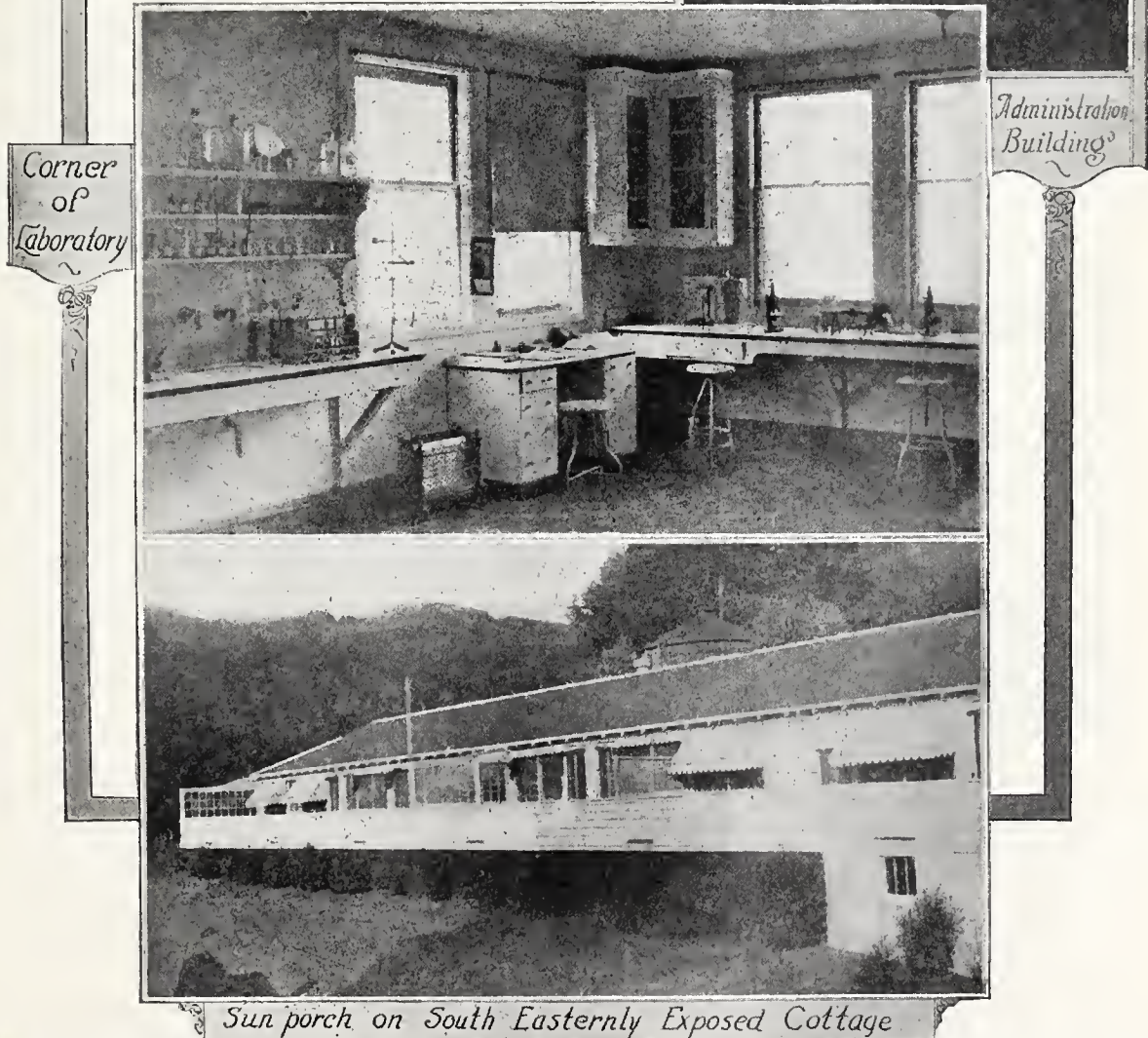
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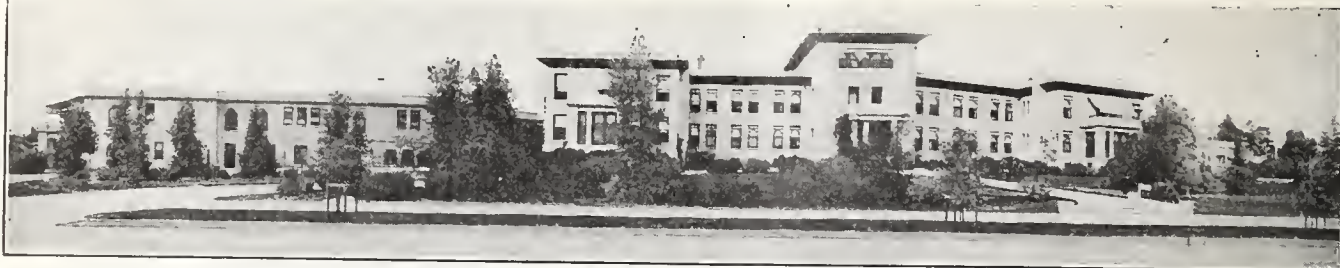
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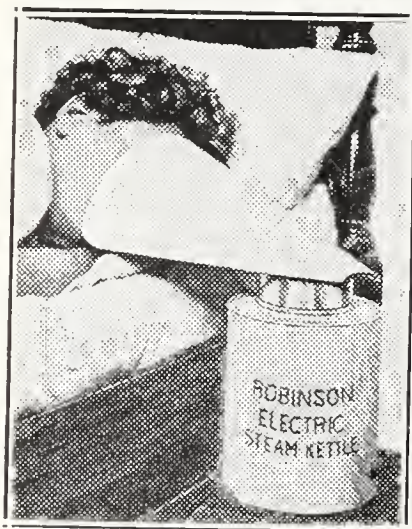
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VOLUME XXIII

APRIL, 1925

No. 4

Subscription prices, \$5.00 (\$6.00 for foreign countries); single copies, 50 cents.

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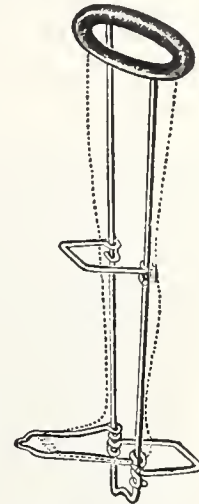
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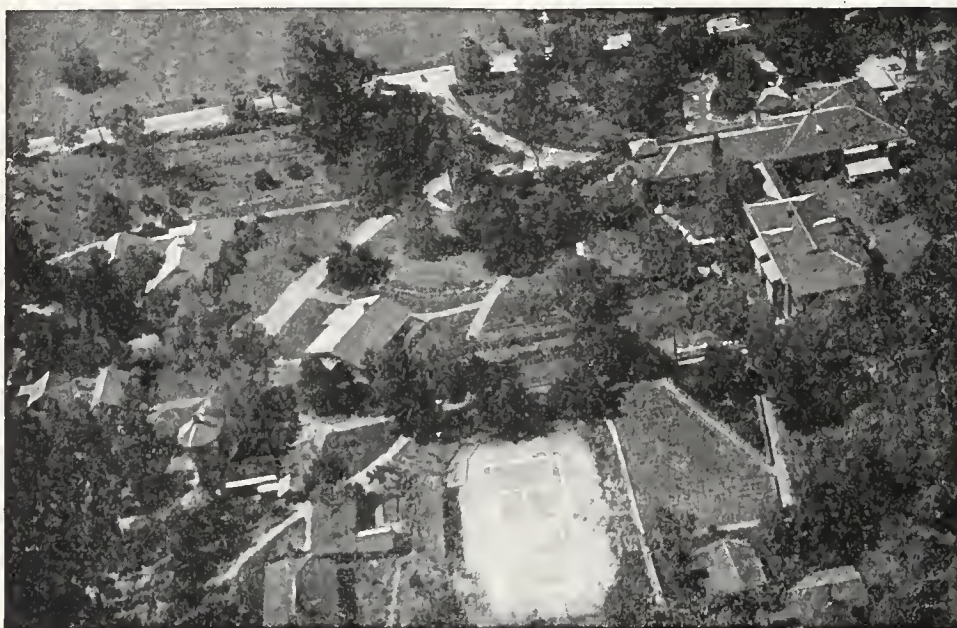
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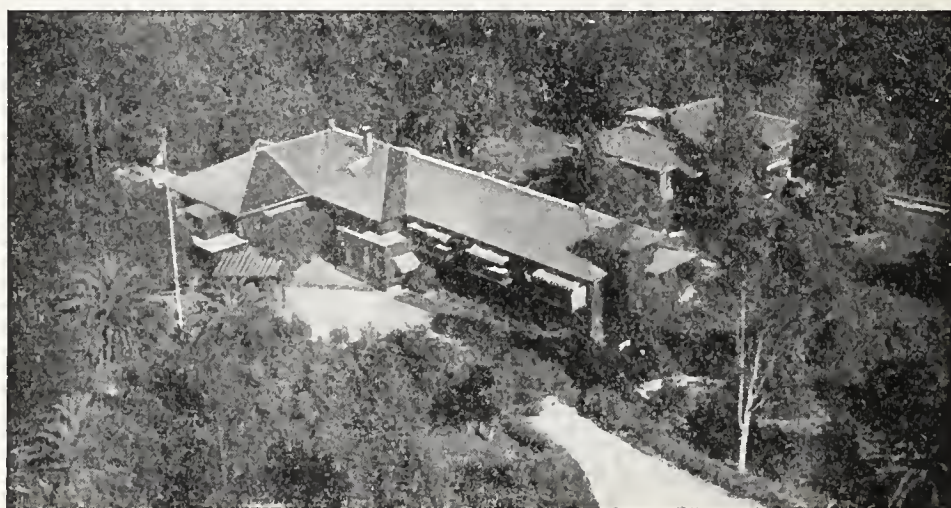
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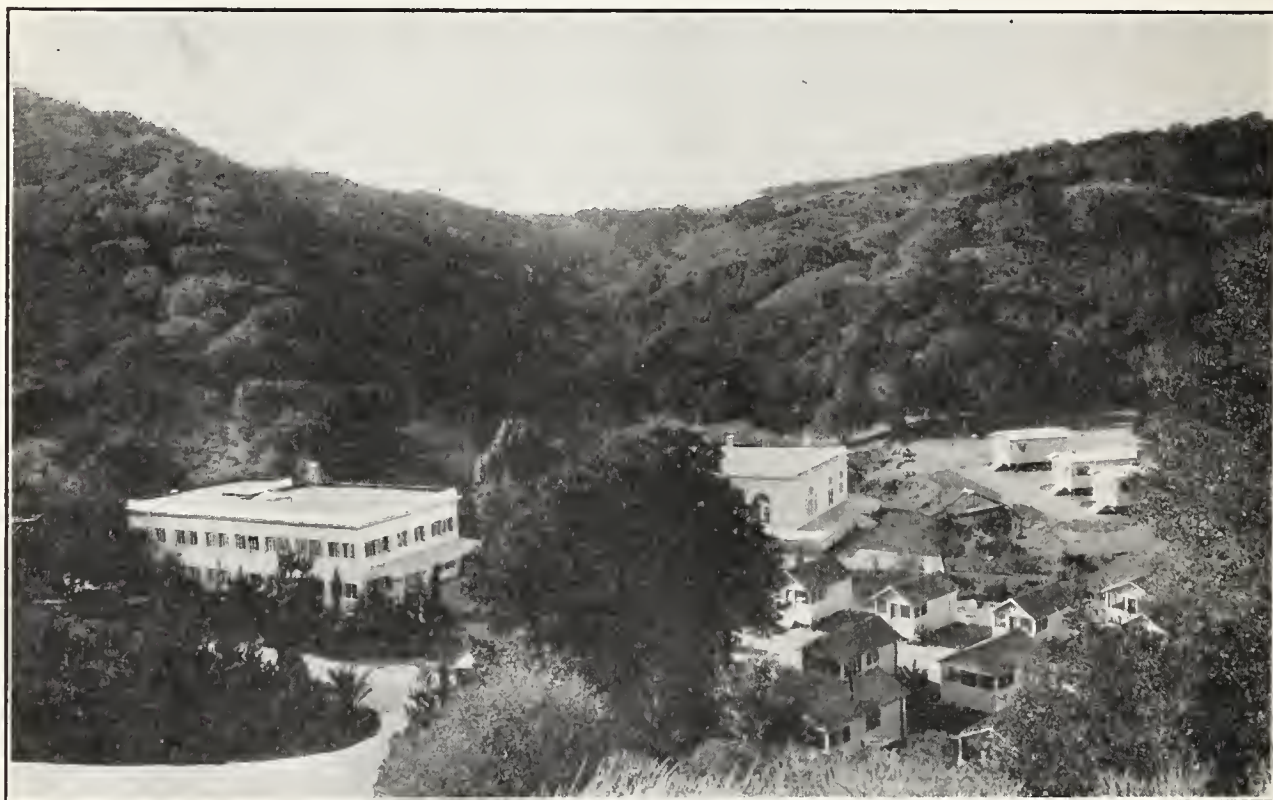
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(Continued on Page 398)

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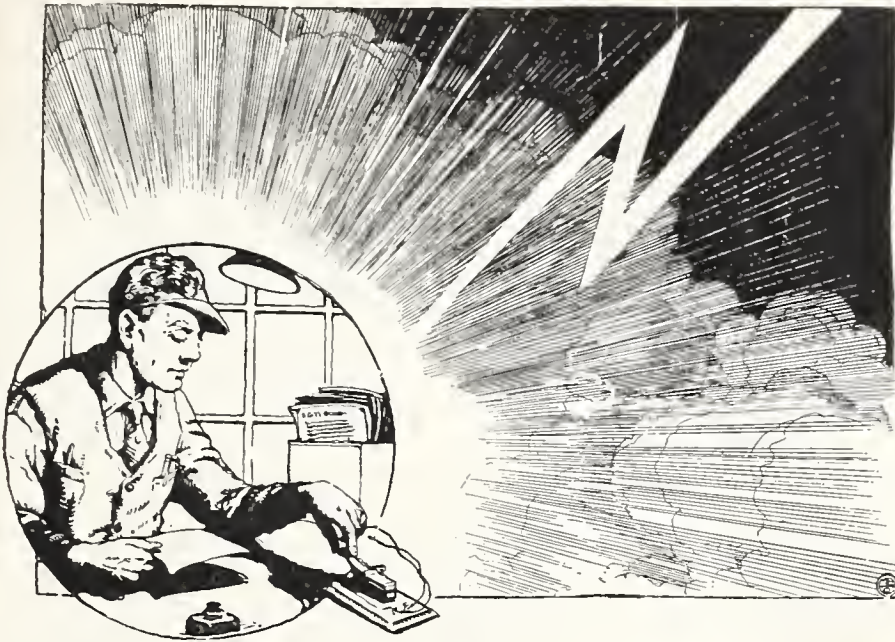
(Continued from Page 396)

dosage and is more convenient and less disagreeable. Parke, Davis & Co., Detroit.

Butyn and Epinephrin—As a result of animal experiments recently reported by Hirschfelder, Backer, and Jennison, "the addition of epinephrin to solutions of cocain and saligenin increases their tendency to cause local edema. This is not the case with procain and butyn." According to New and Non-official Remedies, 1924, the use of butyn for injection anesthesia or for special anesthesia does not appear promising, since its toxicity is materially greater than that of cocain. Butyn is a substitute for cocain in surface anesthesia, as for the eye, nose, and throat; it acts through intact mucosa almost as effectively as cocain; solutions of butyn are non-irritant.—Journal A. M. A., February 28, 1925, p. 699.

The Dick Test—The United States Treasury Department has not authorized the interstate sale of any Dick scarlet fever preparation. The Council on Pharmacy and Chemistry does not accept biologic products until they are licensed by the Treasury Department, and, therefore, has not considered the Dick scarlet fever preparation.—Journal A. M. A., February 28, 1925, p. 699.

School Not Enough—The word "school" isn't enough, according to Angelo Patri. It is too limited, too far away from actual things and every-day practices. *The mistake lies in believing that a child's mind is a clean sheet upon which the schools may write whatever they please. Not so. The mind of a child is a book in which are written the life histories of all his ancestors bequeathed to him as his own life story. The book of his intelligence is sealed behind the walls of flesh. It must stay sealed unless the child himself opens it, and the only way he may do that is through his hands. The only way he may add his chapter to the tale is by his hands.*



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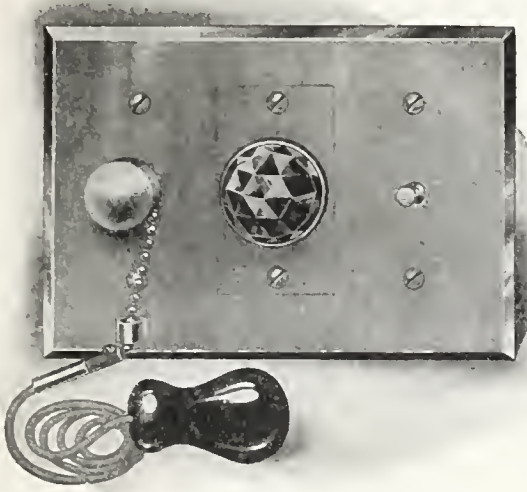
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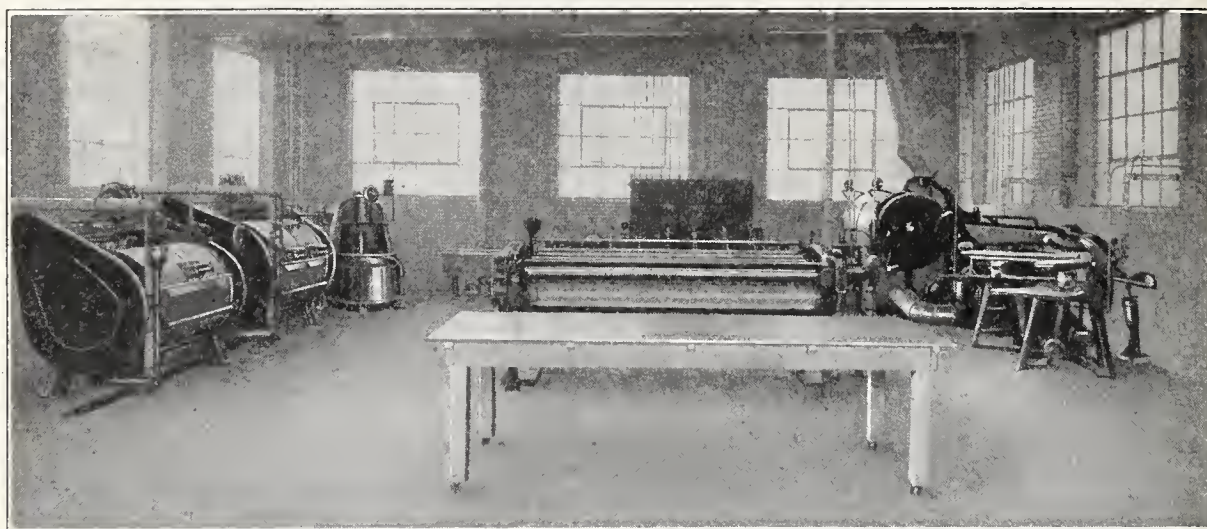
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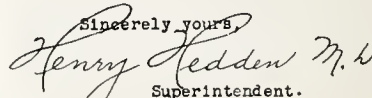
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All books received are promptly acknowledged in this column. Such acknowledgment is the only return California and Western Medicine feels obligated to render in return for the courtesy of the sender. Selected books believed to be deserving of comment will be reviewed solely in the interests of our readers. Our advertising columns are open to publishers of acceptable books for such further statements as they care to make.

Medical Education. A Comparative Study. By Abraham Flexner. New York: The Macmillan Company. 1925.

A Compend of Genito-Urinary Diseases and Syphilis. Including their Surgery and Treatment. By Charles S. Hirsch, M. D., Urologist to the Jewish Hospital; Mount Sinai Hospital, Philadelphia. Fourth Edition, Revised. With 44 illustrations. Philadelphia: P. Blakiston's Son & Co.

The Practical Medicine Series. Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of Charles L. Mix, M. D. Volume IV, Pediatrics. Edited by Isaac Abt, M. D., with the collaboration of Johanna Heumann, M. D. Series 1924. Chicago: The Year-Book Publishers, 304 South Dearborn street.

A Textbook of Practical Therapeutics. With Especial Reference to the Application of Remedial Measures to Disease and Their Employment Upon a Rational Basis. By Hobart Amory Hare, M. D., Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College of Philadelphia; one time Clinical Professor of Diseases of Children in the University of Pennsylvania. Nineteenth Edition, enlarged, thoroughly revised and largely rewritten. Illustrated with 144 engravings and 8 plates. Lea & Febiger: Philadelphia and New York. 1925.

The Physiology of Mind. An Interpretation Based on Biological, Morphological, Physical, and Chemical Considerations. By Francis X. Dercum, M. D., Ph. D., Professor of Nervous and Mental Diseases in the Jefferson Medical College, Philadelphia. Second Edition, Reset. 12mo of 287

(Continued on Page 415)

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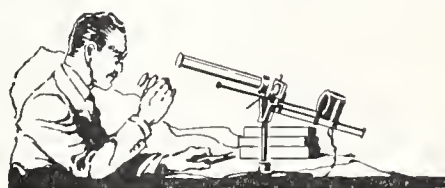
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BOOKS RECEIVED

(Continued from Page 412)

pages. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, \$3.50 net.

The Technic of Local Anesthesia. By Arthur E. Hertzler, M. D., Professor of Surgery in the University of Kansas. Third Edition. With 140 illustrations. St. Louis: The C. V. Mosby Company, 1925.

Selected Medical Papers, Alfred Worcester. Containing eighteen articles reprinted from the writings of Dr. Alfred Worcester, one article from the writings of Dr. Edward R. Cutler, and four sketches by Mr. Russell T. Hyde. Boston: The Four Seas Company, 1925.

Diseases of the Rectum and Pelvic Colon. By Martin L. Rodkin, M. D., New York, Rectal Surgeon, St. Catherine's Hospital; Associated Surgeon, Broad Street Hospital, etc. Illustrated. Second Edition, Revised and Enlarged. New York: E. B. Treat Company, 45 East Seventeenth street, 1925.

Heredity in Nervous and Mental Disease. An Investigation by the Association for Research in Mental and Nervous Diseases. New York: Paul B. Hoeber, Inc., 67-69 East Fifty-ninth street.

Tumors of the Spinal Cord. By Charles A. Elsberg, M. D., Professor of Neurological Surgery, Columbia University, etc. New York: Paul B. Hoeber, Inc.

Principles of Surgery for Nurses. By M. S. Woolf, M. A., B. Sc., M. R. C. S. (Eng.), L. R. C. P. (London), Instructor in Surgery, University of California Hospital, San Francisco. 12mo of 350 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, \$3 net.

Report on Second International Congress of Military Medicine and Pharmacy. Rome, May-June, 1923. By Commander William Seaman Bainbridge, M. C., United States Naval Reserve Forces, member of permanent committee delegate from the United States. Reprinted from The Military Surgeon, December, 1924, January and February, 1925. Washington, D. C. 1925.

The Modern Hospital Year-Book. Fifth Edition, 1925. An annual reference volume on the building, equipment, organization and maintenance of hospitals and allied institutions. Also a current purchasing guide to hospital requirements. Compiled, edited, and published annually by The Modern Hospital Publishing Company, Inc., Chicago.

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CALIFORNIA AND WESTERN MEDICINE

VOL. XXIII

APRIL, 1925

No. 4

SPECIAL ARTICLE

THE PRESENT STATUS OF ELECTROCARDIOGRAPHY IN THE DIAGNOSIS, PROGNOSIS AND TREATMENT OF HEART DISEASE

By WILLIAM J. KERR, M. D., San Francisco

HISTORICAL.

The normal electrocardiogram.

*Value of electrocardiogram in diagnosis.
Some of the abuses of the method.*

*Recognition of disordered mechanisms of
the heart without the aid of graphic methods
is possible in most instances.*

*Conditions which are shown only by the
electrocardiographic method.*

*Value in prognosis and treatment must
await further study and experimental work.*

*The ultimate goal is to learn what the in-
strument may teach us and then to dispense
with its use for routine work.*

Current was passed through the wire, which was drawn from side to side by the poles of the magnet, while a ray of light from a lamp threw a shadow of a minute portion of the moving wire on a moving strip of photographic paper in the form of an undulating dotted line. Einthoven's invention is an adaptation of this instrument to the study of heart disease, and, as originally constructed, has remained the standard instrument for clinical work.

Einthoven's instrument makes use of a delicate silvered quartz filament or fiber which can scarcely be seen by the unaided eye. It is suspended between the poles of a powerful electro-magnet. Any current passing through the conducting filament, which is placed in a magnetic field at right angles to the magnetic current, causes the filament to oscillate forward and backward according to the ascent or descent of the current. The amount of oscillation depends upon the strength of the magnetic field, the strength of the action current and the resistance in the filament. The movements of the filament, activated by cardiac action, are recorded by projecting its shadow, magnified by a high-power microscope, on a moving photographic plate or film. The time interval is recorded by photographing the shadow of a rotating spoked wheel activated by a tuning fork. The electromagnets are fed by an accumulator battery. The source of light was originally provided by a powerful arc lamp with a water chamber interposed to prevent injury to the filament. Many clinicians today employ an incandescent lamp (Point-O-Lite), which gives a constant beam of brilliant light. The action current originates at the heart and is drawn off by non-polarizable electrodes, placed on convenient and suitable parts of the body. Several types have been devised, but the one described by Cohn, and perhaps the most suitable, consists of a sheet of lead foil 7.5 cm. wide by 22 cm. long and covered by a strip of rubber sheet 9 cm. wide by 30 cm. long. The strips are fastened together near one end by a brass screw which carries the binding post. Warm salt solution is used as the electrolyte. The electrode is applied over gauze soaked in the solution after preparing the skin, to provide satisfactory contact. The current passing through the filament represents, not only the cardiac action currents, but also the difference of potential between the parts of the body to which the electrodes are applied.

In the body there are action currents of other tissues besides the heart muscle which produce variations in the potential. To offset this, a battery current is introduced which neutralizes this so-called skin current. The tension on the filament is adjusted so that each millivolt of current causes an excursion of one centimeter on the plate. This is the Einthoven standard for comparison, which is generally used in clinical work.

Briefly, then, the complete apparatus consists of (1) a string galvanometer, including an achromatic

THE credit for the introduction of the string galvanometer into the field of clinical medicine should be given to Einthoven. Long before his time Matteuci (1843) had discovered that electromotive force emanated from the heart itself. This was confirmed in 1849 by DuBois Reymond by the use of a very delicate galvanometer. Further confirmation came independently by Kölliker and Remak in 1850. Müller and Kölliker showed later (1850-1856) that a special current was developed in the auricles during their contraction. The invention of the capillary electrometer by Lippmann in 1873 led to the construction of the hypersensitive capillary electrometer. Waller, in 1887, suggested that there was a ratio between the contracting force of certain heart muscles and the current that emanates from them. The Ader registration machine or recorder, described in 1887 and used for submarine cable work, consisted of a long vertical wire stretched in a magnetic field.

microscope; (2) a constant source of brilliant light; (3) non-polarizable electrodes; (4) an accumulator battery for the magnetic field; (5) an apparatus for testing the susceptibility of the galvanometer; (6) an apparatus for compensating the "skin current"; (7) a photo-registering apparatus; (8) time-marking apparatus.

Electrodes are usually applied at three points, namely, right and left wrists and left calf. By a combination of these in pairs, we derive the three leads which are related to the action currents in different parts of the heart muscle, and the differences in potential established between the connections at the extremities. Thus:

Right arm and left arm constitute lead I.

Right arm and left leg constitute lead II.

Left arm and left leg constitute lead III.

From these leads the direction, amplitude, and time of the cardiac action currents can be expressed graphically, and a study of these constitute *electrocardiography*.

While the apparatus and its operation appears complicated in description, little difficulty is encountered in acquiring the necessary technical skill for manipulation. Greater skill and study are necessary in interpreting the three curves or leads which constitute the *electrocardiogram*. The *normal electrocardiogram* consists of a series of deflections which are associated with the events of a cardiac cycle, beginning with the origin of the impulse at the sino-auricular node and traversing the auricle, auriculo-ventricular node, ventricular conduction system and ventricular muscle and resulting in contraction. The deflections apparently result from electrical changes accompanying conduction of the impulse and contraction of the muscle. The deflections or waves are grouped according to their occurrence in the cycle; thus P waves are associated with auricular activity and the Q, R, S, and T waves accompany ventricular activity. The electrical changes in the heart precede the actual contraction of the muscle by a brief period. It is not necessary to go into the controversies which were waged about the causation of the different deflections in the normal cardiac cycle. Experimental work is helping to clear up many of the debated points. The final phase, known as the T wave, is the least well-understood deflection of the normal electrocardiogram. The original work of Einthoven (1900-1907), the subsequent studies of Frank and Hess, Eppinger and Rothberger, Kahn, Hoffman, Barker, Kraus and Nicolai, Eyster and Meek, and the brilliant researches of Lewis and his associates, laid the foundations for our present knowledge of the electrocardiogram in health and disease. Since 1910 the literature dealing with electrocardiographic studies has assumed voluminous proportions. A list of the more important contributions is appended. The recent studies have dealt largely with the applications of electrocardiography in diagnosis, prognosis, and treatment.

There can be no question but that the introduction of the electrocardiograph into experimental and clinical medicine has cleared up much of the confusion about the heart. These correlated studies shall serve for all time as one of the most brilliant applications of experimental physiology to clinical

medicine. The cardiac irregularities, one by one, have been studied and described. Heart-block, which was fairly well understood by experimental studies and clinical observations with the polygraph, has been further clarified by electrocardiographic work. This is particularly true of blocking of impulses or defective conduction in the bundle of His, its branches and its arborizations in the ventricles. In the course of extensive studies, the limitations of assistance which we may secure from the electrocardiographic method have been delineated. There are patients who are suffering from obvious cardiac failure who show no deviations from the normal so far as the electrocardiogram is concerned. Patients with extensive valvular disease may show normal electrocardiograms. Some of the more severe cardiac manifestations, such as pulsus alternans, which are demonstrable by the polygraphic or sphygmomanometric methods are shown only rarely on the electrocardiogram. However, in such cases the T waves frequently show abnormalities which have come to be associated with grave cardiac disorders.

VALUE IN DIAGNOSIS

At the outset it should be stated that one who is skilled in electrocardiography and has carefully studied the associated clinical manifestations of disordered action of the heart seldom needs to make use of the electrocardiographic method in diagnosis. This has been made possible by the brilliant observations of Mackenzie and others with the polygraph, and extensive studies by Lewis and numerous physiologists and clinicians with the electrocardiograph. Such a state of affairs does not necessarily condemn the electrocardiographic method as having no place in clinical medicine. Nor does it mean that such an instrument should be restricted to the research laboratories and the medical schools. The ultimate goal in the use of all instruments of precision, as Mackenzie and others have maintained, is to dispense with their use when we have learned all that they may teach us. This stage, however, has not been reached with the electrocardiograph in diagnosis and less so in prognosis and treatment.

Practically all Class A medical schools are today providing some training in the interpretation of electrocardiograms. An increasing amount of instruction is being given in the methods by which disordered mechanisms may be recognized, without instrumental aid. This is highly desirable for those who are entering general practice and may not be able, for many reasons, to carry on their instruction in graphic methods at the bedside. The polygraph, which is portable, may replace the electrocardiograph to some extent, and should be a part of the armamentarium of those doing internal medicine. Some provision must be made for those physicians who have not been instructed in instrumental methods or the interpretation of the findings and the clinical symptoms and signs which they present in the patient. A considerable proportion of patients who are sent for electrocardiographic study present normal variations or simple irregularities which could be readily recognized by the clinician. The patients with such disorders should be spared the expense and the fear that they are suffering from heart disease.

At times the reassurance that may come from the graphic registration and demonstration of a normal or inconsequential finding may be of value in dealing with certain types of patients, but this is seldom necessary for the able clinician.

Experience has repeatedly shown that clinicians should seldom rely on laboratory findings for the diagnosis in any given case. This is also true of the results which may be obtained with the so-called instruments of precision. In rare instances instrumental methods may reveal unsuspected conditions. In general, however, there are symptoms or signs which reveal to the careful observer the true nature of the disorder. Although electrocardiography has helped to place our present knowledge of cardiac disease on a firmer basis, we should not lean too heavily on the results it may show. There are times when we may be misled by normal electrocardiographic findings when the patient is shown to have obvious heart failure. On the other hand, we may err in assigning a grave prognosis in a case where the electrocardiogram shows extensive damage of the heart. It should be remembered that the prognostic significance of certain abnormalities is drawn from average experience, based on statistics subject to wide individual variations.

There are certain normal variations of the electrocardiogram which must be kept in mind. The shape of the curves in the three leads is constant for the individual for long periods of time, barring disease, and may, therefore, be of value in identification. The shape complexes may vary with respiration or changes in position of the heart, produced by displacements, etc. In the case of complete transposition of the viscera, the complexes in Lead I are inverted. None of these call for electrocardiographic confirmation, although they must be borne in mind in interpreting the graphic records.

Inasmuch as the ultimate goal in medicine is to dispense with instrumental aid, when we have learned all that it may be able to teach us, it would be advisable to attempt an exposition of the conditions where such aid is and is not necessary. In the paragraphs which follow, an effort will be made to show the present status of electrocardiography as an asset in clinical medicine. Simple methods of detecting disorders of the heart which require only sight, hearing and touch will be suggested.

The *irregularities* of the heart often confound the physician. The commonest of these is *sinus arrhythmia*, which is of frequent occurrence in children and young adults. Usually the variation in rhythm is associated with respiration, with an increase of rate during inspiration and a slowing during expiration. A deep breath, held, will often cause a marked slowing of the heart. Exercise or anything which speeds up the heart tends to eliminate the irregularity. A study of the jugular pulse in the neck usually shows the three normal waves. This irregularity is of no clinical significance, can usually be differentiated without instrumental means, and yet is frequently mistaken for a serious disorder. Extrasystoles may be associated and suggest auricular fibrillation. *Sino-auricular tachycardia* is a simple tachycardia associated with exercise, febrile and toxic conditions, and is usually regarded in its proper light. *Sino-auricular*

bradycardia with a rate of 50-60 may be a normal finding to confuse with heart-block. A study of the jugular pulse and a general examination of the patient will usually make the diagnosis. *Extrasystoles*, ectopic beats, or premature beats are also common, especially in young people, and usually have no great significance. They are often attributed to toxic influences or irritations arising outside the heart. In persons past middle life they are often associated with more general cardiac disease, and when arising from multiple foci, or when followed by alternation of the pulse, have more serious significance. When associated with muscle damage they may be forerunners of the tachycardias, such as auricular fibrillation, auricular flutter, or others. Extrasystoles arising in the auricles usually alter the rhythm of the heart, the new rhythm taking its time from the time of the inception of the extrasystole. Those arising in the ventricle usually do not disturb the underlying rhythm which takes its time interval from the last normal beat preceding the extrasystole. Extrasystoles may rarely be interpolated; that is, may fall between two normal beats without altering the rhythm. By listening to the heart, the extrasystole can usually be detected, which may not give rise to a perceptible pulsation at the wrist. This should be differentiated from dropped beats which belong properly under heart-block. By carrying the time with the foot, the changes in the underlying rhythm may be studied. By watching the jugular pulse in the neck, the presence or absence of the "A" wave may help to differentiate an auricular from a ventricular extrasystole. Extrasystoles frequently come in a definite sequence; that is, every second, third, fourth beat, and so on. If so, we may have a pulse at the wrist suggesting alternation, a bigeminal pulse, a trigeminal pulse, and so on. Exercise or anything which will increase the rate of the heart usually causes extrasystoles to disappear and give way temporarily to a regular rhythm. If the myocardium is severely damaged, extrasystoles may be increased by exercise. Electrocardiograms are of value in localizing the point of origin of extrasystoles and, when arising from multiple foci, would speak for grave disturbances. Multiple ventricular extrasystoles, associated with defective conductivity, may be forerunners of ventricular tachycardia and ventricular fibrillation, and indicate a bad prognosis. Chloroform anesthesia would be contra-indicated. Adrenalin should not be administered alone or in conjunction with chloroform anesthesia. By a careful study of the patient, the type and seriousness of extrasystoles can usually be determined. *Nodal rhythm*, where the impulse arises at the auriculo-ventricular node and passes in both directions, causes marked disturbance in the cardiac mechanism. Such a rhythm may be detected by a study of the jugular pulse. The rhythm is usually regular and rapid, but may be slow. The "A" wave in the jugular pulse may be present, coming close to the "C" wave, or may be submerged in it. The electrocardiogram gives a clear interpretation of this disorder, showing the site of origin of the impulse in the junctional tissues.

One of the commonest irregularities is *auricular fibrillation*. An electrocardiogram is seldom required to diagnose this condition. The absolutely irregular

rhythm, variation in force and volume, generally rapid rate (90-160), deficit between apex and pulse rate, absence of regular "A" waves in the jugular pulse, increase of the irregularity and breathlessness with exercise, and response to digitalis or quinidine differentiate this irregularity from others. A fibrillation, where partial or complete block is present, may be confusing. An auricular flutter, if showing an irregular ventricular rhythm, may simulate auricular fibrillation, but usually an underlying rhythm will be detected. Auricular fibrillation with slow undulating fibrillary auricular waves in the jugular pulse may suggest auricular flutter. The electrocardiogram is an aid in diagnosing these borderline conditions and in assessing the associated myocardial damage when taken in conjunction with the general clinical picture. With auricular fibrillation there is usually associated valvular or degenerative disease or toxic conditions, such as thyroid disease.

Auricular flutter, which is closely allied to auricular fibrillation, usually has a ventricular rate of 90 to 150, but may be above or below this rate. The rhythm is usually regular, but may be irregular. The auricles are usually beating about 300 times per minute and the ventricles fail to respond to each second, third or fourth beat because some of the ectopic impulses are blocked after passing through the auricles. The clinical symptoms are usually pronounced. The heart-sounds suggest a recurring irregularity or may be regular. The jugular pulse shows rapid regular "A" waves at about 300 per minute, with superimposed "C" and "V" waves. Vagal pressure usually causes a marked slowing of the ventricular rate when the "A" waves in the opposite jugular may be clearly noted. Exercise may increase the block and slow the ventricular rate. Quinine derivatives apparently have little effect on auricular flutter, but ample doses of digitalis may bring about auricular fibrillation which may then change to a regular rhythm if digitalis is withdrawn. Electrocardiograms are useful in exact diagnosis of the irregularity and in estimating the general muscle damage. Mitral disease and degenerative myocardial diseases are frequently associated. *Auricular tachycardia*, which is usually paroxysmal in type, generally shows a rate of 160-280 per minute. The impulses arising outside the pacemaker at the sinus take the center of the stage for a time and the heart beats rapidly and regularly. The clinical symptoms are generally marked, leading to anxiety on the part of the patient, family, and physician. Nothing can be determined at the heart except the rapid rate and regular rhythm. The jugular veins are distended and distinct waves are not easily made out. Anything which stimulates the vagus nerves may terminate the attack, in which case the regular, normal rhythm may be resumed in a spectacular manner. Quinidine by mouth or quinine intravenously may cause prompt cessation of the attack, which in itself is rarely fatal.

Any one of the disorders, namely, auricular fibrillation, auricular flutter and auricular tachycardia, may be paroxysmal in nature and, as such, probably constitute many attacks of *true palpitation* described by patients. Inasmuch as the attacks terminate promptly in a great majority of cases, clinicians

should be able to differentiate them without the aid of instruments because of the divergent prognostic and therapeutic features. Electrocardiograms show the location of the abnormal pacemaker in the latter two conditions.

Ventricular tachycardia is less common than auricular tachycardia, usually paroxysmal, and is a grave condition, occurring more often in extensive myocardial disease such as seen with coronary occlusion. The disordered rhythm with rapid rate and general condition of the patient leave little doubt in the mind of the clinician of the seriousness of the patient's malady. This condition probably precedes *ventricular fibrillation* which, if permanent, is not compatible with life. In both of these conditions, electrocardiograms are of value in instruction to complete the list of possibilities.

Heart-block may be noted in a variety of forms. *Sino-auricular* block is comparatively rare, where overstimulation of the vagus may cause the entire heart to stand still. Upon listening to the heart, no sounds would be heard and there would be no pulsations in the neck during the pause. This form should be differentiated from complete auriculo-ventricular block where the auricles continue to beat. Electrocardiograms may be necessary to aid in the decision. *Delayed conduction time* usually precedes the more severe forms of heart-block. The impulse from the pacemaker is delayed in its course from the auricle to the ventricles. A study of the jugular pulse will usually show that the "A" wave precedes the "C" wave by an interval greater than normal. Pressure on the vagus may increase the block. In many cases there are also dropped beats, where the ventricle fails to respond to an impulse coming from the auricles. The pause, indicating absence of ventricular contractions, may be detected by auscultation at the apex and noted in the jugular pulse. The pauses may occur rhythmically, tending to confuse with extrasystoles. An electrocardiogram is seldom necessary to differentiate, but is of value in showing the associated changes in the ventricular muscle. *Complete heart-block* may be permanent or paroxysmal in nature, as is seen in Adams-Stokes syndrome. The ventricles are usually beating at a rate of 20-50, but may show wider variations. The auricles are usually regular, but may show auricular fibrillation or flutter or other irregularities. There is no association between the rhythms in the upper and lower chambers of the heart. If the ventricular rate is slow, the auricles may be heard beating at a more rapid rate at the base of the heart. The jugular pulse usually shows the independent rhythm of the auricles; and there is usually evidence of degenerative disease in the heart. Syphilis, acute infections, and congenital lesions may be concomitant. By a careful study of the clinical findings, instrumental aids are not often necessary to decide as to the existence of complete heart-block. The original descriptions of Stokes and Adams are examples of the value of careful clinical observation. The blocking of impulses, which may occur in the bundles of His and its branches, and arborizations produce electrocardiograms which are, as yet, the least understood of all the abnormal mechanisms. The lesions which bring about such changes in the conductivity and contrac-

tility of heart muscles are often diffuse and variable, and the electrocardiograms produced thereby differ from characteristic curves shown by experimental study. We may not be able to demonstrate histologically the lesion which produces a given abnormality in the electrocardiogram. Clinically, we are not able to differentiate between a blocked impulse in the right or left branch of the bundle of His, nor are we able to state definitely that there is widespread interference with the impulse around the papillary muscles or beyond in the ventricular walls. The electrocardiographic method is invaluable in estimating the significance of some of these grave disturbances. The interference of the conduction of the impulse in the ventricles will be shown. The shape and duration of the "Q, R, S" complex and the shape and deviation of the "T" wave will give us an idea of the extent of damage. The general condition of the patient may suggest a grave cardiac condition. The poor quality of the first sound or the split first sound at the apex of the heart may be the only abnormality noted on general examination. Pulsus alternans may be noted when taking systolic blood-pressure readings and rarely by feeling the radial pulse in marked cases. Polygraphic tracings may reveal constant alternation or only after extrasystoles in such cases, and would be a help in diagnosis and prognosis.

The nature of *pulsus alternans* is not fully understood, but of its seriousness there can be no doubt. This is one condition where the electrocardiographic method gives us very little help, unless we can show changes in the ventricular complex which, in themselves, are known to be of equal seriousness and significance.

In *irritable heart*, strong respiratory cyclic oscillation of the electrical axis with sinus arrhythmia may be of assistance in making the diagnosis.

Relative *hypertrophy* or *preponderance* of one side of the heart over the other may be shown by the electrocardiographic method. The findings may be of value in a study of congenital or valvular heart disease, hypertension, and nephritis, but should be used only in conjunction with the general clinical and roentgenographic findings. Changes in the "P" waves may indicate unequal hypertrophy of the auricles.

In considering the disordered mechanisms of the heart from a diagnostic standpoint, it should be kept in mind that combinations may occur which make accurate diagnosis almost impossible without the assistance which the electrocardiograph may render.

VALUE IN PROGNOSIS

The electrocardiographic method has proven of great value in prognosis. This is largely due to the fact that recognition and classification of disordered mechanisms by this method enabled us to study the various groups over a period of years. Apparently, all the possible cardiac disturbances have been observed experimentally and clinically. As a general rule, individuals who show multiple disturbances in the normal cardiac mechanism, as shown electrocardiographically, have a grave prognosis. Those who show simple extrasystoles or sinus arrhythmia

have an excellent prognosis. Paroxysmal auricular tachycardia is usually not of a serious nature. Auricular fibrillation is often paroxysmal and not serious, but when permanent is usually attended by increasing disability because of the frequent association with a failing heart muscle. Auricular flutter parallels auricular fibrillation. The finding of bundle-branch block or arborization block, which may be shown only by the electrocardiogram, usually indicates a grave prognosis unless syphilis be the etiological factor. Changes in the "T" wave, especially inversion of the "T" wave in Lead I, Leads I and II, or Leads I, II, and III combined, are known to be of serious prognostic significance, providing digitalis has not been recently administered. Ventricular tachycardia and ventricular fibrillation, which can be definitely diagnosed only with the electrocardiograph, are grave conditions, the latter usually being observed only in the dying heart.

VALUE IN TREATMENT

As in prognosis, the value of the electrocardiographic method in treatment of heart disease is still in the academic and developmental stage. The action of certain drugs like digitalis, strophanthin, quinine derivatives, arsenicals, atropine, physostigmine, adrenalin, potassium salts, muscarine, aconitine, and others is being better understood because of careful experimental and clinical electrocardiographic studies. The effect of digitalis on the "T" wave may be studied during treatment to insure the desired therapeutic effects, or the observations may be used as a method of standardizing the drug. Before giving quinidine to restore a fibrillating auricle to a normal rhythm, it is well to know something about the ventricular muscle. If the patient is suffering from extensive myocardial damage and congestive heart failure, it would be unwise to proceed with such treatment until the congestion had been cleared up with rest, depletion, restriction of fluids, and digitalis. It would probably be unwise to employ quinidine if the heart muscle shows extensive damage. The electrocardiogram would be of value in making our final decision about treatment. In heart-block due to syphilis, the progress of the treatment with arsenicals and iodides can be readily shown by electrocardiograms. Patients with heart-block who are taking atropine may have the progress of treatment carefully checked by this method. As time goes on, no doubt other avenues of study with the electrocardiograph in therapeutics will be revealed and older methods will be abandoned as a better clinical understanding is established.

SUMMARY

The electrocardiographic method has served a useful purpose in clearing up much of the mystery concerning disordered mechanisms of the heart. The close parallelism between experimental and clinical observations affords the most brilliant example of applied physiology up to this time.

The electrocardiograph, with such modifications as may be made, will remain an instrument of great value to the investigator. Its permanent place in medical education is assured, for study and research

and in the instruction of successive classes of students.

All medical students should be taught the interpretation of the commoner types of electrocardiograms, and they should be instructed to recognize most of the disordered mechanisms of the heart without the aid of any instrument of precision.

Practitioners who have not had the advantage of instruction in the use of the instrument and what it reveals should make an effort to learn the commoner types of abnormalities. Polygraphic study will be of assistance if an electrocardiograph is not available.

The electrocardiogram serves as a permanent record for comparison and study.

The value of the electrocardiographic method in prognosis and treatment is great, but will not be fully realized for many years to come.

Finally, it should be remembered that the electrocardiographic method is an aid in clinical medicine to confirm the findings of the physicians, and to stimulate him towards improved methods of observation.

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Serologic Significance of Streptococci in Arthritis and Allied Conditions—In using active serum, R. Burbank and L. G. Hadjopoulos, New York (*Journal A. M. A.*), have developed a technic for bacterial fixations, in the main of the streptococcus types, whereby various arthritic and rheumatoid conditions may be classified serologically into three major groups: Arthritis reacting to hemolytic streptococci and belonging to the iso-atrophic class. This type in pure form is periarticular. Arthritis reacting similarly to hemolytic streptococci, but of different fixing properties. This type is aniso-atrophic or deformans. Arthritis reacting to streptococci of the *S. viridans* type and belonging to the osteoarthritic or productive form. The bony change is often a very early manifestation in this group, and is demonstrated by crepitus and by roentgen ray. The majority of arthritic cases that are not arrested or cured early in the course of the disease have a tendency to undergo further changes leading to mixed types. Thus, in an acute exudative periartthritis or in an arthritis deformans, the bony parts gradually may become involved and give rise to a mixed serologic picture. Similarly, in a chronic productive arthritic case, acute tonsillitis, or some other hemolytic infection may engraft a synovial (hemolytic) flare-up on a chronic hypertrophic joint. A fair percentage of arthritic patients, especially those suffering from colitis and chronic constipation, have a marked tendency to effect complement fixation in certain strains of non-hemolytic streptococci isolated from the intestinal tract of similar arthritic cases. This type of organism seems to be a transition form of streptococcus hemolyticus, with certain properties lost through secondary intestinal implantation. Certain pathologic conditions have long been known clinically to be precursors of arthritis. Serologically, we have confirmed these clinical observations. In controlling the value of the test in normal cases, the possibility of the presence of some masked focus of infection must be considered. With this point in mind, the test is not diagnostic for arthritis alone, but is diagnostic of a wide group of acute and chronic infections that give rise to anti-streptococcic bodies in human serums.

CONDITIONS, ESPECIALLY PREVIOUS PATHOLOGICAL CONDITIONS, WHICH INTERFERE WITH RESULTS IN INDUSTRIAL INJURIES

By S. J. HUNKIN, M. D., *San Francisco*

Previous conditions, arising out of earlier injuries or already existing diseases, may and often do materially modify results obtained after industrial injuries. Outside of osteo-arthritis and probably the major fraction of even this, the most important cause for previously existent structural pathology of the working man, lies in the long continued exposure to the elements, the faulty, oftentimes necessary, positions, the frequently repeated minor injuries occurring perhaps over a great many years.

The last accident is oftentimes not the one important factor in the disability.

DISCUSSION by J. Rollin French, *Los Angeles*; J. L. Pritchard, *San Jose*; Frank M. Mikels, *Long Beach*.

A PATIENT, beneficiary under the Industrial Accident law, came to see me regarding some patches of eczema on his right lower leg which, he alleged, came from a plaster splint applied by me more than a year and a half before and for which he claimed compensation. He exhibited several patches of a weeping eczema on his right lower leg. I had examined this man on an average of once a week for many months up to some two or three weeks previously, and knew during this time he had no suggestion of eczema. While examining the leg, I noticed a stain on the other stocking and asked him if he had any eczema on the left leg. He denied the allegation, but when I pulled down the other stocking, I found a patch of eczema about as big as a silver dollar. This particular patient came under my observation about one and a half years ago with a mal-posed fibrous union fracture of the upper right femur. We noted at that time a deformity just below the right knee which he said was from an old fracture. We also noted a mal-united overlapping fracture of both bones of the lower third of the right leg which he said dated from a fracture some fifteen to eighteen years ago. At the time he came under my observation he had a peculiar tumorous growth around this mal-united fracture which had given rise to the suspicion of sarcoma. He has made a very good recovery; has good union, although radiographically the recession of the old tumor suggests a duplication of the repaired shaft; he has practically normal motion in the hip-joint; and has a flexion of from 115 to 120 degrees in the knee, with a shortening of between two and three centimeters. He now claims compensation for lessened motion in the knee, a shortened leg, and an eczema of one leg (having it on both), all as a result of the last accident. It is apparent to any man having experience with fractures that the previously existent overlapping fractures in two places must of necessity have given a shortening probably equal to what he at present has. It is also evident that a fracture with deformity within a centimeter or two of the knee would lessen the motion of that knee in some degree. I shall be interested in what compensation will be given. All of you who deal with such cases must have an idea of how much his present disability, including the eczema on one leg, is due to the accident in question,

and must ask yourselves "how much did the previous pathology modify the result obtained after the last accident."

At present there are under my observation two men, the conditions of whom are closely similar: the one a state compensation case, and the other drawing compensation from another insurance company. Each one received a minor injury to the heel—I say minor because good and repeated radiograms, before they came under my observation and afterwards, disclosed no evidence of injury. They both present spurs and inflamed bursae. Both show definite arterial vascular changes, and the one has a Wassermann XXX. The one has lues with a probable Neisser symbiosis, and the other has a definite Neisser with a probable spirochete symbiosis. Similar injuries sustained by a normal individual would probably have caused soreness, possibly a little lameness for a few days—at the outside say for two or three weeks. In both of these cases the motions of the ankle-joint and tarsus are practically normal; yet each man complains of pain, marked disability out of all proportion to the evident pathology, and both are definitely intent upon getting a life ticket upon the insurance funds. One of them, the positive Wassermann man, has lately claimed extra compensation because of trouble with the other foot, and suggested "beginning ventral hernia." Beyond doubt, in these cases the injury plays only a very minor role and certainly is not responsible for more than a minor fraction of the disability claimed. The worst feature about such cases is that some members of our profession help them in their pretensions, by seriously considering and detailing symptoms which they admit have neither pathological nor structural basis, but honestly argue that "their need is great"; that "the employer takes them as he finds them"; and that "the insurance company has plenty of money and takes premiums on that premise." As I see it, charity, the saving virtue, has as its only limit and only requirement the need therefor. Compensation, on the other hand, is not charity and must be considered solely as giving "pro for quod." Compensation is paid for and the insurer seeks nothing, but demands only what has been paid for. The need of the sufferer, the richness of the company plays no part. The employer does not "take the employe as he finds him," as I see it: he oftentimes does not take him at all, but has him thrust upon him, and at times has a well-known lame duck sneaked upon him. I have known a strike called and later called off on account of certain men, it being well known to me—and, of course, to many others—that these particular individuals who had not been doing the proper stint of work and in the settlement must be taken back were lame ducks and not able to do their proper stint of work. The employer in this case does not take them as he finds them, but has them thrust down his throat. It is not rarely my experience to have a man under my care or sent to me for an opinion of his condition, the result of an alleged accident, when I had treated the man for the same symptoms months or years before the alleged accident. I have also had men refuse to be sent to me who later have admitted to me when the case was settled or when they were forced to come to me that they expected I would

give some information regarding their previous condition. Sometimes the necessity is great; sometimes the love of a much-needed rest is greater, and once in a while the recognized necessity for slowing up is greatest. That money should be taken from him who hath and given to him who hath not, is hardly a valid argument excepting in idealistic Christianity; in the Soviet land; or in thieves' quarters: yet, a somewhat parallel idea is not rare among real and practical people regarding the money of other folk. It is suggested that the origin of many of these ills of previous conditions arises in the course of a man's employment; that the employe has been worn out in industry—if not in the last few months, then in the last few years; that the essential factor in the increasing disability primarily results from his labor, and, therefore, there should be a tax upon industry for the support and protection of one broken by industry, and time as a factor should not be of the essence of this understanding or argument. I believe this argument and this idea to be true, and labor along these lines has a just grievance. I recognize and assert that laws must and will be made in the nearby days to cover and remedy this present failure. Such conditions arising should be a tax upon industry and such pathology arising out of the character of employment, even going back ten, fifteen, or twenty years maybe, should be paid for, in my opinion, by industry. This is right, square, and equitable, and such an arrangement in the end must and will prevail: yet, this has nothing at all to do, as I see it, with the present status. There is at present no way to levy such a tax covering various industries (perhaps long extinct) of the past twenty-five years, more or less. As a matter of fact, we cannot make a law so retroactive. You can hardly levy on me to compensate one for something that my grandfather should have attended to, although at that time no such idea had arisen, and certainly cannot ask me to pay for what my grandfather's dearest enemy had either accidentally, thoughtlessly, or even wilfully neglected. There should and will be found some method to take care of such persons in the future, and there is no better time than the present to begin. Certainly, this will be seen more and more clearly in the future, and great business will neither expect, hope, nor be permitted to prosper by using up or breaking up humanity as has too often been the case in the past. Two cases confront me now along this line: A plasterer, a very expert man, for many years has worked chiefly at overhead ornamental work and has become very skillful thereat, thereby earning extra money above his craft. He has developed, most probably as a result of the necessary continued vertebral hyperextension, a potential and probable steadily increasing spondylolisthesis. In this condition and position, about a year ago a twist gave him a sacroiliac strain for which he claimed and received compensation. He recovered from the strain, but the tendency towards spondylolisthesis steadily increasing with his years and weight, he finds that he can no longer, with any degree of security and comfort, do the special work which calls for vertebral hyperextension. This, however, is what he does best, what he feels he is best fitted for, and what pays him the most money. This potential spondylolisthesis, how-

ever, in my opinion, is a pathological condition engendered chiefly by his occupation and dependent upon the industry he has been engaged in. The issue is plain and simple to me and I am keen to know how the commission is going to decide, for they have no easy job in this and in similar cases. They are making precedent and history in their work of today, and what they are now deciding shall rise to comfort or plague them hereafter. Here is another case along these lines in which the scales of justice will be hard to balance, and it will take a Solomon to give an unquestioned judgment.

An honorable man well advanced in life has for a great many years worked at heavy, highly skilled mechanical work. For some time for three reasons—advancing years, a little stiffening, and favor of his employers for an old, steady and efficient worker—he has been given light work. During this work (the man himself feeling vigorous, perhaps not appreciating his gradually lessening capacity) he received two slight accidents (several weeks apart) to his elbow. After the second accident he finds, apparently to his surprise, that he can no longer wield the tools of his trade. Several weeks elapsing without recovery, he seeks other medical advice, and it is found that his elbow has less than half normal motion. Loose pieces of bone and irregular masses of bone are found by the finger and in radiograms in and around the elbow. The man has had an osteochondritis, endochondritis dessicans if you prefer, over many years, and the slight accidents, while probably producing the suddenly noticed symptoms, are merely an incident in the history of the lamed joint. The accident, in my opinion, should not be held even as a major cause. The occupation, on the other hand, was the major factor. What is the answer? How and who shall compensate? Another man, a structural worker, was under my care years ago with a fracture in the upper third of the left femur. The fracture at that time was readily reduced and held with a metallic suture, which, by-the-by, is still in situ. He recovered with normal function and has been working as usual up to the last accident. At the time we first examined him, we noticed an old overlapping fracture of the left clavicle and a suspicion of a fracture of the right clavicle. Some three months ago he fell and shattered the right humerus in the surgical neck; fractured the left tibia at the internal margin into the knee; and also the left fibula into the left ankle. He is again making a good recovery and apparently will soon be again about his work. However, he has had five important fractures of long bones, to my knowledge, and each one lessens his normal a little bit. He is getting by well, however, and probably does and will consider himself normal. However, looking into the future—suppose he has a few more fractures during the next ten years, each one taking a little from him. He will then be over the active period of life, but perhaps will still have the will to do, or more likely be forced to do, and perhaps now gets a comparatively mild injury to his hip, knee, ankle, or shoulder. He may have disability out of all proportion and possibly out of all relation to his accident, and comes before the commission for justice. How are they going to apportion it? Still, his dis-

ability is directly traceable to his work and in my opinion, of right, should be a tax upon industry; but to what accident should it be apportioned? And what insurance carrier should justly pay the tax under our present law? A tax upon industry, we say; but upon what industry, and where? Here is another one: A Russian, 48 years of age, who had lived in Russia up to the last two years, going through the war with all its hardships and vicissitudes. Since he has been here, he has been a laborer and within a few months gets a slight fall, injuring his back. After a few days he resumes his work, but says his back troubled him. The discomfort or distress or pain gets worse and worse and he lays off from work. Radiograms taken at this time, not by me, show a very extensive osteoarthritis of the spine with spurring, bridging, and mushrooming. This condition, we know, must have existed, gradually increasing for many years. He has a progressive disease, hastened probably by the slight fall, but destined to develop, regardless of any fall, and be eventually disabling, especially if, as in this case, the man believes he has a "meal ticket for life." In this case the back was not normal, he suffered some from it, and very possibly, even probably, the slight injury had exaggerated the symptoms; in fact, may have called the stiffening to his attention. The man was not entirely disabled—on the contrary, was able to do a reasonable amount of work for years if he had the will and desire to do so. He needed some help and as time goes on will need greater help, and naturally will have greater and greater disability as time advances. He had a wife and children and appeared honestly to believe he was entitled to full compensation. He came to me outside of the insurance company for an opinion towards getting greater compensation. The injury, however, in my opinion, was perhaps responsible for 10 per cent or at the most 20 per cent of his disability; perhaps not responsible for any of it. Who should pay the compensation his family needed, and which he strongly felt and was advised he was entitled to—the employer for whom he worked a few days? the Russian Government for whom he struggled and slaved for twice as many years? Whose industry should be taxed—American or Russian? Civil or military? It may be that all men are brothers under the skin, but why flay John Jones because the hide of Ivan Ivancovich was tanned? Many such cases have presented themselves: Mexicans, Slavs, Cubans, and Europeans, in whom it was evident that their structural condition was such before they entered this country that a simple examination could have determined that their disability was imminent and when occurring would probably be severe and lasting. Previous pathology modifies results perhaps more after injuries to backs than after injuries to any other structure. As a fact, previously existing pathology in backs is probably responsible for most of the economic waste occurring to the insurance carriers under the compensation law. They not alone take much more compensation than they are equitably entitled to, but to a very great extent increase the medical expense of the insurance carriers. Most of this excess is due to previously existing pathological changes, osteitis and periostitis chiefly. To a

lesser degree perhaps it is augmented by a desire on the part of a man who is advancing in years to escape the daily, strenuous treadmill of modern industrial life, and not a little perhaps, to the doctors under whose care they come, and to the oftentimes multiplicity of doctors whose advice has been sought by the patient and the insurance carrier—by the former to get symptoms relieved if possible (and they often doubt this will be done), but if not, to at least have their symptoms discussed, accepted, explained, and put over to the commission—by the insurance carrier to get rid of apparently never ending worry and expense, and to secure explanations and opinions which will enable them to get what appears to them to be a reasonable rating. It has more than once been my duty to examine a man for disability resulting from an alleged injury to his back or to his sacro-iliac area after I had had the privilege of treating him for similar symptoms years before, resulting from a similar accident, and had issued the warning then that a recurrence would probably occur under such and such circumstances. I have suspected, even known at times, that the relapse or recurrence was deliberately provoked because the man was tired of not being able to do a heavy day's work against his partner, and knew he was getting older all the time and soon might not be able to hold down any job. I have been cognizant of this in several cases, and have suspected it (or rather known it as well as a man knows anything that he has not himself observed) in several scores of cases.

It is not wise, speaking solely from the standpoint of the patient, in a case of injury to a back, complicating a vertebral osteoarthritis to be examined by too many doctors. In a multiplicity of counsel there is not necessarily wisdom—much more often the reverse of wisdom. Just as often as "too many cooks spoil the broth" do too many doctors hinder the recovery of such patients, and this for two reasons: First, it gives the patient's conditions and symptoms an undue prominence and emphasizes the readily acquired idea that the condition does not permit of recovery; and second, no two doctors express themselves in similar language even when agreeing upon the condition, and this difference in expression oftentimes impresses the patients as difference in opinion. (It must have occurred to you, as to me, when the patient was told that he had a fracture to have his reply: "Dr. Blank told me I only had a break"; and on such a statement (that is difference in words used) the patient bases the idea that the doctors did not agree about the case.) Harm comes to the patient and expense to the insurer by way of the doctor in another way: a multiplicity of opinions mixes things up and generally favors a compromise treatment. With no one satisfied and no single plan properly carried out, wisdom is not found, and a definite plan of treatment is not carried to success along such lines. Many a promising case is ruined, treatment greatly prolonged, expense vastly increased, and worse than all, the patient demoralized and dropped below the level by too many opinions. Better a mediocre plan carried out in detail than a compromise of many better plans, no one of which gets a complete trial. I think it is in this way that insurance carriers may get an advantage from a staff

of their own, probably of second-rate men, for although the particular plan of treatment may not be so good, it is taken care of in detail.

Speaking of pathological conditions, results, treatment, and multiplicity of opinions, I would like to put myself on record as saying that, in my opinion, too much stress is laid by the doctor upon the history and statement of the patient in structural damages rather than upon conditions found. In my opinion, the examining surgeon should examine a patient as an engineer a bridge, and make a report of what conditions are found, paying only secondary attention to the statements of the parties in question, not because necessarily there is intent to mislead, but rather because the injured man does not know, and mixes imagination, memory, and reasoning in his tale. It would be cheaper, and so far as I am concerned, often of just as much avail to both parties if the history were taken by the stenographer in the insurance office. After all, one is dealing with a structural condition which may be determinable, and not with theories, stories, or opinions. I have digressed somewhat, and ask your pardon for the digression, because it appears to me that "plenty talk" on the part of the doctor or doctors is responsible for delay and the gradual infiltration of the patient with the feeling that he has suffered much, and much is coming to him. In this frame of mind he is not likely to admit previous disability—in fact, the recollection of the past is overborne by the pain of the present and the question of the future. I well remember a horseshoer who was sent to me with recent infected fractures of the lower leg. Noticing a kyphoscoliosis of the third degree with a marked psoas contracture, and appreciating the possibility later of the back conditions being blamed upon the infected areas, I had him well radiographed and a careful detail of the hip and back contractures and positions made. A good recovery was secured from the fractures, and the man was probably afterwards in practically as good condition as before his accident, yet he claimed disability from shortening of his leg and inability to straighten his hip-joint (due to the previously existent psoas contracture secondary to the deformed back). By telling his story well himself, apparently believing most of it, and getting some members of our profession honestly to support him, he gets a rating of 32 per cent. Really the man was disabled, perhaps 32 per cent or more, although I doubt it, but approximately nine-tenths of this disability existed prior to the accident and was, as I see it, not up to the insurance carrier. The man is now a great friend of mine, although I stood against him at the settlement, and again is engaged in mechanical work (not horse-shoeing) and making more money than he was before. Surely, the gods favored him in slipping him such a fortunate accident at a time when his months were numbered as a horseshoer. The employer took him as he found him, and found "some lemon." This is a type of man, and not the very worst, that has come under my observation, and I am using it (of course, because it is a well-marked case)—if not to point a moral to at least adorn my tale. Take the picture of his back and hips as they appeared at the time of the injury, not after the infection had spent. Many of you have

seen similar cases spurred, and bridged, and even fused with periosteal outgrowths which extended away from the vertebrae more than a centimeter, locking and interlocking, this condition showing within a few hours of the accident, mind you, so that one could approximately measure the previously existing and gradually growing pain, stiffness, and disability, in spite of all statements and evidence which might be and was offered by the applicant. Many years, you will appreciate, it must have taken to develop such extreme changes, the causes being drink, exposure, hard work, and last but not least, repeated gonorrheas. There is an old adage, perhaps once true, that "Those who dance must pay the piper," and again from the sacred writings—"What ye sow that shall ye also reap"; but in this case the sowing of the whirlwind brings to him, through the beneficence of the law, balmy ease and comfort as he approaches the autumn of life. I tell you he appreciates that accident, and because of his friendship to me I rejoice in his good fortune, reached, as stated in the biography of Mr. Raycroft, "through no work nor virtue of my own." The arguments usually offered and oftentimes worthy of all credence that "he worked before at the same place for ten years without a lay-off by reason of sickness, previous to his accident" means no more than the statement of the hotel-keeper in the backwoods who, when a guest sought a clean roller-towel, exclaimed: "Well, dang it, sixty-five men used that roller this morning and you are the first one who complained." Going on the ferry a few months ago, my attention was called to the piles at the dock. A great many were eaten away, coming to points like sharpened pencil-ends meeting. A few even were parted; yet, the dock stood. The boats went in and went out, bumping on the sides day after day, the piles withstanding the blows, and one stood and wondered. A short time later I saw in the paper that this ferry was out of commission because a boat had hit the dock a glancing blow and it had caved in. It is possible that the last blow was not nearly so hard as the dock had had previously; and daily and hourly resisted, yet the argument that, because of the earlier daily known work, it must have been all right previous to this last blow, is not valid to the engineer who sees the extensive pathology and knows the teredo has been doing his work for years before—in short, the wonder was not that it fell with this particular blow, but that it had withstood the blows over the days and weeks and months before.

In conclusion, it is my desire to emphasize the following: That previous conditions, arising out of earlier injuries or already existing diseases, may and often do materially modify results obtained after industrial injuries; that outside of osteo-arthritis and probably the major fraction of even this, the most important cause for previously existent structural pathology of the working man, lies in the long continued exposure to the elements, the faulty, oftentimes necessary, positions, the frequently repeated minor injuries occurring perhaps over a great many years. The last accident is oftentimes not the one important factor in the disability. Of right, the gradual using up and wearing out of a man in industry should be just as compensable as his breaking up. Laws must

be made in which the time factor is not of the essence of the understanding—that a date is not important in the using up of a man's structural capacity. A new deal and a new understanding is at hand.

It is true that a little real malingering is being put over, but very little. It is true, however, that a good deal of exaggeration is being put over. Probably the chief cause for this is the feeling that telling the truth about the pre-existent and growing disability mitigates against compensation. If previous conditions oftentimes were accepted as evidence of a using up in industry and were made compensable, the great incentive for exaggeration would pass and a better era between the laborer and the employer would be inaugurated. The time has arrived. Broader vision is necessary for the future. Other laws, wider outlooks, are imperative.

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DISCUSSION

J. ROLLIN FRENCH, M. D. (417 Towne Avenue, Los Angeles)—I have read Doctor Hunkin's paper with much pleasure and interest. The doctor ably deals with some of the most serious problems of industrial medicine. I have examined and directed treatment in many hundreds of cases, such as the variety the doctor describes, and well appreciate the perplexities.

From my experience, I have formulated a definite procedure as to diagnosis and management. I am convinced that it is just as important to make a psycho-analysis of the mental aberrations of the patient as it is to diagnose the osteo-arthritis of the vertebra. I most heartily concur in the statement that "It is not wise to have the patient examined by too many doctors." It is surprising how soon some of the seemingly ignorant patients pick up medical phraseology and subjective symptoms therefrom. Perhaps, I can better express myself by defining the varieties of malingering. First, let us divide them into true and false malingerers. A true malingerer is one who, with malice aforethought, feigns for gain. This type, as a rule, are not difficult problems. The false malingerers are those who misinterpret existing symptoms and feel they will do themselves bodily harm if they attempt to work, when, as a matter of fact, they are doing themselves bodily harm by not working. The skilled diagnostician well realizes that work, in many instances, is the best treatment, but he overlooks the importance of psycho-analysis and hence is unable to sell the patient the idea. We sometimes condemn the patient for not understanding and going to work, when, as a matter of fact, the physician should condemn himself for not having the ability to successfully teach or sell the idea, which would result in co-operation.

I do not always blame the ignorant mind for thinking that perhaps eczema is the result of an injury. The patient does not know the etiology of eczema (?). With a few exceptions, I have found that a simple explanation frequently transfers cases of this nature from the compensable class. I believe we should give some consideration to the fact that the average layman knows but little relative to the subject of pathological etiology; therefore, we should have more patience in explaining same. To reverse the situation, I will relate a conversation between a doctor and the manager of an automobile agency. The doctor had but little knowledge of mechanics. He was having difficulty in keeping his automobile running smoothly, and, after repeated visits to the adjusting department, he called upon the manager and condemned the car as not being satisfactory, and intimated that he had been sold a lemon. The manager, instead of completing the sale by educating the doctor in the successful operation of the car, lost his head and told the doctor "he was selling automobiles and not brains." It is needless to say that that automobile concern lost a customer. Successful men in any profession are those who can sell ideas successfully.

Nature is most accommodating, and if we sell the idea

of co-operation to our patients, nature will compensate, in many instances, the deformities or pathology by re-routing function.

I believe "Take the employe as he finds him" is worthy of greater discussion than space here permits, and there are many good points for and against.

With reference to the cases of spur of the os calcis, no doubt the psychic damage causing prolonged compensable disability was caused by the doctor who preceded Hunkin. Had the first doctor definitely and positively diagnosed the cause of disability and so explained and sold the idea to the patient, compensation would have suffered but little beyond the expense of the original examination. The patient, perhaps, was in good faith when he thought the slight accident caused the disability, but negligence on the part of the attending physician to explain the true cause of disability further prompted the patient to accept the slight injury as the cause of disability. Self-preservation is the first law of nature. I have even heard physicians exaggerating circumstances when applying for replacement of an automobile tire or surgical equipment. Perhaps, the physician was in good faith, but for lack of knowledge upon the subject was apparently claiming something to which he was not entitled. These circumstances parallel injured employes attempting to obtain compensation payment. I believe it is the physician's duty to exercise every reasonable effort to educate the patient when he, the patient, applies wrongfully for compensation benefits. If after exhausting his resources in his effort to convince the patient of the true etiology of disability and that his disability is not compensable, the physician finds he is not successful, then, in my opinion, it is his duty to collect all possible evidence in tangible form to prove same before the Industrial Accident Commission. Physicians at times are so endowed with the idea that their diagnosis is correct and they frequently lack the legal training of preparing evidence for a decision by another.

In conclusion, I wish to state that I believe Dr. Hunkin's paper has ably and forcibly brought out the urgent necessity of several points in the management of patients with previous disease due to industrial injuries:

The importance of an early and positive diagnosis as to the true cause of disability.

To more carefully weigh subjective symptoms.

The necessity of better and more positive salesmanship on the part of the physician after making a differential diagnosis.

The necessity of greater knowledge of law and contract by the physician.

The importance of psycho-analysis in differentiating between true and false malingerers. The value of accurate evidence in which to supply a judiciary when it becomes necessary to settle differences of opinion.

J. L. PRITCHARD, M. D. (Twohy Building, San Jose, Calif.)—Doctor Hunkin has definitely pointed out some salient features of a situation which many times is embarrassing and often humiliating for the physician. Are doctors to blame for many unseemly occurrences in cases before the courts and industrial accident commissions? It is not unusual to hear a layman say that one may get a doctor to testify to anything, and everything. If that is a correct statement of prevailing conditions, then it is no wonder that the injured malinger. If they do not do it of their own free will, they often have it thrust upon them.

In most features the industrial situation is very similar to that of the disabled soldier. If a man was accepted as sound at the time of enlistment, any disability arising would be considered as "due to service," although it might be osteo-arthritis, sacro-iliac strain, or what not. Many industrial organizations insist on their employes passing an entrance physical examination, and more than that—a check-up yearly or semi-yearly.

FRANK M. MIKELS, M. D. (Long Beach, Calif.)—After reading Doctor Hunkin's paper, I am very much impressed with the salient and important facts which he has presented relative to pathological conditions existing previous to industrial injuries and subsequent psycho-neurosis following physical traumata.

The attending physician is under a moral obligation to

render to patients that order of therapeutic procedure which will restore them to as near normal condition as possible with the highest degree of function. He must use extraordinary tact in his discussion of existing pathological conditions, when satisfying the curiosity and demands for information, not only from the patient himself, but also the members of his family. The implantation of morbid ideas through suggestions into the psyche or consciousness of a severely injured patient may often lead to fixed mental morbidities which may play a great part in impairing the normal function of his injured limbs or other parts of the body. Functional psycho-neuroses following severe joint, tendon, and nerve injuries, are often responsible for a great degree of the disability resulting from such injuries, and sometimes from very slight trauma.

It is very difficult to fix the degree of relative causation when neuropathic conditions develop subsequent to a series of industrial injuries extending over a period of several months or years. The object of paramount importance is to get away from the dogmatic discussions and the diagnostic hypotheses and settle down to the practical application of more recent methods of physiotherapy, such as deep therapy, diathermy, galvanism, faradism, mechanotherapy, massage, and the other kind of physical or mechanical readjustment that will clear up the complications subsequent to various injuries.

The time has come when the industrial surgeon and physician must recognize the true value of these recent therapeutic agencies and apply them properly in degree and modality, as indicated in each individual complication or pathological condition.

The psycho-neurotic personality may maintain a normal degree of occupational efficiency until he meets with a physical injury attended by psychic trauma. Following in the wake of the psychic trauma may come metabolic disturbances, manifested by recurrences of asthma and eczematous manifestations. Paralysis may develop which has only a psychic basis. A latent thyro-toxic condition may be aggravated and accentuated as a result of the emotional shock attending physical injury. It is not unusual for a cardiac myasthenia of the neuropathic type to manifest itself and thereby incapacitate the injured employee for a long period of time.

The state compensation law contemplates protecting the employee against disabilities arising from existing pathological conditions which may be aggravated by an industrial injury. Having this premises as a basis of medico-legal relationship with the patient who has met with an industrial injury, the physician in charge finds himself in a very delicate position, requiring extraordinary judiciary consideration as well as medical and surgical acumen.

And Still Some Who Promote Charity as a Business, Accuse Them—The doctor is one of the few professional men who gives his service free to the public. The doctors of the United States give away about \$1,000,000 worth of service every day in the year to the indigent and to those who do not pay bills.—Chicago's Health, February, 1925, "The Physician."

"The Physician as a Sanitarian"—Every physician is a guardian of the public health, and the community expects him to be interested in medical matters of a public nature, just as they expect the lawyer to take part in the legal aspects of public affairs, or any other citizen to contribute his best thought upon public questions. The opportunities and influence of the physician as an educator are greater than those of almost any other group. Many have implicit confidence in the word of some physician, and the attitude of the public toward public health matters is to some extent a composite of the attitude of the physicians of the community.—Chicago's Health Bulletin.

MALIGNANT TUMORS OF THE KIDNEY

WITH SPECIAL REFERENCE TO DIAGNOSIS

By FRANK HINMAN, M. D., AND ADOLPH A. KUTZMANN, M. D.

(From the Department of Urology, University of California Medical School, San Francisco)

The incidence of malignant tumors of the kidney are to the extent of 0.25 to 1 per cent in adults; 0.06 to 0.1 per cent in children. Of tumors in general, they constitute from 0.5 to 2 per cent in adults and about 20 per cent in children.

The pathogenesis of kidney tumors is still in the hypothetical stage. The types most commonly found are the hypernephroma, occurring chiefly in late adult life and "embryonic mixed tumors" found during early childhood.

Clinically, all renal tumors should be considered malignant because of the great rarity of the benign types.

The classical signs of kidney tumor are hematuria, pain and tumor. Hematuria is the most frequent initial symptom in adults, while tumor is in children.

The importance of each symptom should be considered initially as it appears and the diagnosis not allowed to wait until the clinical picture is complete.

Only by thorough early investigation can we hope to influence the present appalling morbidity of 90 per cent.

The urological examination should always be complete and include a differential examination of the urine, functional studies, and ureteropyelography.

The correlation of the clinical findings and urological findings should be carefully entered into so that a diagnosis may be arrived at in the doubtful cases.

DISCUSSION by George F. Schenck, Los Angeles; Nathan G. Hale, Sacramento; Paul A. Ferrier, Pasadena.

THE surgical problem of care of malignancy any place in the human body has two very important and fundamental points: (1) An accurate diagnosis made early enough, (2) to make possible a complete and permanent removal of the tumor. Application of these principles in treating malignancy in some parts of the body has most markedly lowered the mortality. The breast, uterus, and mouth are notable examples, and the fact that metastases in these conditions occur primarily along the draining lymphatics which are surgically removable, still makes possible a small percentage of cures even in those who seek aid in the later stages of the disease. Thus Bloodgood has found, in thirty years' experience, that cancer of the tongue when gotten in the early stages yields a cure in 62 per cent of cases, while only 12 per cent are relieved in the later stages; in breast cancer, 70 per cent may be cured if treatment is sought as soon as the lump is felt, 25 per cent if the lower axillary glands have become involved, and only 10 per cent with the involvement of the higher axillary glands.

In malignancy of the kidney the problem is similar but more difficult, particularly respecting early diagnosis, and more radical surgery than nephrectomy has never been successfully advocated. There are really no pre-cancerous or early symptoms in kidney tumor. A. O. J. Kelley, in 1895, showed that 72 per cent of cases came to autopsy undiagnosed, in spite of advanced liver and lung metastases in many. Kronlein, in 1905, also encountered this problem and was unable to make an early diagnosis in twenty cases.

The ultimate mortality today is still an appalling one, being placed as high as 90 per cent by some



Figure 1.—Photograph showing a large hypernephroma involving almost the entire kidney except for the lower pole. Note the solidity of the tumor. This type is the common kidney tumor of adults.



Figure 2.—Photograph of a large "embryonic mixed tumor" of the kidney, weighing 9.9 pounds. Note the varied picture due to multiple areas of hemorrhagic extravasation, degeneration and necrosis with multiple cyst formations. The tissue is friable and lacks supporting stroma. This is the common kidney tumor of children.

observers (Braasch). The onset is very insidious. By the time hematuria, pain or tumor appear, the case may be in an advanced stage. Gregoire attempted to apply surgical principles to renal tumor by a radical resection of the primary renal lymph zone at the time of nephrectomy, but, aside from technical difficulties, metastases occur chiefly by way of the blood stream to remote parts of the body, as a glance at the following tables shows quite forcibly.

Distribution of metastases in 176 cases of hypernephroma (Watson and Cunningham):

<i>Hematogenous</i>	Cases
Lungs	26
Bones	35
Internal organs	29
Liver	8
Brain	4
	102
<i>Lymphogenous</i>	Cases
Regional lymph glands	11
Scar	9
Adrenal	2
	22
	Cases
Lower G. U. tract	4
General metastases	6
Miscellaneous	7

Distribution of metastases in 307 cases of "embryonic mixed tumors" in children (Walker, Watson and Cunningham):

<i>Hematogenous</i>	Cases
Liver and lungs	34
Internal organs	16
Opposite kidney	11
Nervous system	1
	62
<i>Lymphogenous</i>	Cases
Retroperitoneal glands	12
Mesenteric glands	6
	18
	Cases
Miscellaneous	7

Metastases to a distant part of the body may lie dormant for a number of years. It has been found that cases have died six years after operation, and Kronlein cites a case which succumbed twelve years later.

The outlook is discouraging. So long as surgery remains the only hope in the face of this appalling mortality, the surgeon must make earlier diagnoses, inasmuch as more radical surgery is useless. The public, as well as physicians, should be thoroughly familiar with these facts, and the urologist should realize his personal responsibility by studying and improving methods of investigation. The urologic study of suspicious cases must be complete, thorough, and prompt in order to increase the percentage of early diagnoses. The findings of ureteral catheterization, pyelography and renal functional studies are not infallible. Even the urologist cannot make an accurate diagnosis in the majority of early cases.

HISTORICAL NOTE

Early descriptions of epithelial tumors of the kidney appear in the writings of König, Rayer, Parker, Shepherd, etc. Robin, in 1855, put forth the first definite description, showing them as being derived from the tubular epithelium. This was accepted by Waldeyer, Klebs, Recklinghausen, etc., who classified kidney tumors as benign adenomas and infiltrating carcinomas. In 1870, Catanni was apparently the first to recognize the occurrence of the sarcomatous elements. The first epochal article to appear was that of Grawitz, in 1883, wherein he recognized the yellowish cortical tumors to whom Birch-Hirschfeld, in 1892, applied the term "hypernephroma." They were regarded as springing from adrenal rests in the kidney. In 1894, the second great group of kidney tumors were described by Birch-Hirschfeld. From their structure, he suggested that they arose from Wolffian body rests and were mixed as to constituent tissues. He named them "embryonic adeno-sarcomata." In a very able discussion appearing in 1899, Wilms furthered the embryonic theory and called them "mischgeschwulste" or mixed tumors.

Since then there have appeared from time to time excellent discussions, but fundamentally very little has been added to the work of original investigators (Beneke, Muus, Sudeck, Klose, Garceau, Busse, Ribbert, Wilson, etc.)

Pathogenesis—The histogenic origin of the large groups of kidney tumors is still in doubt. Grawitz originally, and later Birch-Hirschfeld, showed that the hypernephroma came from adrenal rests in the kidney. This was later contested by Stoerck, who is of the opinion that their origin is renal. Wilson derives them from the nephrogenic blastema, and has applied to them the term “mesothelioma.”

The views regarding the pathogenesis of the “mixed tumors” can be summarized as follows:

- (a) That their origin is due to inclusions of Wolffian body tissue (Birch-Hirschfeld).
- (b) That aberrant cells of the myotome and sclerotome are responsible for the tumor growth, and that the apparent mixed character is to be explained by the varying constituents which enter into the ultimate formation (Wilms).
- (c) That these tumors are derived from the embryonic tissue of the true kidney, which persists and becomes metamorphosed (Busse, Muus, Ewing).

Due to this uncertain knowledge of origin, many classifications have been brought forward. For clinical purposes, the following from Eisendrath is probably the best:

- 1. Primary Neoplasms of the Parenchyma:
 - Epithelial Type:
 - (a) Adenoma.
 - (b) Carcinoma.
 - Connective Tissue Type:
 - (a) Benign—fibroma, myxoma, chondroma, leiomyoma and rhabdomyoma, angioma.
 - (b) Malignant—sarcoma.
 - (c) Embryonal adenomyosarcoma—also called teratomata or mixed-cell tumors.
 - Neoplasms Due to Misplaced Adrenal Rests—Hypernephroma.
- 2. Primary Neoplasms of the Renal Pelvis:
 - Epithelial Type:
 - (a) Papilloma (benign).
 - (b) Papillary carcinoma.
 - (c) Epithelioma (squamous-celled).

CLINICAL

Incidence—Renal tumor is not a very common occurrence. Collected statistics show that in general they occur in adults from 0.06 to 0.1 per cent.* In the University of California Hospital, from 1906 to 1923, inclusive, there have been twenty-nine cases among 46,800 admissions—0.06 per cent. In adults their relative occurrence among tumors in general is from 0.5 to 2 per cent; in children, they constitute about one-fifth (20.4 per cent).*

From the confusion as to pathogenesis and types, the hypernephromata and embryonic mixed tumors are the two most frequently found. The former occurs most frequently during late adult life, and the latter during early childhood. Next in frequency are the carcinomata of the parenchyma, papillary carcinomata of the renal pelvis and squamous-celled carcinomata of the renal pelvis.

* Hinman & Kutzmann: Malignant Tumors of the Kidney in Children. Ann. Surg., 1924, lxxx, 569.

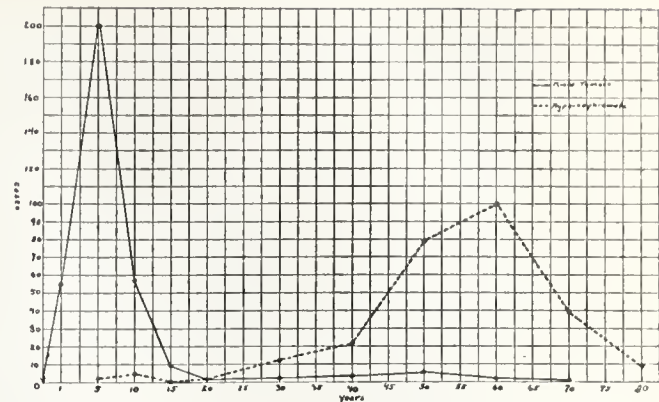


Figure 3.—Chart showing age incidence of hypernephromata and “embryonic mixed tumors.” Note that the hypernephromata occur chiefly in old age, and “mixed tumors” in childhood. Based on 267 hypernephromata and 341 “mixed tumors.”

Diagnosis—The signs and symptoms are an important factor in diagnosis, and yet they may not be pathognomonic. We are often confronted with a paradox; we must try to cure tumors which run a rapid and fatal course unless an early diagnosis can be made, and yet their onset usually is insidious; and when they present themselves with the usual diagnostic group of symptoms, the case may be beyond help, in spite of the fact that no metastases are clinically demonstrable. There present themselves a group of symptoms which have been found to be more or less constant, namely, the “cardinal trio”—hematuria, pain, and tumor. It has been our experience that when a case presents these symptoms, the diagnosis is not an early one and the case usually terminates fatally, in spite of surgical aid, and yet over one-third of cases coming to operation present these symptoms. To add to the difficulty it has been found that the pre-operative duration may be no index of the prognosis. Cases may even terminate fatally and never at any time show any sign or symptom. The lesson to be learned is that the appearance of any single symptom should at once lead to a thorough investigation.

The following table, prepared from various sources (Willan, Barney, Israel, Squier, Albrecht) presents at a glance the prevalence of the signs and symptoms in adults:

SIGNS AND SYMPTOMS OF MALIGNANT TUMOR OF THE KIDNEY IN ADULTS		
	Initial Per cent	Associated Per cent
Hematuria	21.4-70 Av. 42	80
Pain	30-40 Av. 35	58
Tumor	18-20 Av. 19	85
Weakness and loss of weight (cachexia)	9-20 Av. 13.5	75
Varicocele (left) .....	.....	15
Fever .....	.....	8
Anorexia, vomiting, edema of legs, metastases	Rare	...

In children, the problem is even more difficult. Added to the insidiousness of onset, tumor is usually

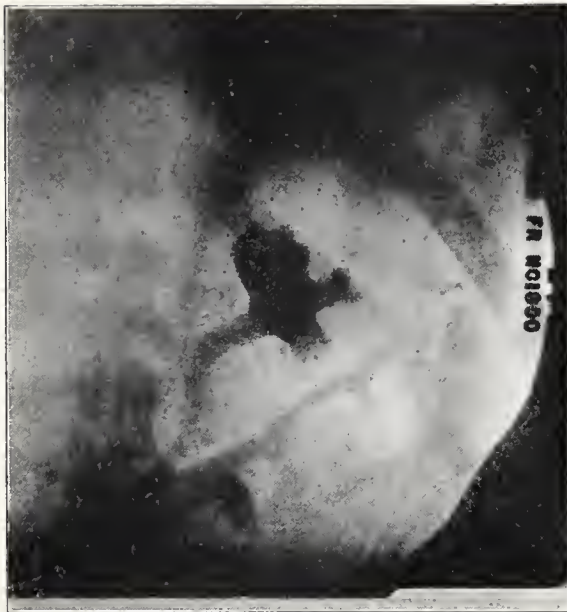


Figure 4.—Typical pyelogram of a malignant tumor of the kidney (hypernephroma) showing the "spider leg" deformity.



Figure 6.—Photograph of pyelogram of a polycystic kidney. The filling defects in these cases often simulate a malignant tumor and must be carefully differentiated.

the initial symptom; also, the protuberant abdomen of young children tend to mask this sign. Such tumors usually are not found until they have attained a large size, by accidental palpation or after cachexia and weakness have set in. The following table shows the prevalence of the signs and symptoms in children:

SIGNS AND SYMPTOMS OF MALIGNANT TUMOR OF THE KIDNEY IN CHILDREN		
	Initial Per cent	Associated Per cent
Tumor	42-71 Av. 57	90
Pain	7-20 Av. 14	20
General weakness	11	
Vomiting	8.8	
Icterus	2.2	
Diarrhea, constipation, ascites	1 ea.	
Hematuria	Rare	5-35 Av. 14

That we have failed to make but little impression on the prognosis, is shown by the fact that the morbidity still ranges about the appalling figure of 90 per cent. We must be open-minded in facing this tremendous problem. Such a high figure in the ultimate mortality shows that diagnosis is too long delayed, either because the urologist is not seeing hematuria cases early enough, or because his methods are yet inadequate to make an early diagnosis. The important significance of blood in the urine must be taught, even though it be the only symptom and transient. Fraser reports a case of renal tumor in a child where there was a transient hematuria one year before operation, and yet the case was not seen by the surgeon until the tumor had reached a large size. Obviously, the urologic surgeon cannot be asked to cure malignant tumor if the case has gone until metastases have probably taken place.

Our experience with malignant tumors of the kidney is far from cheerful, yet it is probably no dif-

ferent from that of many others. In the last eighteen years, twenty-nine cases have presented themselves for treatment. Of these, twenty-three cases were definitely proven, while the remaining six have insufficient data. Seventeen cases occurred in adults, and six in children. Of these, eleven were operated upon; ten either refused operation or were deemed inoperable; two were completely missed during life and found at autopsy. But two cases are alive of the surgical cases and of these, one was lost sight of two months post-operative; the remaining case is still living and well seven months post-operative, so that we have no cases coming within the period of cure. The remaining surgical cases succumbed in from several days to two years. We can, therefore, expect practically a 100 per cent morbidity.

It seems that most of these cases were seen in the late stages of the disease. The following table, briefly shows their occurrence as to initial symptomatology:

Hematuria	}	..... 8 cases
Pain		
Tumor		
Hematuria or Pain or Both	}	..... 6 cases
Tumor	(all children)	5 cases
Cachexia and weakness		1 case
No urologic symptoms		3 cases
Aortic aneurysm		1
Pulsating tumor of skull		1
Exophthalmos		1
		23 cases

Note that eight cases showed all three signs and symptoms, that five cases had large abdominal tumors, and one with cachexia—fourteen cases (60 per cent) in which at once the prognosis was a bad one. Twelve cases showed no clinical metastases,

and of these ten were operated. Eleven cases showed clinical evidence of metastases, and of these one was operated upon. This was a case which entered with a pulsating tumor of the right parietal bone, due to a head injury six weeks previously. The tumor was removed, and upon pathological examination proved to be a hypernephroma metastasis. Careful re-examination of the patient revealed a tumor of the left kidney which had been missed upon the first examination. Urological examination confirmed the diagnosis of left kidney tumor. The patient was again subjected to a most rigid physical examination, but no further evidence of metastases were found. In view of the fact that there are several reports of cases in the literature living and well over six years in whom a solitary metastasis was removed with the primary kidney tumor, a nephrectomy was performed. This patient is living seven months post-operative, without any further signs of metastases and has gained twenty pounds in weight.

Several of the cases have brought forth interesting points and difficulties as to diagnosis. One case entered the hospital with a large pulsating aortic aneurysm. This ruptured and caused death. Autopsy revealed a hypernephroma of the left kidney, yet at no time had there been any signs nor symptoms referable to the urinary tract. A similar case

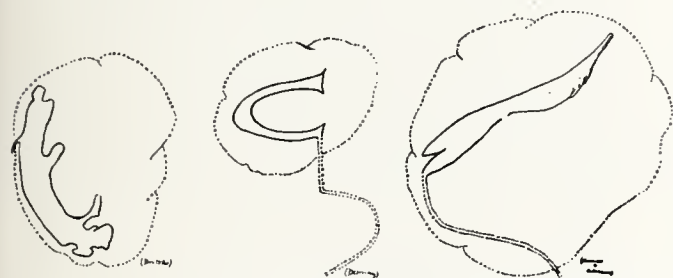


Figure 5.—Drawings showing pelvic deformities of "mixed tumors" of the kidney in children, as demonstrated by pyelography.

entered the hospital with a slight hematuria. Examination revealed a strongly positive Wassermann and widely dilated aortic arch. Urologic examination revealed only a slight deformity of one of the pelves suggesting tumor. In view of the other findings, the kidney condition was considered luetic. The patient died one year later, and autopsy revealed a hypernephroma with metastases to the liver.

A third case entered with a severe hematuria of several days' duration. The history showed that there had been a transient attack of diplopia ten months previously associated with a glycosuria. The glycosuria was still present with the hematuria. The case was considered inoperable, and the opinion was that there might be pancreatic and cerebral metastases.

Two cases in children, one with an exophthalmos and the other with a swelling to the side of one eye, were seen. Post-mortem examination of each revealed a neurocytoma with intracranial metastases. A third case in a child did not present itself for treatment until the tumor had reached huge proportions, weighing ten pounds.

The urologist must be ever on the alert for pitfalls. If any impression is to be made on the prognosis of malignant kidneys, the case must be seen

early. Careful attention must be paid to any individual sign or symptoms as they appear. The urologic examination should be complete and thorough, including ureteral catheterization, functional and urinary studies and careful pyelographic studies. Hematuria is the most important leading symptom. Its presence nearly always means an organic lesion in the urinary tract and should never be considered lightly or without significance, even though it be transient. Patients should be encouraged to seek advice from the surgeon as early as possible, for in doing so, not only will the opportunity for cure of renal tumor be enhanced, but also other conditions producing similar signs. Thus, Kretschmer found, in an analysis of 200 cases of hematuria, that 43 per cent were due to new growths in the urinary tract.

SUMMARY

1. The incidence of malignant tumors of the kidney are to the extent of 0.25 to 1 per cent in adults; 0.06 to 0.1 per cent in children. Of tumors in general, they constitute from 0.5 to 2 per cent in adults, and about 20 per cent in children.

2. The pathogenesis of kidney tumors is still in the hypothetical stage. The types most commonly found are the hypernephroma, occurring chiefly in late adult life, and "embryonic mixed tumors" found during early childhood.

3. Clinically, all renal tumors should be considered malignant because of the great rarity of the benign types.

4. The classical signs of kidney tumor are hematuria, pain, and tumor. Hematuria is the most frequent initial symptom in adults, while tumor is in children.

5. The importance of each symptom should be considered initially as it appears, and the diagnosis not allowed to wait until the clinical picture is complete.

6. Only by thorough early investigation can we hope to influence the present appalling morbidity of 90 per cent.

7. The urological examination should always be complete and include a differential examination of the urine, functional studies, and ureteropyelography.

8. The correlation of the clinical findings and urological findings should be carefully entered into so that a diagnosis may be arrived at in the doubtful cases.

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DISCUSSION

GEORGE F. SCHENCK, M. D. (Westlake Professional Building, Los Angeles) — Drs. Hinman and Kutzmann are to be congratulated on the straightforward and concise presentation of their subject. It is to be noted that they are lamenting over the fact that their cases were not seen early. Hematuria is the outstanding symptom of malignant tumors of the kidney.

Hematuria is a symptom that is perhaps the most constant and significant symptom in genito-urinary diseases. It may occur in nephritis, pyelitis, hydronephrosis, polycystic kidneys; kidney, ureteral, and bladder stones; tumors of the kidney, ureter, bladder, and urethra; ulcers of the bladder; adenoma of the prostate; carcinoma of the prostate; prostatitis, vesiculitis, stricture of the urethra, renal

tuberculosis, malaria, and several drug intoxications. It is a symptom that is due to a definite pathological condition that can be definitely determined in a large majority of the cases.

Unfortunately, the trend of all genito-urinary diseases is progressive. The vast majority of hematuria cases are given some internal medication and told to report in three or four days. Unfortunately, many cases of hematuria will subside spontaneously and not reoccur for months. In the meantime, much valuable time is being sacrificed, and the disease is progressing rapidly. In fact, nothing short of marked and persistent hematuria will get the patient a thorough examination, and if indicated, cystoscopy, kidney study, and pyelo-uretero-grams.

Personally I think if physicians would pay more personal attention to voided specimens of urine and do microscopical examinations of routine urine, they would discover hematuria cases earlier than heretofore.

A word about therapy in the malignant tumors of the kidney: Dr. Keyes makes a wide exposure by extending the usual oblique incision well forward, and, if need be, to divide the anterior sheath of the rectus muscle transversely. Then he does an extra-capsular nephrectomy. His reasons are it may delay metastases, there will be less oozing, less chance for infection, and a better opportunity to heal the incision by primary union.

Dr. Barringer thinks hypernephromas are hopeless for radium packs or deep x-ray therapy.

NATHAN G. HALE, M. D. (Capital National Bank Building, Sacramento) — The urological section is to be congratulated that this subject has been presented to us so clearly by those whose experience well fits them for the task.

Renal tumors are, in most instances, neglected because one of the first symptoms, hematuria, is treated expectantly. There could not be a better warning than blood in the urine, yet it is surprising to note the number of cases where blood in the urine sends the patient to the doctor, and the doctor treats this characteristic symptom lightly.

The urologist's difficulties in diagnosing an early tumor are great. The pyeloureterograms are not characteristic in many of the early cases, and, for that reason, pyeloureterograms, at intervals, should be insisted upon by the urologist when the diagnosis is not conclusive.

In operating, the so-called cardinal principle of removing the perirenal fat in toto with the kidney tumor, on account of possible invasion of this fat by the cancer, is the only procedure in renal surgery for malignant tumors that has been suggested as an improvement in technique for a number of years; and this is of little avail on account of the many cases that metastasize by way of the blood stream.

In conclusion, I hope that the stimulus of this excellent paper will start investigation concerning malignant renal tumors, which will result in an earlier diagnosis and a better surgical attempt at complete removal.

PAUL A. FERRIER, M. D. (Citizens Bank Building, Pasadena, Calif.) — Doctors Hinman and Kutzmann have made the thorough study that we have learned to expect of them. The conclusion cannot be escaped that present surgical methods in malignant tumors of the kidney are well-nigh futile—at best a short reprieve. It is a service to dissuade from unwarranted surgery. The problem awaits solution with that of deep-seated malignancies elsewhere.

DOCTOR HINMAN (closing) — In conclusion, I should like to emphasize the great importance of hematuria as an early symptom of renal tumor, and that this hematuria need not always be macroscopic before recognition. If physicians would acquire the habit of routine examination of urine, by having the patient void in three glasses and examining the second glass for evidence of disturbance in the bladder or above, much more definite findings would be possible. Microscopic study of such urine showing R. B. C. would be evidence of pathology, even though there would not be pronounced bleeding.

The writers appreciate the excellent discussions of their paper that have been given.

DOUBTFUL TUMORS—SHALL WE EXCISE A PIECE FOR DIAGNOSIS?

By A. R. KILGORE, M. D., San Francisco

In essence, this paper is a plea, not against diagnostic incision of tumors, but against delay between such incision and complete operation.

IF WE take out an appendix when the real trouble is a kidney stone, we can correct ourselves another day and still cure the patient. But if we leave live cancer cells in a patient and cause, by our interference or permit by our delay, metastasis to take place, we have lost the only chance we had of obtaining a cure. Cancer, of all diseases, must be treated right the first time.

Excision of a piece of tissue for diagnosis offers the most accurate method of diagnosis available, but under varying conditions it may or may not cause metastasis to take place. When it is safe, we ought to be prepared to use this method; when it is unsafe, we ought by all means to avoid it.

Excision of a piece of tissue or of an entire small growth for diagnosis has had ardent support and just as ardent condemnation. When the Harvard Cancer Commission and the New York Board of Health proposed the establishment of free tissue diagnostic services, a storm of criticism was aroused. Dr. Greenough, of the Harvard Cancer Commission, addressed a questionnaire to the members of the American Surgical and American Gynecological Associations to determine prevailing opinion. He found extraordinary disagreement among the men of widest experience in this country, and there is still anything but clear-cut opinion on the part of surgeons generally.

If there are definite facts available from which to draw definite conclusions, those facts ought to be generally recognized and our procedures standardized accordingly.

ANIMAL EXPERIMENTATION

Animal experimentation has not been of great help because the behavior of animal tumors in the matter of metastasis does not parallel that of human tumors closely enough to make it safe to accept experimental evidence in its entirety as applying to human neoplasms. There have been three outstanding communications, however, bearing directly or indirectly on the point in question. F. C. Wood found that aseptic incision of a transplanted sub-cutaneous tumor in rats did not materially increase the number of metastases, as demonstrated at autopsy several weeks later. He was working, however, with an adeno-carcinoma—the so-called Flexner-Jobling tumor—the histology of which is certainly not closely akin to that of human scirrhous or squamous cell cancers.

On the other hand, both Tyzzer and Knox have shown that a very small amount of gentle massage of various animal tumors enormously increases metastasis, and the latter author has shown that the amount of increase in metastasis produced by massage varies directly with the cellular malignancy of the tumor. Neither of these authors experimented with excision of a piece of tumor tissue, but the amount of massage (one to two and a half minutes) described in their experiments is probably not greater than the manipulation necessarily incident to the

operation of excision of a piece of sub-cutaneous tumor.

Incidentally, these papers bring home one very important clinical lesson—the importance of gentleness in the palpation of tumors for diagnosis. If one or two minutes of gentle massage will enormously increase the metastasis of a tumor, what must happen to a breast cancer palpated extensively by several consultants and a group of medical students. One gentle application of the fingers is sufficient to determine the presence of a lump, and if the fingers are trained, the same single palpation is enough to determine size, shape, and consistency of the lump and the presence or absence of fixation to the skin or deep structures. Here, certainly, is one condition in which it is better to sacrifice painstaking and complete description of the characteristics of the lump in the interests of safety to the patient. We cannot help what the patient has already done by feeling or rubbing the lump, but we can avoid the catastrophe of further spreading metastasis by our own diagnostic procedures.

If, then, animal experimental evidence is inconclusive, are there definite facts available upon which to base opinion for human tumors?

It is first absolutely essential to recognize that human tumors behave in widely different ways, varying with the cell type and with the location in the body. The question is not, can we safely excise a piece of a doubtful human tumor, but can we safely excise a piece of a scirrhus breast tumor; can we safely excise a piece or the whole of a squamous cell lip growth, etc. It is the purpose of this paper to discuss individually the commoner tumors for which we should standardize our procedures in the matter of excision for diagnosis.

1. THE BREAST

Very definite facts are available in the case of the breast. Bloodgood has analyzed the end-results in eighty-nine cases of breast cancer so early that the clinical diagnosis was "benign." Twenty of these were approached by excision of the tumor mass. Some days later, after microscopic study, excision of the breast and axillary contents was done. *All of these twenty were dead within five years.* In fifteen, the entire breast was first removed and later, after microscopic study, the axillary dissection was done. Two of these, both having early adeno-carcinomas, remained well after five years—less than 7 per cent cured. Fifty-four cases were approached by exploration, the diagnosis made on the operating-table by gross appearance or frozen section, and immediate complete breast amputation and axillary dissection performed. Forty-three cases were well after five years—80 per cent cures.

In the face of such definite, known end-results, theoretical discussion has no place. Exploratory incision is safe, but only if immediate complete operation follows. Delay for laboratory diagnosis (except by immediate frozen section) destroys nearly all chance of cure.

The mechanism of metastasis in breast cancer offers some explanation of these facts. Handley has shown by a beautiful piece of research that cancer of the breast tends to metastasize, not only by embolism

of separate fragments of cancer carried by the lymphatic stream, but also and very commonly by actual continuous growth along the lymphatic vessels, so that a solid cord of cancer may extend from the breast tumor to the axillary nodes. If, therefore, the tumor is excised, or even the breast amputated, microscopic strands of cancer may be cut across with the knife, implantation in the wound may occur and also stimulation by the injury of the cancer cells in the cut lymphatics to more rapid growth and spread.

Why, then, are many surgeons confident, from their own experience, that they have cured breast cancer by two-stage operations? There are two obvious reasons: 1. Failure to recognize the difference in behavior of different types of breast cancer. Certain adeno-carcinomas, when pure and not mixed with true scirrhus or medullary cancer, metastasize late or not at all. If the surgeon removes a breast containing such an adeno-carcinoma and receives from his pathologist a diagnosis of "cancer" and then later performs an axillary dissection, his patient will remain well. She might have remained well without the axillary dissection because no metastasis had occurred, but she is set down in his records as a case of "breast cancer" cured by a two-stage operation.

2. Mistakes in pathological diagnosis. Some pathologists who do not see patients clinically and follow them tend to make histological diagnoses of "cancer" on microscopic cell appearances that are borderline or, at most, not typical scirrhus or medullary cancer. Or they are actually incompetent and call blood-vessels in granulation tissue cancer. I have actually seen this done and axillary dissection later performed on such a diagnosis. Such "cancers" are "cured." They would have been cured if the axilla had been treated by an electronic machine or a cancer paste. No cancer is there. Our statistics of operative cures of cancer of the breast will be worthless until we distinguish sharply between true scirrhus or medullary cancer and the adeno-carcinomas and borderline or doubtful or actually mistaken histological pictures.

2. THE LIP

Here again, definite facts are available. Both Bloodgood and Broders have published extensive end-result studies. The former states that, in his experience, where a correct V-excision has been made, no case has ever had a local recurrence. The primary tumor has been studied in the laboratory as a routine, and if more than "transitional stage" malignancy is present, a neck dissection is subsequently done. One hundred per cent have been cured when no neck glands could be demonstrated pathologically to have metastasized, and 50 to 70 per cent have been cured even when metastasis has been found.

A two-stage operation is, therefore, safe in the case of the lip. This fact is also readily explainable, for squamous cell carcinomas of the lip apparently metastasize chiefly by embolism and not by continuous lymphatic permeation as in the case of the breast, so that excision of a lip growth through surrounding healthy tissue cuts across no strands of cancer in lymphatic vessels. A preliminary excision of the primary growth is of tremendous advantage, because

in the early stages of malignancy, as demonstrated by the microscope, neck dissection is unnecessary, since no metastases have yet taken place.

Is it justifiable to excise a piece instead of the entire primary growth? Why do it? The large growths are obvious clinically. Small lesions are easily excised without deformity resulting, and excision leaves no remaining lesion to act as a precancerous focus.

3. THE SKIN

Considerations for skin lesions are identical for practical purposes with those for the lip. In the case of large lesions situated so that excision would be mutilating, and where diagnosis cannot be made clinically, excision of a piece of the growing edge may be justified, but these cases are rare.

4. THE TONGUE

Here the situation is different because the chances of operative cure, except in very early growths, is remote. Less than 10 per cent of tongue cancers can be cured surgically, while removal of any but small growths involves distressing mutilation. When diagnosis cannot be made clinically, excision of a piece is without doubt justifiable.

But here again, if only a piece of a syphilitic or other ulcer of the tongue is excised the remainder of the ulcer is potentially precancerous. This fact is forcibly illustrated by a record in my possession of a case of small syphilitic ulcer of the tongue, incised for diagnosis, which became fully developed cancer within two months. When a tongue lesion can be excised completely without mutilation, this should be done.

5. THE UTERUS

Among the replies to Greenough's questionnaire, previously mentioned, there was widest diversity of opinion about the removal of tissue from the cervix or the curetage of the fundus for the diagnosis of cancer. In a recent personal communication, Dr. Greenough states that the disagreement is just as pronounced today. His own opinion, based on his experience in his clinic and at the Huntington Hospital, is expressed thus: "While I fully believe that a biopsy should be avoided in every case where a diagnosis can otherwise be made, I fully believe also that a biopsy is to be preferred to delay in awaiting positive symptoms by which the diagnosis can be made. . . . We have practiced biopsy on all our radium cervix cases at the Huntington as a routine, and we have not been able to establish the fact that the biopsy in any way diminished the prospect of cure."

Dr. Thomas Cullen of Johns Hopkins also kindly complied with a request for a statement of his opinion and practice. I quote from his illuminating comments: "We do not want to cut into malignant tumors if we can avoid it, and when removing a surface growth . . . cut around it, but if the surgeon refuses to cut into a suspicious cervix, what will he do? Will he watch the patient week after week, losing valuable time in the occasional case of malignancy, or will he go ahead boldly and remove the uterus in all suspicious cases, thereby doing many unnecessary hysterectomies. How is he going to re-

lieve the many cases of uterine hemorrhage unless he knows just what the patient's bleeding is due to? Personally, I take little or no stock in the view that removal of a small wedge of the cervix is fraught with any danger of spreading cancer if it exists. The cervical tissue is very dense and does not lend itself readily to the escape of cancer cells into the parametrium and further, even if there were danger, I would rather take this than subject the patient to an unnecessary hysterectomy where no malignancy exists.

"From two-thirds to three-fourths of the cases of cancer of the body of the uterus, if operated on fairly early, remain well. Nearly all of these have been diagnosed from scrapings. In former days the hysterectomy was performed several days after the removal of the wedge from the cervix or after curetage—now it is commenced within ten to fifteen minutes—just as soon as the frozen section is diagnosed."

I want to call special attention to the last statement. In one of the largest and best gynecological clinics in America, it is felt that recourse must be had to microscopical examination in the diagnosis of early cervix and fundus cancer; yet, while many cases have been cured by a two-stage procedure, it is the practice now to "play safe," make the diagnosis from frozen section and perform the operation for cancer, if present, at the same sitting.

6. SARCOMA

Small, excisable sarcomata should obviously be completely removed. Nothing is to be gained by preliminary section. In large, connective tissue tumors the question is usually one of avoiding unnecessary operation. If we realize that mutilating operation—amputation, etc.—is useless for malignant sarcoma and unnecessary for benign connective tissue tumors, the advantages of microscopic diagnosis are obvious, but here again, frozen section is the method of choice because some benign tumors (e. g., the myxoma of bone) implant and metastasize if left in place after being cut into.

SUMMARY

In essence, this paper is a plea, not against diagnostic incision of tumors, but against delay between such incision and complete operation. In at least one situation (the breast) the two-stage procedure has been proven to destroy almost all chances of cure in the more malignant forms of cancer. In other locations (the uterus and cervix) the evidence is not so convincing as to absolutely condemn curetage or removal of a piece of tissue and delay for laboratory diagnosis, but the ideal procedure is frozen section diagnosis and immediate complete operation when this gives positive evidence of the presence of cancer.

In the case of the lip, removal of the primary growth complete (rather than incision of the growth) is a safe procedure with dissection of the neck lymphatics at a later time, depending on the microscopic appearance of the primary growth.

For lesions of the skin and of the tongue the same procedure is to be recommended as for those of the lip, except that in large growths of the tongue, where complete excision would be seriously mutilating and the chances of curing cancer remote, diagnostic in-

cision seems justifiable when the lesion cannot otherwise be accurately identified.

Small connective tissue tumors should be removed intact—certain large ones explored for gross appearance or frozen section diagnosis.

391 Sutter Street.

HIGH PROTEIN RATION AS A CAUSE OF NEPHRITIS *

By NEWTON EVANS, M. D., AND E. H. RISLEY, M. D.,
Loma Linda, Calif.

(From the Departments of Biochemistry and Pathology of the College of Medical Evangelists)

Review of selected literature.

Experiments recorded.

It is evident that, to be technically correct in view of present knowledge and ideas, the term "parenchymatous nephritis" should be quite largely avoided.

Animals fed on the high protein ration for prolonged periods showed nephritic changes, without exception.

We believe that the results of these experiments substantiate the correctness of the low protein ration as one of the important measures in the prophylaxis and therapy of nephritis.

DISCUSSION by T. Addis, San Francisco; Eugene S. Kilgore, San Francisco.

NO CONSIDERATION of the causes of nephritis can be satisfactory without including recognition of the classification of these conditions. Obviously, a classification may be attempted upon one of several different bases: anatomical, histopathological, clinical or etiological, or a combination of these. It is recognized by all that a satisfactory classification must take etiology into account, and since little has been known of the real causes of nephropathies until recent years, the attempts at classification have been numerous but unsatisfactory and confusing. When some of us were medical students twenty-five years ago, the histo-pathological classification presented included the two main divisions, "parenchymatous nephritis" and "interstitial nephritis" with subdivisions. The term "chronic interstitial nephritis" was used to indicate all contracted kidneys, those in which there was a manifest growth of new fibrous tissue. Although the term "chronic interstitial nephritis" still occurs in some textbooks and in the vocabulary of many physicians the present tendency is to eliminate the term from our nomenclature. It is now recognized that any type of true nephritis, if it exists for a sufficiently long period, ultimately eventuates in the fibrous contracted kidney (secondary contracted kidney), whether the original process is a tubular nephritis, a glomerular nephritis or the very rare true interstitial nephritis; or whether it is the slowly progressive process of the arteriosclerotic kidney (primary contracted kidney).

There seems also to be, even now, a lack of uniformity in the use of the term "parenchymatous nephritis," sometimes used as referring to conditions of primary tubular degeneration and by some used to include both those cases in which the primary change is in the tubular epithelium and the more frequent

cases in which the glomeruli are principally involved. It is evident that, to be technically correct in view of present knowledge and ideas, the term "parenchymatous nephritis" should be quite largely avoided.

In the literature of recent years the most quoted authority on the classification of the nephropathies is the monograph in German of Volhard and Fahr, published in 1914. In brief, they recognize:

1. The nephroses—degenerative lesions of the tubular epithelium.

2. The true nephritides—glomerular nephritis—inflammatory lesions primarily in the glomeruli.

3. The scleroses—contracted kidney due to arteriosclerosis of the renal arterioles.

In the first group (the nephroses), with tubular degenerations they recognize an acute course, a chronic course and a final stage with fibrous contracted kidney (one form of secondary contracted kidney).

In the second group (true glomerulonephritis), there are two sub-classes: First, the diffuse form (the more usual), and second, a focal form, each of which may be seen in three stages, all ending in a contracted kidney (secondary contracted kidney).

In the arteriosclerotic kidney (primary contracted kidney) the scleroses group, they divide the cases into benign hypertension cases and malignant hypertension cases, the latter being, according to their view, a combined form of arteriosclerotic contracted kidney and true nephritis.

Notwithstanding the general tendency to follow quite faithfully this classification of Volhard and Fahr, it is evident that from a strictly clinical standpoint it is frequently not possible thus to classify actual cases accurately. The majority of clinical observers are satisfied to characterize the conditions as (1) acute, (2) subacute, or (3) chronic nephritis, or as a (4) chronic arteriosclerotic or vascular nephritis, not attempting to differentiate clinically between tubular and glomerular nephritis. Such a classification is followed by Newburgh in his recent extensive paper on the etiology of nephritis in "Medicine."

Henry A. Christian presents a practically identical division except that he recognizes the possibility of dividing all *chronic* cases into three groups: the true chronic nephritis, the arteriosclerotic cases, and a combined group, meaning an arteriosclerotic kidney in which the true chronic nephritis process is associated.

ETIOLOGY

The one important etiological factor in true nephritis now accepted by all observers is that of infections, principally the streptococcus infection. As presented clearly by MacCallum, the more intense acute infections, such as general peritonitis and acute septicemias, usually produce tubular changes, while the less severe types of infections, especially the subacute forms, such as those produced by the non-hemolytic streptococci, are associated with glomerulonephritis, including acute, subacute and chronic forms. Acute tubular epithelial degenerations, as is well known, are also caused by various mineral poisons and other toxic substances. The type of these is the kidney of bichloride of mercury

* Read before the County Medical Society, Los Angeles, Calif., January 3, 1924.

poisoning. In toxemias of pregnancy and in eclampsia, there are typical tubular degenerations.

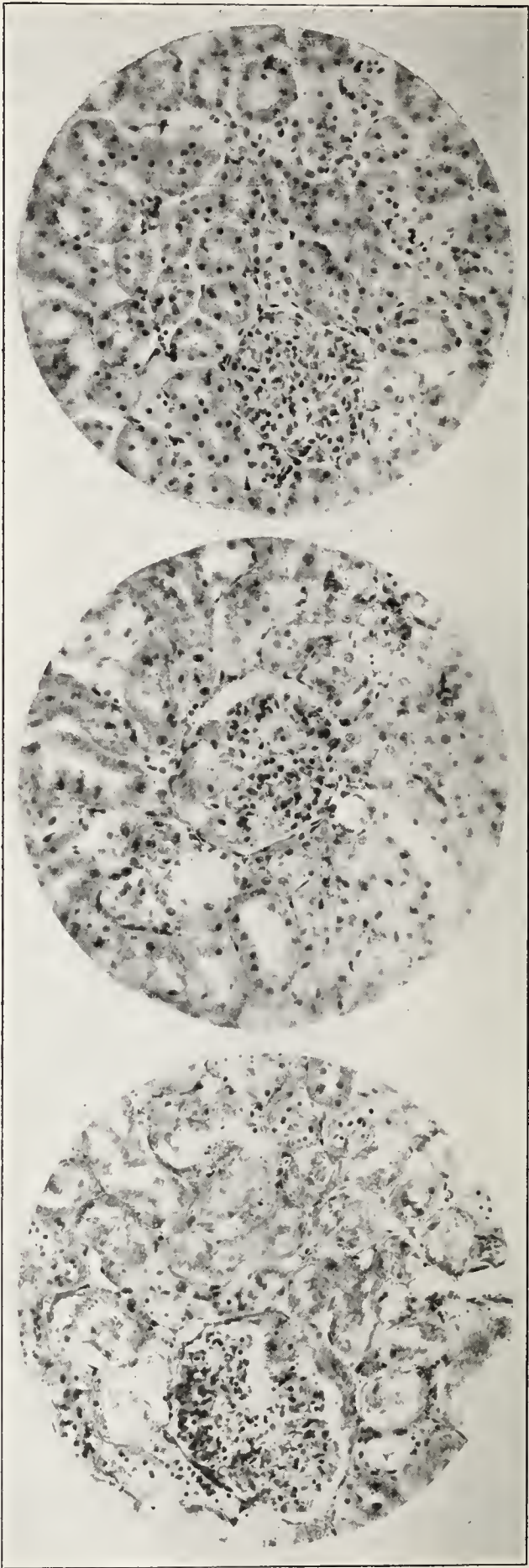
The first to elucidate in a comprehensive manner the important relationship of streptococcic infections to acute and subacute glomerulonephritis was Löhlein, in 1907. His careful pathological and clinical observations have been generally accepted and confirmed by many workers, from both an experimental and clinical standpoint. Probably the streptococcic lesions which give rise to the greatest number of recognized nephritides are those of the tonsils. Among others, Ophüls has published a number of reports of clinical and autopsy studies on nephritis (1912 and onward), showing the importance of streptococcus infection in the causation of nephritis.

In recent years attention has been called to an entirely different group of causes of nephritis. W. T. Longcope, in 1913, reported remarkable anatomical changes in the liver, myocardium and kidneys, following anaphylactic shock from foreign proteins injected in experimental animals. Later, in 1915, he reported other experiments, showing that similar necrotic and inflammatory changes (though less intense) occurred in the kidneys as well as heart and liver, from the parenteral injection of large doses of foreign proteins in animals not sensitized and in which no anaphylactic reactions occurred. Evidently, the foreign protein in sufficiently large doses exerted a toxic destructive influence upon the kidney tissue; but we should not overlook the fact that in these experiments the protein material was introduced directly and was not ingested as a food.

In 1919, Newburgh conceived the idea that possibly the products of nitrogenous metabolism, which normally do not injure the kidney, are capable of producing serious damage if the kidney is called upon to eliminate them in excessively large amounts. This conception was based upon the fact that, although the normal kidney is capable of secreting such toxic mineral salts as mercuric chloride in small amounts, the tubular epithelium suffers severely if it is called upon to handle this poison in stronger dilution. He accordingly undertook to ascertain the effects upon the kidneys of rabbits, of feeding excessive amounts of protein food. In several series of experiments he used different proteins: egg-whites, soy beans, and

SUMMARY OF RAT-FEEDING EXPERIMENTS
High Protein Diets

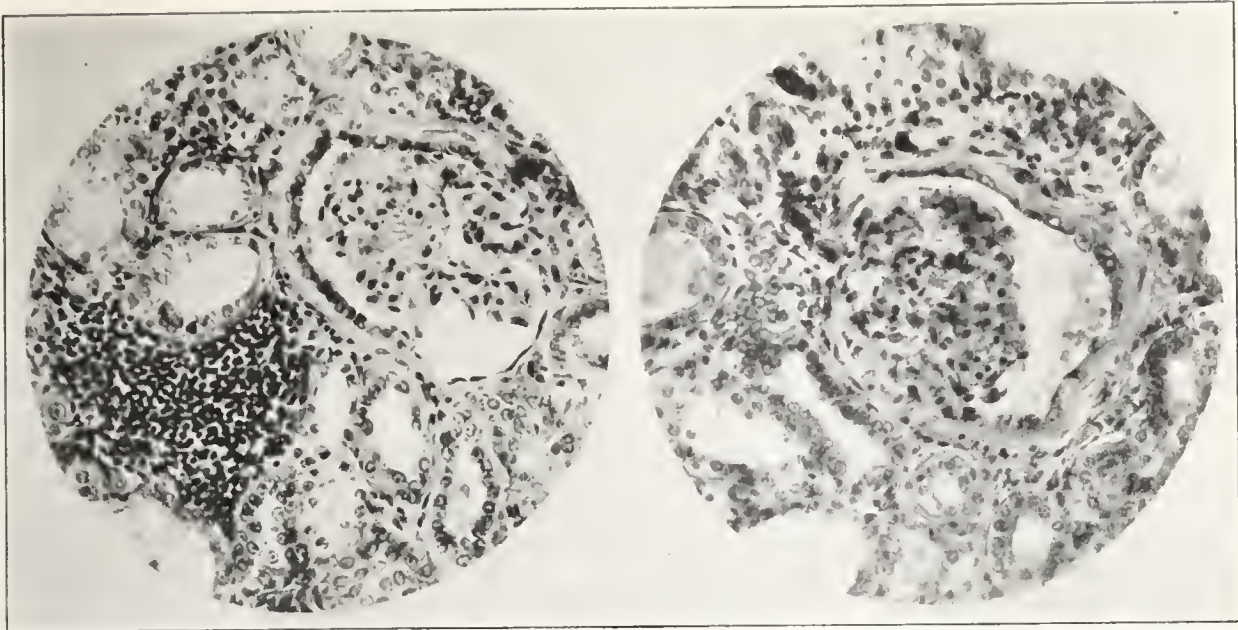
Diet	No of Rats	Growth	Albumin in Urine	Per cent showing definite Microscopic Pathology	
				Tubules	Glomeruli
Controls ordinary diet	10	Good	(No. tested, 9) Pct. positive, 11 trace only	0	0
Casein	4	Poor	(No. tested, 0)	100	25
Casein and wheat gluten	4	Fairly good	(No. tested, 3) Pct. positive, 100	75	75
Meat	6	Good	(No. tested, 2) Pct. positive, 100	83	33
Nut meal	15	Poor	(No. tested, 2) Pct. positive, 100	47	33
Peanuts	4	Fair	(No. tested, 1) Pct. positive, 100	75	25
Soy beans	5	Fair	(No. tested, 1) Pct. positive, 0	80	60
Wheat gluten	8	Poor	(No. tested, 6) Pct. positive, 100	25	75



TOP
Ordinary Diet.—Normal kidney.

CENTER
Wheat Gluten Diet.—Partially hyalinized glomerulus.

BOTTOM
Meat Diet.—Exudate in Bowman's capsule. Extensive tubular degeneration.



Casein and Wheat Gluten Diet.—Round cell infiltration, fibrous and epithelial hyperplasia of Bowman's capsule.

Casein and Wheat Gluten Diet.—Changes similar to photograph above, but with exudate in Bowman's capsule and adhesion of glomerulus to capsule.

RAT-FEEDING EXPERIMENTS, HIGH PROTEIN DIET (WHEAT GLUTEN)						
Number	Diet	Months on Diet	Weight Grams	Urine	Pathology	
					Tubules	Glomeruli
54	Wheat gluten	6	34-154	Not tested	Slight pyknosis	Badly diseased. Hyaline degeneration
33	Wheat gluten	9	64-165	Not tested	Normal	Normal
55	Wheat gluten	14	55-197	Albumin +	Some degeneration with pyknosis	Exudate with definite changes
56	Wheat gluten	14	32-111	Albumin +	Moderate pyknosis	Some adherent. Some with exudate
57	Wheat gluten	14	47-160	Albumin +	Some pyknosis	Some thickened and fibrous
58	Wheat gluten	15	61-164	Albumin +	Normal	Moderate changes. Thrombi in capillaries
59	Wheat gluten	15	32-105	Albumin +	Normal	Exudate and epithelial proliferation in a few
60	Wheat gluten	15	62-168	Albumin +	Normal	Small exudate in a few

RAT-FEEDING EXPERIMENTS, HIGH PROTEIN DIET (CASEIN AND WHEAT GLUTEN)							
No.	Diet	Months on Diet	Weight Grams	Urine	Pathology		
					Tubules	Glomeruli	Other Findings
39	Casein and wheat gluten	7	60-239	Albumin +	Some contain casts	Many seriously damaged. Much exudate	
41	Casein and wheat gluten	7	83-172	Albumin 0	Normal	Some contain exudate	
42	Casein and wheat gluten	7	85-138	Albumin +	Badly damaged. Degenerated	Degenerated and fibrosed	New fibrous tissue around glomeruli
43	Casein and wheat gluten	7	94-200	Albumin +	Advanced degeneration. Hypertrophied. Contain casts	Enlarged and many fibrous	Much new formed fibrous tissue

casein. He found that when the animals were killed and the kidneys examined, constant evidences of renal injury were found after feeding excessive amounts of these proteins. Apparently, the soy beans and the egg-whites produced greater injury than the casein. Fifteen grams of casein daily in the average-sized rabbit produced no injury, while 30 grams constantly produced lesions. He was able to recognize nephritis in all stages—acute, subacute, and chronic—ending in typical secondary contracted kidney. The urines contained albumin and casts, and

the blood chemistry determinations showed a constant retention of non-protein nitrogen.

In an effort to determine the specific substances responsible for the nephritis lesions, he made tests which proved conclusively that urea in the amounts present in the experimental animals was not the substance at fault.

These facts reported by Newburgh suggested the desirability of confirming his findings, but it seemed to us that rats would be more suitable material on account of greater similarity to human beings in

their dietetic habits. We accordingly began at once, 1919, a series of feeding experiments on white rats, which we are reporting at this time.

In the May, 1923, number of the Johns Hopkins Hospital Bulletin, there appeared a report of similar experiments in which rats were used by E. V. McCollum and two of his associates. Their experiments were also suggested by the report of Newburgh's work. In beginning their experiments they were impressed by the idea that in Newburgh's rabbit-feeding experiments it appeared that the diets of the animals were abnormal in other features besides being high in protein; for instance, these diets were evidently deficient in essential mineral salts and probably in vitamins. Accordingly, their experimental diets were carefully planned so as to give the rats a well-balanced diet, except in the one feature of abnormally high protein content (31-41.3 per cent). The excessive protein in their mixture was attained by adding various quantities of casein, liver and legumes to other natural food substances. Their final results proved to be in entire accord with those of Newburgh, as indicated by the following quotation: "Notwithstanding the fact that the rats apparently did so well on these diets, they showed kidney damage, without exception. . . . There is apparently no cause other than the excretion of excessive amounts of the end products of protein metabolism to which we can ascribe this renal damage."

These observers also agree with the statements of Newburgh that the histological kidney changes are primarily those of the tubules rather than of the glomeruli.

In the reports of these rat-feeding experiments at Johns Hopkins, there is no indication of any urinary examination of the experimental rats. In Newburgh's rabbit experiments, both albumin and casts were reported. Certain blood chemistry observations, however, are reported in the rat experiments.

In Newburgh's most recent article, he describes several series of experiments on human subjects, both normal and nephritics, which show definite injurious results upon the kidneys following the ingestion of excessive amounts of protein in the form of meat. He also argues from known facts regarding the relative infrequency of nephritis in racial groups habitually living upon a low protein dietary that such a diet is less taxing to the kidney parenchyma than the high protein dietary.

EXPERIMENTS

As mentioned above, in 1919, immediately following the reports made by Newburgh, we undertook feeding experiments with some foods that seemed to be suited for the purpose. Our work has continued more or less steadily from that time to the present and, although covering only about sixty animals, yet it seems to be of enough interest to report. White rats were chosen as the best suited animals, since they are omnivorous, are comparatively easy to care for, they live well in captivity, and have a rather short span of life. This last point makes it possible to follow the test long enough to be comparable to man, and yet not consume too large an amount of time in getting the results.

The animals were kept two in a cage, but no

effort was made to follow successive generations. Care was taken to keep everything in as favorable a condition as possible, so that other influences, aside from the diet, would be practically nil. The animals were weighed and checked up from time to time and account made of their progress. In spite of all our efforts, some of the animals died in the early part of our work, probably due to the one-sided diet which they were receiving. This accounts for some of the low ages given in our reports, as all rats were autopsied and the kidneys studied carefully, regardless of the time they had been under the dietary restrictions. In about one-half the cases, specimens of urine were collected and tested for albumin qualitatively by such tests as Heller's and acetic acid and potassium ferrocyanide. We regret that this was not done with the entire series, but did not at first see the possible significance of such a procedure, and further thought that it would be a difficult task to collect the urine. Collection and examination of the urinary specimens was later simplified and was followed throughout.

The following data give some idea of the character of the foods used:

1. *Casein*—The commercial product and one made in our own laboratory were used, the per cent of protein ranging near 75 per cent. The product was finely ground and was fed to the animals in that form.

2. *Meat*—The meat used was the flesh of rabbits, as we had a surplus stock of those animals on hand at the time. The meat was not allowed to spoil, but was hung in the cage in small quantities at a time. The protein was estimated as averaging 20 per cent, the fat as 12 per cent, and the other solids at about 2½ per cent, making the total solids 34½ per cent. This would make the protein about 58 per cent of the total solid water-free material, exclusive of the bones which were not eaten in any amount.

3. *Nut Meal*—A peanut product having 55.5 per cent protein. This was also used in the form of a finely ground powder.

4. *Peanuts*—Ordinary shelled peanuts. The samples we used averaged about 27 per cent protein. These were fed to the animals whole.

5. *Soy Beans*—Ordinary product from the store. Averaged 39 per cent protein. Fed to animals whole.

6. *Wheat Gluten*—Made from flour by washing out the starch. The sample used ran 44 per cent protein. Finely ground and fed to animals in this form.

7. *Greens*—Ordinary alfalfa, lettuce, beet-tops, or similar products. Proteins very small in amount. These were fed only in very limited amounts, and were designed to keep the animals going better, so far as vitamins and salts were concerned.

We are aware that there are several imperfections in our technic. Perhaps the most important of these is the fact that our dietaries were not balanced in a way that would give reasonably near complete nutrition. Some of our animals showed definite nutritional disturbances from the lack of vitamins, the lack of which was only in part supplied by the green stuffs used. It is interesting that McCollum and his associates, after very careful checking up the

diet from every viewpoint possible, got very similar results, so far as kidney damage is concerned. The work is not as complete in details as might be desired; for example, the percentage of albumin in the urine might have been estimated, the urine might have been studied for the detection of casts, and the blood chemistry might have been studied, although it is rather difficult to get blood from rats during life without injuring them seriously and thus probably bringing other factors to play on the problem.

A series of ten control rats was used to get information as to what might be expected in the examination of the kidneys of normal animals. These rats were fed upon mixed grains and greens. The grains used were wheat, kaffir corn, and maize, with an average protein percentage of about 10. Varying periods of time were taken so as to give data for various ages. As will be seen by the tables, only one showed albumin in the urine and that only a trace, and none showed microscopic change of any moment in the kidneys. We are, therefore, justified in concluding that rats living upon an ordinary diet for periods of sixteen months or less are practically free from kidney lesions.

In studying the animals fed upon the special diets, it is of interest to compare the relative frequency of tubular lesions and glomerular lesions. Our summaries show that the tubules of the kidney are more susceptible to the injurious effects of the high protein diet than are the glomeruli. This is well seen when the average per cent of damage is determined for all the groups, the tubules showing 69 per cent; the glomeruli only 46 per cent. By comparing the different groups on the different dietaries, it appears that in the case of wheat gluten the glomeruli are involved more than are the tubules, while in all other cases the reverse is true. The explanation of this is not clear, and whether any significance should be placed upon it is questionable.

Taking the time factor into consideration, as well as the percentage of protein, it appears that the damage to the kidney is in direct proportion to the content of protein in the diet, with the exception that soy beans and peanuts, although less in protein content, have more marked effects than some of those foods much higher in protein. These products were fed in their original form without grinding, and thus were possibly less completely utilized.

Of the different high protein dietaries used, the meat diet appeared to have the most favorable influence upon the growth of the animals—probably because it more nearly approached the ideal diet in presenting the necessary food elements. Further, the rats with meat had as much of the greens as did the others, but in no case was an excess of the green stuffs used. Next to meat, the animals with the combination of wheat gluten and casein made the best growth. Those fed upon casein, nut meal, and wheat gluten alone did poorly and suffered a great deal from malnutrition. In our early work some of the animals died before sufficient time had elapsed to show marked effects upon the kidneys. Later, the addition of small amounts of greens helped to keep the experiments going for longer periods of time.

The most serious lesions in the kidneys were found in the rats fed upon the mixture of casein and wheat

gluten. In two of these animals fed only seven months on the mixture, very advanced and marked lesions were observed in both tubules and glomeruli. Advanced changes were also found in those fed upon nut meal for periods of ten months or longer. In two cases fed on meat ten and eleven months, the changes were marked. In all of these cases there was definite replacement of renal parenchyma by connective tissue.

The accompanying tables make a further detailed discussion of the kidney findings superfluous, and the characteristic histological changes are illustrated by the photographs reproduced herewith.

SUMMARY AND CONCLUSIONS

1. The control animals fed on an ordinary diet for corresponding periods showed no kidney changes.
2. Animals fed on the high protein ration for prolonged periods showed nephritic changes, without exception.
3. We believe that the experiments carried out by Newburgh, McCollum and others, as well as by ourselves, prove definitely that high protein diet is capable of producing true nephritis in the animals used.
4. There is no question but that there are other factors, such as bacteria, bacterial toxins, mineral poisons, and other toxic materials which are basic in the etiology of nephritis, but it seems very possible that the high protein ration generally used by peoples in temperate zones is a definite etiologic factor.
5. We believe that the results of these experiments substantiate the correctness of the low protein ration as one of the important measures in the prophylaxis and therapy of nephritis.
6. Although the experiments herewith reported were extreme applications of the high protein ration, yet, taking into consideration the comparatively short duration of the test, in some cases not over one-seventh of a rat's life, it seems very plausible that 25 to 30 years, corresponding to one-third or one-half of a man's life, of the moderately high protein dietary would produce some of the damage we see today in the cases constantly coming before us.
7. Since meat is the protein food used most abundantly (Sherman says we use 180 pounds per capita in the United States per year), it would seem wise at least to limit its use in the average dietary to one-half the present quantity consumed, and to correspondingly increase the use of fruits and vegetables, which are low in protein and at the same time yield vitamins and salts of great value.

DISCUSSION

T. ADDIS, M. D. (Stanford Medical School, San Francisco)—The paper demonstrates that abnormalities in the structure of the kidneys may be found in rats which have been given a diet which is high in protein. But there seems to be room for considerable doubt as to whether or not these anatomical changes are due to the high percentage of protein in the food or to some other factor or factors associated with the diet.

The question of the effect of high protein diets is, as a matter of fact, very complex, and the work which has been done has given, apparently, contradictory results. Chalmers Watson (Food and Feeding, Appendix, November, 1910) first reported that degeneration of the renal

tubules, as well as various other extra-renal lesions, result from giving much protein to rats, but Drummond, Crowden, and Hill (*Jour. of Physiol.*, 1922, 56, 413) fed rats for 100 days on a diet which contained 83 per cent of casein, and were unable to find any defect in the kidneys. They suggest that Chalmers Watson's results may have been due to vitamin deficiencies. Newburgh's work on rabbits has been referred to by the authors, but it may be noted that the renal lesions he produced bore no resemblance to true nephritis as seen in man, and I have been unable to confirm his findings as to the effect of a large ingestion of meat on the urinary sediment. The lesions found by Polvogt, McCollum, and Simmonds seem to have been of a quite minor nature, and no very definite changes in the chemistry of the blood are reported. Osborne, Mendel, Park, and Darrow (*Proc. of the Soc. of Exper. Biol. and Med.*, 1922-23, 20, 452) found no microscopical evidence of inflammatory or of degenerative changes in the kidneys of rats fed on diets which contained 75 per cent of either casein or meat; and still more recently Osborne and Mendel (*Am. Jour. Physiol.*, 1924, 68, 143) state that there were no pathological changes in the kidneys of rats which had subsisted on pure protein or protein-fat diets, though they did note renal hypertrophy, whereas in Drummond, Crowden, and Hill's experiments the weights of the kidneys of the high protein fed rats were within the normal limits of variation.

The experiments given in this paper by Dr. Evans and Dr. Risley form an interesting but not, I think, a decisive contribution to the subject. In view of the complete disagreement in the results obtained by different investigators, it would seem that the question as to whether a high protein intake produces renal damage is still unanswered.

EUGENE S. KILGORE, M. D. (391 Sutter Street, San Francisco)—The authors have made a valuable contribution, which, together with the reports of Newburgh, McCollum et al., throws strong suspicion on high protein feeding as one cause of nephritis; and Dr. Addis has pointed out reasons for withholding final conclusions on the relation of protein diets to human nephritis. A further reason for conservatism is the universal difficulty in converting the results of animal experiments into conclusions for man. The rat experiments will have added significance, if they can be confirmed with larger series and with some of the experimental difficulties pointed out by the authors overcome. The comparative span of life of the high protein and normally fed rats would be interesting. And finally, in view of the disagreement of some of the investigators on the nature and extent of lesions in high protein fed animals, it would add materially to the weight of future reports if the possibility of subconscious researcher's bias could be eliminated: e. g., if all or at least the pathological examinations could be made and recorded by one who at the time was uninformed as to whether he was examining test animal or control. This is an experimental precaution seldom taken in medicine, but one which, if followed generally, would save our literature from many contradictions.

In favor of the results of these experiments as applied to man, it must be said that the impressions from clinical experience and insurance statistics are in harmony with the idea that diet is of considerable importance in the etiology of kidney, as well as other degenerative changes. The overweight group, who comprise largely the group of overeaters, have a higher incidence of chronic degenerative diseases and a correspondingly shorter life span.

DOCTOR EVANS (closing)—It would seem that the opinion expressed by Doctor Addis in his discussion of the results of these experiments is of some weight, inasmuch as there is apparent discrepancy in the results of similar experiments in the hands of different workers. It is also true that in our diets, in addition to the high protein content, there may have been a comparative deficiency in vitamins and in the mineral salts. On the other hand, I question the accuracy of some of Doctor Addis' interpretation of available information. He states that the kidney lesions in Newburgh's rabbits have no resemblance to true nephritis as seen in man. Newburgh states in his report of 1919 that the rabbits developed acute, subacute, and chronic nephritis; and it is my impression that the photo-

micrographs which he presents exhibit lesions which histologically bear considerable resemblance to the effects of nephritis in man.

Regarding the results of Polvogt, McCollum, and Simmonds in their rat-feeding experiments, they state unequivocally that the high protein diets produced an unfavorable influence upon the kidney tissues.

In the observations of Drummond, Crowder, and Hill, as quoted, the kidneys were examined after 100 days of feeding. I doubt whether that period was long enough to produce the characteristic results. In our work and that of Polvogt et al., the periods were much longer—from six months to fifteen months, in our experiments. In the report of Osborne and Mendel on experiments for the purpose of determining the effect of diets deficient in preformed carbohydrates, there is no detailed information as to what proportion of the animals were examined histologically or at what stage in the feeding the kidneys were thus examined.

Doctor Kilgore very properly emphasizes the importance of unbiased observation of suspected lesions. We purposely made our microscopic observations under conditions which would insure this. No information was available, to the one of us who did the microscopic work, as to the nature of the diet in any given case until after the observations were made. The dead rats were brought to the pathology laboratory and recorded by number only. Under these working conditions, no abnormalities were recorded in the ten control animals on the normal ration. The lesions presented in the photographs shown illustrate the conditions observed in the animals with the abnormal diets.

Tinkering With Health by Tinkering With Milk—

The California legislature shows poor judgment in starting out to solve the really serious and extensive milk problem by attempting to tell the hospitals what kind of containers their milk may be served in. Hospitals have the facilities and are perfectly competent to judge the quality of food, drink or medicine they serve their patients. Furthermore, they are already legally responsible for any untoward results that may happen to their people because of carelessness or ignorance.

California certainly does need, and needs badly, some intelligent legislation upon its milk problem, but before such legislation can be worth while there must be better enforcement of some of the existing complicated laws upon the subject and an intelligent report prepared by personally disinterested thoroughly qualified students.

There are several public health features of milk more important than that it shall be served only in certain kinds of containers. The typhoid germ grows just as luxuriantly in a quart bottle of milk as in a tin can, and, furthermore, it is no respecter of labels. These germs have recently grown in milk in bottles and other containers to the cost of health and life in our state and elsewhere.

And We Call Ourselves "Free"—"Thirty years from now, if we continue at the present riotous rate, taxes will be \$100 per capita," says Senator Borah, "and 40 per cent of the national income will be demanded for public expenses. There will be an officer for every ten persons in the republic, and in every activity we will find ourselves under the surveillance of a bureau. We will still have a republic in name, but a bureaucracy in fact—the most wasteful, the most extravagant, the most demoralizing and deadly form of government which God has ever permitted to torture the human family."—*Illinois Medical Journal*.

Doctor or M. D.—The title of Doctor seems to have little significance any more, since it may be applied to the osteopath, the chiropractor, the optometrist, and a vast army of less well known but insufficiently qualified practitioners of the healing art. It is, therefore, of real importance that the Doctor of Medicine be careful always to distinguish himself by his degree of M. D. rather than merely by the meaningless title of Doctor.—*The Atlantic Medical Journal*, March 1925, Editorial.

CONGENITAL NASAL ATRESIA

By FRANCIS L. ROGERS, M. D., Long Beach, Calif.

It is important that the nasal tract anteriorly and posteriorly be cleared of obstructions prior to the operation for atresia.

The removal of a section of the posterior end of the nasal septum is important in securing a free and permanent opening.

The effect of continuous mouth-breathing upon the nutrition and general health of the child is very marked. In bilateral atresia narium cases, the very prompt and marked improvement in this case illustrates the point that in these cases imperfect oxygenization and physical exhaustion from labored breathing, rather than infections, are the greatest factor unfavorably influencing general nutrition of the child.

A better understanding of this condition, careful routine examinations of the nose, with a probe at birth by obstetricians, would no doubt reduce infant mortality and relieve embarrassment resulting from faulty diagnosis by family doctor or pediatricist, and generally conduce to greater efficiency in our profession.

DISCUSSION by Harvard McNaught and C. Edgerton Carter.

JUDGED by the available literature on the subject, congenital nasal atresia is a rare condition. Many nose and throat textbooks do not even mention it. Others of a considerable number examined give it but very brief mention. Otto, in 1830, was the first to discover the condition which he found at post mortem. It was first reported in a living subject in 1854 by Emmert. Schmiellglow, in 1904, first tabulated a list by collecting sixty-four cases, and up to the present time (1924) there have been about 165 cases reported in the literature of all countries.

In a questionnaire presented to a group of forty nose and throat specialists recently, but two reported ever having seen a case of congenital bilateral atresia of the nasopharynx.

The cause of congenital atresia of the choana is somewhat clothed in doubt, but it is believed that the primitive nasal capsule which develops as a part of the primordial cranium, and which extends forward beyond the anterior portion of the notochord, forms a core for the frontal nasal process, producing a broad mass of tissue changed in form somewhat which approximates the lateral nasal and maxillary processes. By this approximation of the nasal structures, the ectodermal coverings are brought abnormally into contact, the processes become united and the atresia results. This all occurs in the early months of the intra-uterine life during the formation of the foetal head.

Nasal atresia is believed to be much more common than the present available literature would indicate. Some writers who have made an intensive study of the subject state their belief is that many deaths at birth, or within the first forty-eight hours after birth, where the cause of death is not positively known, are attributable to this form of asphyxiation. If this be true, the subject is one of very much greater importance than has heretofore been regarded, and offers added reason for bringing the subject to the attention of the profession, particularly to obstetricians, general practitioners as well as the rhino-laryngologist.

Richards says mouth-breathing is always an ac-

quired habit. Hence, a child born with complete nasal obstruction almost immediately becomes cyanotic and in distress cries. The crying establishes mouth-breathing, which temporarily relieves the cyanosis. When the child stops crying it soon becomes cyanotic again, and it frequently becomes necessary to aid the child's early respiratory acts by mechanically elevating the soft palate and pulling the tongue forward, repeating the practice until the mouth-breathing habit is acquired.

Statistics compiled in 1918 by McNaught of San Francisco indicate that the condition occurs more often on the right than on the left side, and much more often unilaterally than bilaterally, but accurate percentages for either are not available.

When one nostril is occluded, the patient may not manifest the most marked symptoms of obstruction. Where atresia is complete on both sides, mouth-breathing is the most conspicuous symptom. The persistent presence of secretions of a peculiarly opaque mucilaginous consistency in the nose which cannot be expelled by blowing the nose, or the appearance of a watery discharge from the nose when the child cries from increased lachrymation, should always suggest the presence of congenital nasal atresia. Headache, deafness, and anosmia are said to exist in most cases, but were not observed in any of the three cases I shall report. The presence of adenoids, polypi, or other tumors benign or malignant, should always be determined and ruled out in every case of suspected atresia.

The treatment of congenital atresia is fundamentally surgical. Authorities differ somewhat as to the time of choice, varying from the first to the tenth year. A majority agree that it should be undertaken as early in life as there is sufficient development to admit the operator's forefinger into the nasopharynx, and the nostril large enough to admit of visualizing the field of operation and the use of instruments required in the nose at the point of occlusion.

I have seen and recognized, in thirty years' practice as a rhinologist, three cases of complete atresia of the choana narium. The first case was seen in 1897, the second in 1907, and the last—the principal subject of this paper—November 5, 1921. The first two were unilateral, the last was bilateral. All three occurred in females, and all were under 10 years of age.

The first case, in a well-developed child of 4 years, was unilateral and on the left side. The parents were healthy farming people in the Middle West.

The second case was a girl of 7 years, the daughter of an Italian musician residing in Long Beach, California. The atresia was on the left side, and was complete. This case was operated, using a technique then recommended in textbooks, but with a result not wholly satisfactory, the lumen of the choanae when healed being smaller than was desired, resulting in a slight whistling sound when mouth was closed and patient was taking exercise.

The third, Harriet H. was born January 4, 1917, in a Brooklyn, New York, hospital. She was a first child. There is no history of hereditary disease or abnormality in parents, both being strong, healthy young Americans, aged about 22 years. The child

was a "war baby" and weighed at birth twelve pounds. Delivery was very tedious, lasting four days, but was completed without instrumentation. From the moment of birth, the child had great difficulty in breathing. Almost constant attention of a nurse was required for several days to relieve attacks of choking and cyanosis. It does not appear from any history obtainable that the real cause was discovered at that time. At the age of 11 months, and again at 2½ years, adenoids were diagnosed and removed without general anesthesia at Brooklyn and New York clinics. Neither operation seemed to have afforded any material relief to the patient, and no intimation was ever given the mother of the discovery of any other cause for her constant mouth-breathing and other symptoms. The case was referred to me by a colleague November 5, 1921, with the suggestion that she had adenoids and infected tonsils. Tonsillectomy was performed under general anesthesia on November 8, 1921. No adenoids were found, but the real cause, a bilateral nasal atresia, was discovered, located at or about opposite the pos-



Before operation

After operation

terior end of the vomer. The nasopharynx was rather shallow, but of average width. The occluding wall was firm, smooth and bony, free from granular vegetations or other evidence of disease. The end of the vomer projected slightly backward, forming a well-defined central ridge somewhat wider than the normal edge of the nasal septum. I informed the mother of the condition present and nothing further was attempted until April 18, 1922, when under ether anesthesia the case was operated, and we believe the defect most successfully remedied by the following procedure:

Both anterior nares were cleansed and packed with gauze soaked in a 1-3000 solution of adrenalin. With a well-darkened operating-room, a hooded lamp, and a head-mirror, I was able to visualize the field of operation in both nostrils very well. The left middle turbinate was found oversize, the lower margin being twisted and tightly pressing against the nasal septum, opposite which a small bony spur projected. The turbinate was removed, likewise a

small button of the bony septum opposite it was resected submucously. This provided a clear field on both sides. An incision through the overlying mucous membranes was made from top to bottom of the septum at the junction of the septum with the occluding bony wall, continuing it across the floor to the outer wall of each nostril. Elevating the membranes, including the periosteal covering of the false bony wall, each was turned in a flap outward and forward against the outer nasal wall. From the primary incisions the mucous membrane and periosteum were then dissected forward on septum and floor about one-fourth of an inch. At that point the bony septum was cut through parallel to the primary incisions. The angular knife and a Freer chisel made the horizontal cut across the floor and upward along the outer wall and vault. The false bony walls were then removed through the nasopharynx with a forceps, using the forefinger in nasopharynx as a guide. A small glass pipette on the regular Yankauer suction apparatus served well to keep the nasal field free from blood and mucus. All bony edges were then carefully smoothed with a curette, and the deflected mucous membrane folded backward over the denuded bony surfaces. A three-eighths inch rubber drainage tube was placed in the floor of each nostril, extending well into the pharynx and projecting one-half inch outside the nasal opening. Two folds of half-inch gauze were impregnated with albolin and were inserted in nostrils above the tubes. A strip of O. Z. adhesive, three-fourths inch wide, was placed from cheek to cheek under the tip of the nose, to which the projecting rubber tubes were stitched for added security. Alkaline irrigations through the tubes were used daily after the second day. Gauze packing was removed on the third day, drainage tubes removed for cleansing and replaced on the sixth day and permanently removed on the eighth day, after which daily irrigations and practice in nasal breathing were begun and have since been kept up with regularity. The child had to be taught to blow its nose and to breathe nasally, but at no time after removal of packing was there any occlusion of either nostril that was not readily relieved by irrigation.

From birth the child had been sallow, pale, undernourished, restless at all times, and mentally retarded. Her facial expression suggested the simple-minded. She was nearly four years old before able to make words into sentences, and until last operation her speech was so imperfect as scarcely to be understood even by her mother. When last examined, June 10, 1922, she was able to breathe comfortably from either nostril with mouth closed, and to sleep with closed lips. She now speaks quite distinctly, has an increasingly good vocabulary, is mentally alert, and her general physical condition has improved greatly. The mother, who is the wife of a naval officer, moved to Seattle, Washington, but reported regularly once each month until July 1, 1923, reporting that her condition in every way seemed that of a normal child. On March 20, 1924, I wrote the mother, requesting a final report and requesting that she take the child to Dr. J. Thomas Dowling of Seattle for a critical examination, and his report to me is as follows: "I am pleased to report that her

nose is in fine condition. She breathes quite normally, as a child should with a normal nose. I think your work has been entirely successful."

SUMMARY

1. It is important that the nasal tract anteriorly and posteriorly be cleared of obstructions prior to the operation for atresia.

2. The removal of a section of the posterior end of the nasal septum, which in this case was considerably thickened, is important in securing a free and permanent opening.

3. The effect of continuous mouth-breathing upon the nutrition and general health of the child is very marked in bilateral atresia narium cases. The very prompt and marked improvement in this case illustrates the point that in these cases imperfect oxygenization and physical exhaustion from labored breathing, rather than infections, are the greatest factor unfavorably influencing the general nutrition of the child.

4. A better understanding of this condition, careful routine examinations of the nose with a probe at birth by obstetricians, would no doubt reduce infant mortality and relieve embarrassment resulting from faulty diagnosis by family doctor or pediatricist, and generally conduce to greater efficiency in our profession.

625 Markwell Building.

DISCUSSION

HARVARD McNAUGHT—Congenital occlusion of the nares probably occurs much more frequently than is supposed. The reported cases are comparatively few, but the discovery of some cases, post mortem, leads me to think that it is more common than the statistics would indicate. Obstetricians and pediatricians should be on the lookout for the cycle first described by Richardson and referred to in the foregoing paper, viz.: cyanosis—crying, which relieves the cyanosis, and so on, and when this is seen, think of this condition.

My own experience has been confined to three cases: one of complete unilateral bony occlusion, and two of partial, incomplete cartilaginous occlusion, all in adults. The two cartilaginous ones were easily corrected, as the septal occlusions were then easily bitten out. No attempt was made to make a mucous membrane flap, as the cartilaginous edges do not show the tendency to granulate that bone does. The case of bony occlusion, however, which I described in a paper read before the California State Medical Society, April, 1917, presented a different problem. This patient was operated by me in January, 1915, by a method I had conceived, viz.: to approach the occlusion by means of a submucous septum operation, extending dissection over the anterior face of the bony wall, and after removing the wall use the membrane to cover the floor and roof of the choana. The execution of the operation was easy until I attempted to remove the bony occlusion, which was found too thick to bite out, and chiseling was deemed dangerous owing to the proximity of the eustachian tube. I then improvised the method which Doctor Rogers has advocated—removal of part of the posterior edge of the nasal septum, which gave complete relief to the patient and did not close. This operation was conceived and performed January, 1915.

In April, 1915, Thomasson independently described an operation essentially similar to mine. I relate this case to call attention to the possibility of meeting with a very thick wall and to endorse the remarks of Doctor Rogers in regard to removing a part of the posterior edge of the septum. Where the wall is thin, an operation such as I

originally intended could easily be done, and should prevent undue closure from granulation.

C. EDGERTON CARTER, M.D. (Brockman Building, Los Angeles)—Congenital nasal atresia, as presented by Dr. Rogers, is distinctly a contribution to the literature of congenital malformations.

To the pediatricist, the congenitally cyanotic infant naturally suggests deficiency of the circulatory or respiratory system or both. That this condition may result from complete occlusion of the posterior nares, is not so well appreciated.

The paucity of case reports by no means reassures us that unilateral atresias, at least, may not have been overlooked within our own experience.

At any rate, Dr. Rogers' report will put us on our guard that no "blue babies" escape this amplification of our differential diagnosis.

This one symptom of cyanosis, which ceases during crying or mouth-breathing, differentiates nasal atresia from cardiac incompetence.

Atelectasis, the other not infrequent respiratory complication, reveals in the infant a rapid, shallow respiration, with cyanosis constantly present, though varying in intensity. Radiographs, of course, further illumine the clinical picture, be it cardiac or respiratory.

One feature perhaps not sufficiently emphasized in Dr. Rogers' able article is that of early diagnosis. The comparatively simple procedure of incising the occluding post-nasal membrane with immediate relief of the suffocative and irritative symptoms is so pre-eminently preferable in our judgment to that of an operation delayed for years, that the writer wishes to heartily second Dr. Rogers in advocating a more careful early differential diagnosis.

Furthermore, there is a mental and physical retardation aside from the resulting developmental deficiency which makes early diagnosis desirable.

These three reported cases were aged 4, 7, and 5 years, respectively, and undoubtedly were correspondingly handicapped during the pre-operative years.

The operative technique elaborated by Dr. Rogers impresses one as comparatively simple, effective, and practical for the skilled operator.

DOCTOR ROGERS (closing)—I cannot but feel gratified at these approving expressions from the gentlemen who have discussed my paper. If their words and what I have gleaned from a rather meager literature and a necessarily limited personal experience concerning congenital nasal atresia serves to arouse the obstetricians, pediatricists, rhinologists, and the greater body of general practitioners who read CALIFORNIA AND WESTERN MEDICINE to a realization that many deaths heretofore registered as "still births," "heart failures," "blue babies," and "cause of death unknown" may be and probably are cases of nasal atresia, then this paper and discussion will seem worth while.

To the equipment of every obstetrician, I would suggest be added a small six-inch ball-pointed silver probe, and recommend that their duty be not complete in any case until they have passed this probe into the mouth by way of each nostril of every new-born baby they deliver. The procedure is simple and practically painless, and will promptly recognize any nasal occlusion and direct a course of action that will save the life of many and perhaps all such defectives who otherwise may not live longer than a few minutes, hours, or days.

Herbalogists Arrested Again—Some of the "Herb" "Doctors" have been again arrested for practicing medicine without a license. "Besides selling herbs, it is charged the 'doctors' diagnosed ailments which is against the law. They were released on a \$100 cash bail by Police Judge Lazarus."

Some of these "Chinese Herbalogists" openly advertise their illegal claims in matter that circulates in the United States mails. We will tell the outcome of these arrests later.

THE INTENSIVE TREATMENT OF CONGENITAL SYPHILIS (FINAL REPORT)

By HERMANN SCHUSSLER, JR., M. D., *San Francisco*

(From the Division of Pediatrics, Stanford University
Medical School)

A safe and efficient plan of treatment for congenital syphilis, with suitable variations for special types, is presented.

The methods described are easy to carry out, require very little apparatus or technical skill, and cause practically no discomfort to the patient.

The principle involved is a series of vigorous attacks on the spirochete, with the various available remedies, as the best means of avoiding the Wassermann-fast state.

The evolution of the method during 1920-1922, and its extensive use since then, both in private practice and several clinics, has been followed by eminently satisfactory clinical and serological results. It is therefore recommended for routine use in general and pediatric practice.

DISCUSSION by Harold K. Faber, *San Francisco*; Laurence Taussig, *San Francisco*; M. L. Cohn, *San Francisco*; L. J. Schermerhorn, *San Francisco*; Langley Porter, *San Francisco*.

FEW of the recent articles on congenital syphilis are particularly hopeful as regards prognosis, while several have been frankly pessimistic in tone. In a previous paper, published in this journal in August, 1922, I suggested that one reason for this might be a more or less hesitant attitude, on the part of most physicians, toward the employment of intensive therapeutic measures in infancy and childhood, comparable to those commonly used with adults. This hesitancy is based on several rather firmly rooted prejudices in the minds of physicians in general, which might be formulated somewhat as follows: (1) That intravenous injections in infants and children are painful and technically difficult. (2) That large and frequent doses of the organic arsenicals cause serious damage to the liver and other organs in the young. (3) That the co-operation of parents and school teachers, to say nothing of the children themselves, cannot be secured over a sufficiently long period. (4) That late hereditary syphilis is so resistant to treatment that the effort is not worth while.

In my earlier paper I outlined the plan of treatment in use in the Children's Clinic of the Stanford University Medical School, and indicated that excellent clinical and serological results had been obtained in many patients up to that time. In the subsequent two years several improvements have been made in the routine plan, a few variations have been developed to apply to individual cases, and the results as a whole have been so satisfactory that this appears to be an opportune time to present them in a resumé of four years of work.

For therapeutic purposes, the cases are classified as follows: (1) Infants under one year; (2) Children over one year; (3) Interstitial keratitis cases; (4) Wassermann-fast cases; (5) Older children with neurosyphilis. In the first three groups the

course begins with a series of eight intravenous injections of neoarsphenamine in concentrated solution, given at the rate of three a week. For the next eight weeks mercurial inunctions are given twice a week for babies, covering most of the body each time, and three times a week for older children, covering about one-third of the body each time. These rubbings last half an hour, and minute instructions are given to the parents. For the interstitial keratitis cases, intravenous injections of novasurol are given twice a week for eight weeks instead of inunctions. During the neoarsphenamine and mercurial courses, a saturated potassium iodide solution is given in milk three times a day with meals, the dose being one drop (one-half minim) per year of age. This is omitted during the first year of life. A two weeks' rest is allowed after the mercurial course, after which a Wassermann test is done, and the whole course repeated. Thus a Wassermann is done every three months, four courses being given in a year.

Sulpharsphenamine or neoarsphenamine may be given intramuscularly twice a week for eight doses to those infants whose veins are inaccessible. The results are quite as satisfactory as from the intravenous method, using the same dosage and concentration; and there seems to be no pain or local irritation, the baby often going to sleep at once.

For Wassermann-fast and neurosyphilitic children, the plan of treatment is radically changed. The child attends the clinic twice a week for eight weeks. On Tuesday he gets an intravenous injection of sulpharsphenamine 0.4-0.8 g., and an intramuscular injection of bichloridol 0.06 g. On Saturday he gets an intravenous injection of silver salvarsan 0.1-0.3 g., and an intramuscular injection of bismudol 0.2 g. This alternation, which was suggested to me by Baketel of New York, has given excellent results. The intramuscular injections are given into the gluteus medius about an inch above the tip of the trochanter, and are very well borne. Potassium iodide is given throughout in full doses. A month's rest follows each course.

Treatment is continued until two successive rest periods have been followed by completely negative Wassermanns, using a very sensitive method. If clinical signs have also cleared up, active treatment is stopped at this point, but mercury protoiodide is given by mouth for two more months to older children. A Wassermann is then taken every six months for three years. No case is dismissed as probably cured unless all these tests have been negative and there have been no clinical relapses. Lumbar puncture is done only when there is a clear indication for it.

I have used three standard brands of neoarsphenamine, and am unable to note any marked difference between them as regards toxicity and therapeutic efficiency. There is some variation in subjective taste and smell, solubility, and content of foreign particles, but these are of minor importance.

Neoarsphenamine and sulpharsphenamine are given in 30 per cent solution, the dosage being based on body weight, as well as on individual arsenical tolerance, as estimated by a somewhat smaller initial

dose. This is about two-thirds of the regular dosage, which is given in the accompanying table:

Weight:	Under 12 lbs.	12-24 lbs.	24-36 lbs.	36-48 lbs.	48-60 lbs.	Over 60 lbs.
Dosage:	0.15 g.	0.3 g.	0.45 g.	0.6 g.	0.75 g.	0.9 g.
Water:	0.5 cc.	1.0 cc.	1.5 cc.	2.0 cc.	2.5 cc.	3.0 cc.

TABLE I. SCHEDULE OF DOSAGE FOR
NEOARSPHENAMINE

This dosage may seem excessive, according to adult standards, but it must be remembered that arsenical tolerance in infancy and childhood is relatively high, and that late congenital syphilitics very readily become Wassermann-fast when treatment is prolonged, but inadequate. Immediate or nitritoid crises are very rare, and none have been severe enough to require treatment. Silver salvarsan is given in 5 per cent solution, the full dose being one-third that of neoarsphenamine for the same patient. The initial dose is 0.1 g., and subsequent doses increase by 0.05 g. each time up to the full dose. This gradual increase is very important, and will prevent some unpleasant experiences with this preparation.

The technique is as follows with all these arsenicals: A 5 cc. Luer syringe and a 25 gauge, one-half inch needle are sterilized, and the proper amount of cool, freshly boiled water is drawn up. Freshly distilled water is necessary for silver salvarsan, but tap water is perfectly satisfactory for neoarsphenamine and sulpharsphenamine, which are given in practically equal doses. The tip of the ampule is filed off, and the water forcibly injected through the resulting opening. The ampule is now shaken, with a sterile finger over the hole, until solution is complete, but not longer than this. It is then inverted, the needle inserted, and the solution aspirated into the syringe. It is at once injected into any available vein in the usual manner. The temporal or occipital veins are the best in babies, the head being firmly held and a 2 cc. Luer being used. In older children the veins at the bend of the elbow are often as good as in adults. Between these ages the larger of the two external jugulars is the vein of choice. It is brought into prominence by hyperextending and rotating the head, with a pillow under the shoulders. The needle is inserted during a cry, which distends the vein. Unless blood comes back freely no attempt should be made to inject. In children old enough to reason with, the time spent in gaining the child's full confidence and co-operation, and in overcoming his initial fear of the procedure, will prove to be a very profitable investment. My older children take their injections while sitting in a chair, and there is practically never any outcry or struggle, as the tiny needle is scarcely felt. The unpleasant taste and smell disappear if the child holds his nose and breathes through his mouth during the injection.

Mercury inunctions are given in the usual manner. Emphasis is placed on the necessity of giving the inunctions over a very large area, as the mercury is absorbed only through the pores and hair follicles. Mercurial "olives" are used, the dose being 2 to 4 g., according to age. The potassium iodide solution is dropped slowly into a full glass of milk, which is

constantly stirred during this time to insure thorough mixing, and sweetened if necessary.

The intravenous injections of novasurol, which have proved of particular value in interstitial keratitis, are given in ascending dosage. The ampule holds 1.2 cc. The first dose is 0.6 cc., the second 0.9 cc., and all subsequent doses 1.2 cc. Renal irritation is very unusual, and never lasts more than a week after stopping the mercurial. In interstitial keratitis, the preliminary neoarsphenamine course seems to prevent involvement of the second eye in unilateral cases, while the novasurol clears up the acute symptoms and ultimately the opacities. Old cases, of course, respond slowly, but recent cases attain normal vision in a few months.

Novasurol is injected directly, without dilution, using the same 2 cc. Luer and small needle as are employed for neoarsphenamine. It is absolutely non-irritating to the vein. As stated above, two injections a week are given for eight weeks, following each arsenical course.

Untoward effects from the routine plan of treatment have been very infrequent. There have been some patients who could not tolerate iodides, while a few developed a mild dermatitis from neoarsphenamine. These cases all cleared up rapidly under the sodium thiosulphate treatment recommended by McBride and Dennie. Our only fatality traceable to the treatment occurred from intercurrent pneumonia developing in a case of severe toxic jaundice. The patient, a hopeless juvenile paretic, was given a very intensive course of the mixture of neoarsphenamine and bichloride advised by Linser of Tübingen. (We tried this method for a while, but abandoned it as both inefficient and dangerous.) With these few exceptions, I cannot recall one child who seems to have been damaged by the treatment, which seems rather to have a tonic effect.

The clinical and serological results have been very gratifying. As shown in the table, all infants under one year of age have become persistently negative after one or two courses. Of the adequately treated older children, 65 per cent have become and remained negative, 8 per cent became negative, but relapsed, and 27 per cent are Wassermann-fast. The observation period in the negative cases has lasted from a few months to four years without treatment. No case has relapsed after being constantly negative for a year. Of twelve well-treated cases of interstitial keratitis, nine now have normal vision, and three (all old cases) are improving. Of four unilateral cases, the second eye became involved in only one. This boy received no neo. before his first mercurial course. Two small infants died of intercurrent disease, one of broncho-pneumonia, and one of dysentery.

TABLE II

Serological Results in Infants Under One Year	
Total infants treated.....	15
Died of intercurrent disease.....	2
Negative after one course.....	12
Negative after two courses.....	1
Serological relapses.....	0

TABLE III

Serological Results in Children Over One Year	
Total children treated.....	87
Disappeared from observation.....	17
Recently began treatment.....	15
Died.....	1
Adequately treated cases.....	54
Became and remained negative.....	35 65%

Became negative but relapsed.....	4	8%
Wassermann-fast to date.....	15	27%

TABLE IV

Results in Interstitial Keratitis		
Total cases treated.....	13	
Disappeared from observation.....	1	
Normal vision restored.....	9	
Improving (old opacities).....	3	
Second eye involved during treatment.....	1	

Particularly notable has been the clinical improvement in these cases. Bone lesions and paralyses have disappeared, nutrition and weight and color have improved remarkably, and the whole appearance of the patients has changed for the better. One girl gained thirty pounds during her third year of treatment, having gained comparatively little before this. The teachers report better scholarship and conduct under treatment, and all who have seen the results feel that the work has been of great value.

SUMMARY AND CONCLUSIONS

A safe and efficient plan of treatment for congenital syphilis, with suitable variations for special types, is presented.

The methods described are easy to carry out, require very little apparatus or technical skill, and cause practically no discomfort to the patient.

The principle involved is a series of vigorous attacks on the spirochete with the various available remedies, as the best means of avoiding the Wassermann-fast state.

The evolution of the method during 1920-1922, and its extensive use since then, both in private practice and in several clinics, has been followed by eminently satisfactory clinical and serological results. It is therefore recommended for routine use in general and pediatric practice.

Fitzhugh Building.

DISCUSSION

HAROLD K. FABER, M. D. (Stanford University Medical School, San Francisco)—Up to the last few years congenital syphilis was rightly regarded as one of the more intractable forms of the infection, and prognosis had to be given in the most guarded terms. Such results as Dr. Schussler has shown justify a much more hopeful outlook and represent a real triumph in therapy. They have been obtained not only by systematization and persistence, but by a radical increase in dosage, the initiation of which required faith and courage in the face of adverse criticism. I have watched from the first, with interest and approval, Dr. Schussler's well-planned and vigorous method of attack against a disease which is both widespread and deeply rooted at the earliest moment when measures can be directed against it and have been deeply gratified by the success he has obtained, so amply demonstrated in the present paper. It should be emphasized that the method is simple enough to be used by any physician with some skill in intravenous technique with children, though Dr. Schussler's unusual proficiency has been an important factor in the success he has obtained.

LAURENCE TAUSSIG, M. D. (380 Post Street, San Francisco)—It has impressed itself upon us for some time that conscientious, persistent antiluetic therapy could cure a certain proportion of children with hereditary syphilis. As in other forms of late lues, the most important therapeutic agent is mercury. The form in which it is given is of relatively little importance, though I should place properly administered mercury rubs first, insoluble mercury injections, administered intramuscularly, second, and mercury by mouth last. I have had no experience with intravenous mercury, but can see no advantage in its use. I do not think that it matters much whether we give sulpharsphenamine intramuscularly or neoarsphenamine intravenously, providing a number of doses are given at

regular intervals. Our routine course at Children's Hospital recently has been to give 0.1 to 0.3 of sulpharsphenamine at weekly intervals for six or eight doses, and then bichloridol gr. ¼ to gr. 1 at weekly intervals for twelve to eighteen doses. Our series is too small and too recent to compare the results with those reports in this paper, though the results appear to be good so far. It seems to me that the important point that Schussler has brought to our attention and emphasized is, that the conscientious treatment of congenital syphilis is well worth undertaking, and that the earlier we start and the more faithful we and our patients are the better our chance of benefiting the members of this class of unfortunates. I am not convinced that Schussler's rather radical neoarsphenamine dosage is necessary, even though it has proven safe.

M. L. COHN, M. D. (240 Stockton Street, San Francisco)—I have keenly enjoyed the paper of Dr. Schussler and believe it will be of untold assistance to many practitioners who are prone toward pessimism in the prognosis of congenital syphilis. It will also be of extreme value to those men who have no systematic routine in the treatment of this condition, and to those who are skeptical regarding the safety of such intensive treatment.

For the past few years I have treated a large number of congenital syphilitic children at the Children's Clinic, University of California Hospital. My routine has not been so intensive as that advocated by Dr. Schussler, and perhaps the time element has been prolonged, but the results are ultimately quite comparable.

Each practitioner has his individual conception of the treatment of congenital syphilis, most procedures based upon the use of the two drugs—mercury and arsenic—and each method possessing its respective merits.

The most valuable factor in treating congenital syphilis, and the one least considered, is the co-operation of parent and patient. When this condition has been fulfilled it makes little difference which of the arsenicals and mercurial preparations are used, providing adequate dosage is administered over a sufficiently long period of time.

L. J. SCHERMERHORN, M. D. (516 Sutter Street, San Francisco)—During the past five years I have had about seventy-five cases of congenital syphilis under observation and treatment. I am firmly convinced that, to get satisfactory results from treatment, it is necessary to use large doses of either salvarsan, neosalvarsan, silver salvarsan, or neutral salvarsan in combination with mercury and the iodides, and in certain cases bismuth.

Dr. Schussler's plan of treatment is an excellent one, and one that can be followed with comparative safety. However, one must be on the lookout for complications and not take unnecessary chances in pushing the drugs beyond the patient's tolerance.

More negative Wassermans are obtained if, after the first course of neosalvarsan is given, salvarsan or silver salvarsan is used for the second course, and the third course may be a combination of neosalvarsan and any one of the other salvarsans. Mercury is as necessary as arsenic. Mercurial inunctions are the method of choice if the parents will co-operate with the doctor; if not, intramuscular injections of insoluble mercury are to be preferred. Schussler's results are the result of conscientious, persistent treatment, and his methods are a step forward in the treatment of congenital syphilis.

LANGLEY PORTER, M. D. (380 Post Street, San Francisco)—It is refreshing to come upon a paper written as this one of Dr. Schussler's is, from the standpoint of a clinician amply experienced in the subject matter of his essay. Nothing can be more valuable than this contribution, and its value lies no less in the demonstration of the worth of well-organized university clinics devoted to the special study of single diseases (clinics where adequate material is bound to accumulate) than in the painstaking report of success the clinician's long labor won in this difficult field.

Thanks to the activities of obstetricians and syphilographers who deal with adults, patients with congenital syphilis are much fewer than formerly, so that to gather and bring under treatment so many cases of congenital syphilis is an achievement in itself hardly less to be applauded than the success that has attended the persistence of Dr. Schussler in his line of therapeutics.

The report marks the writer's familiarity with the most

recent works of other clinicians, and it is of importance that he is able to confirm the observation that bismuth is effective in overcoming the factors that produce persistence of the Wassermann reaction in resistant cases.

This contribution will be of great practical value to the profession and a great aid to the pitiable victims of congenital lues because the detailed descriptions of methods and modes make the treatment, as practiced by the writer, available to any one in the profession. It is a real contribution, an honor to the writer and to the medical school he so ably represents.

DR. SCHUSSLER (closing)—I am glad that my paper has brought out such an interesting discussion, which strongly emphasizes the curability of the disease under intensive and persistent treatment. The large doses and short intervals which I now use have been reached by a gradual evolutionary process, and I feel very strongly that they are necessary to secure the best results. Practically all my Wassermann-fast patients were started on relatively mild and inefficient treatment several years ago, and their spirochetes are now resistant to both arsenic and mercury. By way of contrast, out of ten strongly positive older children who were given an intensive first course about six months ago, nine were completely negative at the end of the rest period, while the tenth was still weakly positive. As the question of inunctions versus injections came up, I may add that I have practically given up inunctions since the paper was written. I now give infants a weekly intramuscular injection of bichloridol 0.01-0.015 g. for eight weeks after each neoarsphenamine course. Older children get ten weekly intramuscular injections of a mixture of bichloridol 0.06-0.12 g. and bisnudol 0.2 g. in the same syringe. This is practically painless, only the first injection causing any noticeable discomfort, and no toxic effects have been noted. The eight neoarsphenamine injections are given during the first three weeks of the mercury-bismuth course, with iodide by mouth throughout. The rest period is one month in all patients, a tonic being given if necessary. I find the gluteus medius more satisfactory in some cases, and the gluteus maximus in others. I have found intravenous injections of novasurol very valuable in rapidly controlling severe ocular lesions, such as interstitial keratitis. Perhaps bichloridol and bisnudol in full doses will prove equally efficient. Sulpharsphenamine has proved superior to neoarsphenamine in these eye cases.

Let me emphasize again that the general practitioner can now cure at least 80 per cent of his congenital syphilitic patients without difficulty, pain, or danger; and more than one year of treatment is rarely necessary. I can therefore see no excuse, even in isolated communities, for allowing these unfortunates to go untreated.

HEALTH OFFICERS APPOINTED

According to the California State Board of Health Weekly Bulletin, the following health officers have been appointed:

Mr. M. B. Ordway has been appointed health officer of Pacific Grove to succeed Mr. Frank B. Wilcoxson. Mr. Ordway is not recorded as being licensed to practice medicine in California.

Mr. M. G. Frost has been appointed health officer of Placerville to succeed Mr. Roy McCall. Neither Mr. Frost nor Mr. McCall are recorded as being licensed to practice medicine in California.

Dr. J. T. Christian of Galt has been appointed health officer of Sacramento County to succeed Dr. George H. Sanderson of Folsom. Dr. Christian is licensed to practice medicine and surgery in California, but is not a member of the California Medical Association at this time. Dr. Sanderson is a member.

Dr. E. W. Westphal has been appointed health officer of the newly incorporated city of Atherton, San Mateo County, postoffice Menlo Park. Dr. Westphal is not reported as licensed to practice medicine and surgery in California. He is not a member of the California Medical Association.

Most of the shadows of this life are caused by standing in our own sunshine.—Emerson.

SECONDARY HYPERTROPHIC OSTEOARTHROPATHY FOLLOWING METASTATIC SARCOMA OF THE LUNG

REPORT OF A CASE

By LLOYD BRYAN, M. D., San Francisco

The majority of authors are agreed that this condition is caused by a long-continued hyperemia secondary to an interthoracic condition in addition to a toxemia secondary to the primary disease.

The course of the condition is extremely variable. It may subside and entirely disappear with healing of the primary lesion, or it may progress independently of the original disease with the bone picture at the end not unlike that of osteitis deformans.

DISCUSSION by Leo Eloesser, San Francisco, and W. R. P. Clark, San Francisco.

SECONDARY hypertrophic osteoarthropathy has been recognized as a distinct clinical entity since the original papers of Bamberger (1889 and 1891) and of Marie (1890) and its relation to the simple clubbing of the fingers definitely established by the excellent work of Locke in 1915.

The majority of authors are agreed that this condition is caused by a long-continued hyperemia secondary to an interthoracic condition, in addition to a toxemia secondary to the primary disease. While, as a rule, the primary lesion is a chronic one, usually tuberculosis, bronchiectasis, chronic lung abscess, chronic disease of the circulatory or alimentary tract, secondary hypertrophic osteoarthropathy may occur in a rather acute condition.

Hyman and Herrick report a case in a child of 28 months without any primary lesion being demonstrable. I have observed it in a boy of twelve with an acute lung abscess, which was treated surgically and completely cured in three months. In this patient, at the end of a year all signs of the secondary bone changes had disappeared.

The course of the condition is extremely variable. It may subside and entirely disappear with healing of the primary lesion, or it may progress independently of the original disease, with the bone picture at the end not unlike that of osteitis deformans. There may at times be periods of regression and progression corresponding to the course of the primary lesion. Clinically, the condition is characterized by soft tissue swelling, redness, tenderness and pain in the region of the joints. Roentgenologically, the only means by which the diagnosis is certain, the first findings are bur-like irregularity of the distal phalanges, and later a laminated ossifying periostitis involving first the fifth metatarsals and metacarpals, then the remaining metatarsals and metacarpals, and later the long bones, and finally all the bones of the skeleton. The diaphyses are primarily involved, but the epiphyses do not escape. The joints show first swelling and erosion of the cartilages, and at times complete destruction with ankylosis of the joint.

Saundby, Hall, Alexander, Cagnetto, Hasbrouck, Oliver and I have each reported one case of hypertrophic osteoarthropathy with sarcoma of the lung, and this case is reported to again emphasize that a fairly acute primary lesion may be responsible.

A. C., male; 25; Italian; carpenter—Entered the San Francisco Hospital August 18, 1922. Complaint: Pain and swelling just above right knee for two and one-half

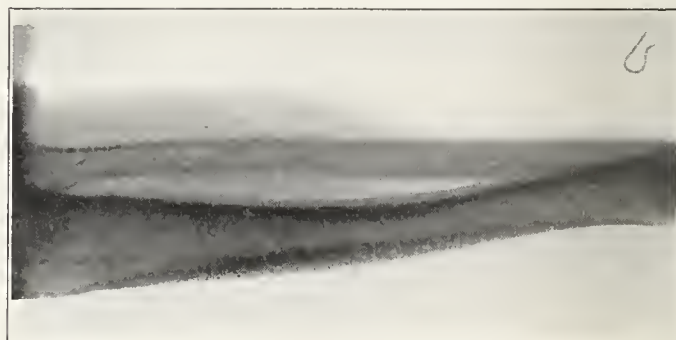


months. Injured knee June 2, 1922, while climbing a ladder; almost constant pain since then. On June 13, 1922, swelling was 2 cm. in size. F. H.: Unimportant. P. H.: Patient single. Denies venereal disease. Patient has always been well. P. E.: Slight pyorrhea, moderate enlarged tonsils. Two small glands in anterior cervical triangle. Marked enlargement of the right inguinal glands. At inner aspect of lower end of right femur there is marked swelling about twice the size of a baseball. X-ray: Periosteal sarcoma. Patient refused amputation, was given deep x-ray therapy. Urine and blood normal. Re-entrance, August 7, 1923. Blood pressure normal. Wassermann, negative. Tumor ulcerated, horribly foul, size of a large cantaloupe, Welch bacillus contamination. Amputation, August 11, 1923, by Dr. Leo Eloesser, right leg, middle of the thigh. Post-operative: Patient made a good recovery, discharged October 3, 1923.

Re-entrance, October 29, 1923. P. I. about one and one-half months after operation, stiffness began to develop in all his joints, with swelling of the joints of his foot and hands; there was little pain. P. E.: Swelling of the joints, clubbing of the fingers. Patient cannot tightly clench his hand. Other findings practically the same as before. There is some stiffness in both elbows. Complaint: Increasing weakness. X-ray of chest on November 1, 1923, showed large, rounded, smooth tumor mass in lower one-half of right lung and a few smaller nodules elsewhere in the lung. Patient complains of difficulty of

swallowing. X-ray examination of head is negative; apparently, no metastasis in hypophysis. X-ray of joints shows marked osteoarthritis. Died February 23, 1924.

Autopsy by Dr. W. Ophuls—Strongly built, well-nourished young man about 25 years of age. The right leg amputated about one-third of femur, well healed. Stump of leg is distinctly swollen, rather hard brawny resistance. Edematous swelling posterior part of scrotum and thigh on right. Left leg very much swollen, showing similar solid edema and marked enlargement of all



toes, especially distal ends of them. Moderate edematous swelling of both forearms, especially left, and very marked enlargement of all fingers and marked clubbing at ends. Nose and ears fairly large. Lips slightly prominent, and chin is small. There is little hair on upper lip, chin, and sides of both cheeks. Pupils are widely dilated.

Skull rather small and round. Skull cap normal; shows some deep depression from Pacchionian granulations in summit. Pia mater on both sides show marked congestion and edema. Sella turcica and hypophysis normal. Large venous sinuses base of brain normal. Large arteries base of brain normal. Slight accumulation of slightly bloody fluid in lateral ventricles and few soft, rather large clots. Brain section: through all parts nothing abnormal.

Abdomen moderately distended; marked atrophy of subcutaneous fat. Muscles also show marked atrophy. Liver projects five fingers below costal margin, in fifth mammillary line. Left lobe about same distance below zyphoid. Lower border stomach at umbilicus. Transverse colon just below. About 50 cc. of clear fluid in the rectovesical pouch. Diaphragm at sixth rib on both sides.

Chest is very large and strongly arched. No calcification of cartilages of ribs. In anterior mediastinum attached to posterior surface sternum is large, white tumor nodule 7 x 5 cm.

In pericardium 300 cc. clear, light yellow fluid. In left pleura 100 cc. clear, light yellow fluid. The right pleura completely obliterated by very strong fibrous adhesions, in lower part of which is very large mass of tumors about size of two fists which is firmly attached to diaphragm to inside ribs and replaces large part right lower lobe. Bone is not deeply invaded anywhere. Small



nodule just in front of body of fifth dorsal vertebra; another nodule size walnut attached to third rib near spinal column. Oesophagus somewhat twisted at lower end, apparently by pull of adjoining tumor nodule, otherwise normal. Trachea and larynx contain some clear foamy mucus. Marked involvement lymph glands at root of lung. Left main bronchus invaded. Tumor has gone through wall and projects in shape of small polypus on inner surface. Large nodule in anterior mediastinum is attached to pericardium, but has not invaded it. Heart valves are normal; muscle, thin, dark brown, and flabby.

No scar at left apex. Left pleura studded with large tumor nodules, largest about 5 cm. in diameter. Left lung well filled with air, except for large area of collapse of left base. Some small nodules in lung tissue. Large nodule in hilus of lung about 8 cm. in diameter. Aorta small, otherwise normal. Thyroid gland small, otherwise normal. Right lung: no scar at right apex. Numerous large nodules in right lung. The largest one measures 12 cm. in diameter, and is in the right lower lobe. Spleen is large, $13 \times 9\frac{1}{2} \times 4$; cut surface shows very marked passive congestion. Left adrenal is small, otherwise normal. Left kidney—capsule strips easily—measures $12 \times 5\frac{1}{2} \times 3\frac{1}{2}$. Kidney shows a marked passive congestion. Right adrenal and right kidney same as left. Marked edema of pelvic connective tissue. Bladder contains some clear urine; shows a marked passive congestion and some edema. Prostate is normal. Rectum is normal. Duodenum and contents normal. Bile-duct is patent. Stomach contains some dark brown mucus; mucous membrane shows exceptionally heavy rugae. Pancreas small, otherwise normal. Gall-bladder and contents normal. Liver large, $26\frac{1}{2} \times 21\frac{1}{2} \times 7\frac{1}{2}$ cm. Cut surface: centers are dark and the peripheral parts light in color. Omentum is atrophied. Mesenteric lymph nodes normal. Retroperitoneal, iliac lymph nodes normal. Femoral lymph nodes moderately enlarged, congested, and edematous. Small intestine is normal. Large intestine shows marked passive congestion and edema. Appendix is normal.

Anatomical Diagnosis—1. Osteo-sarcoma periosteal femur. 2. Sarcoma metastatic of lung. 3. Edema lymphostatic of all extremities. 4. Osteo-arthritis, general. 5. Operation, amputation thigh. 6. Pleurisy, chronic adhesive.

Histological Examination—Pancreas: Normal, normal arteries. Hypophysis: Normal. Kidney: Very much congested, normal arteries, few small scars in cortex. Prostate: Normal. Liver: Moderate fatty infiltration in periphery of lobules, normal arteries. Spleen: Very marked congestion of venous capillaries, otherwise normal, normal arteries. Tumor: Consists of cellular fibrous tissue in which there is much osteoid tissue which is partly calcified; in places there are large giant cells, large areas of necrosis. Lung: Contains tumor nodule of similar structure. Colon: Very much congested, otherwise normal. Small Intestine: Normal.

I am indebted to Dr. Leo Eloesser for the privilege of reporting this case.

135 Stockton Street.



DISCUSSION

LEO ELOESSER, M. D. (135 Stockton Street, San Francisco) — The cause of secondary hypertrophic osteoarthropathy and its allied manifestation, clubbed fingers, is unknown. Neither venous stasis nor suppurative processes alone suffice to account for their origin. Most cases follow pulmonary suppuration, either tubercular or non-tubercular. Doctor Bryan's report is of peculiar interest because the patient was neither cyanotic nor did he have a suppurating focus at the time when his periostitic deposits first made their appearance.

Most secondary osteoarthropathies show exacerbations and remissions; thus patients with discharging empyemas not uncommonly complain of pain and swelling of their bones and joints whenever their chests drain insufficiently: when abscesses break out and drain freely pain and swelling recede. This would incline one to ascribe the origin of the arthropathy to an infectious element.

Typical unilateral club-fingers have been described, however, following subclavian aneurysms; in these an infectious element (unless the underlying lues be so considered) is absent. In Bryan's case, too, no foci of infection were apparent. So that the infectious theory has its flaws. Venous stasis alone will not suffice to produce an osteo-arthritis. Either stasis or infection or both combined may be found in most case reports. Bryan's showed neither. There was stasis, it is true, but a strangely scat-



tered and localized stasis very difficult to explain. There was generalized lymphostatic edema of all the four limbs; the colon was edematous, but not the small gut; nor was there more than a very little free fluid in the belly, and very little, too, in the pleurae. This peculiar localization cannot be accounted for by a block of the great veins at the heart or in the mediastinum. So that the theory of a venous stasis is also insufficient to explain every case.

The cause of this patient's lymphatic block remains a puzzle, but, whatever the cause may be, lymphatic obstruction may have something to do with the production of the periosteal deposits and the clubbing of the fingers and toes.

Douglas Campbell, in the *British Medical Journal* for January 24, 1924, illustrated sections of club-fingers in a case of osteoarthropathy following cancer of the lung. They showed nothing but edema without osseous changes; the long bones, however, were covered with typical periosteal deposits. Periosteal deposits similar to those of osteoarthropathy are also common in elephantastic limbs. Campbell considers lymphatic obstruction as the etiological factor underlying secondary osteoarthropathy. He attributes the edema to imperfect oxygenation, whatever the cause of this imperfection may be, and thus explains the clubbing described after disease of the liver and other extrathoracic organs, which may also lead to imperfect oxygenation.

It seems to me that the theory of a lymphostatic origin—possibly an infectious one—has more to offer in many ways than the theories of "toxemia" and venous stasis which have hitherto been advanced.

Dr. Bryan's case is of uncommon interest and adds strength to this theory of Campbell's.

W. R. P. CLARK, M. D. (516 Sutter Street, San Francisco)—This case of secondary hypertrophic osteoarthropathy following metabolic sarcoma of the lung, reported by Doctor Lloyd Bryan and discussed by Doctor Leo Eloesser, has been of unusual interest to me from several points of view:

1. On account of the question of the etiology of osteoarthropathy, and this point has been well considered by Bryan and Eloesser.

2. On account of the rapidity of the appearance of osteoarthropathy. I think many of us have been inclined to think of this condition as being of slow development and when present, in tuberculosis or heart disease, as indicating a primary disease of long duration, whereas in tuberculosis it is often a matter of months rather than of years.

3. On account of the malignancy of the lung. So many cases of malignancy of the lung, either primary or metastatic, have come to my notice during the past two or three years, that I have been impressed with the fact that one should keep constantly in mind this condition when making a differential diagnosis of chest pathology.

4. And, lastly, on account of the failure of x-ray therapy. All of us have hoped that, with the advent of deep x-ray therapy, a cure for malignancy might have been found, but this is one more case that has failed to respond. I do not wish to be misunderstood, however; x-ray therapy, I believe, still has its place in the treatment of malignancy of the lung, for, even if the progress of the disease may not be prevented, oftentimes some of the symptoms may be greatly ameliorated.

Training the Mind to Rest—Some men, when not working at routine, will close their minds like books. Like steamship captains they will signal "Finished with the engines" and let a dynamo become inert. For them there are no Elysian fields of intellectual pastime, no exaltation in thought of knowledge gained or service rendered. They work and they cease working; there is no eager turning to new fields to browse in. They do not think while smoking; they simply smoke, like cloud-compelling Jupiters, as Dean Briggs has characterized one class of undergraduates. Such of us may dream, but we do not wake and carry out our dreams.—*The Boston Medical and Surgical Journal*, Editorial.

SPINAL ANESTHESIA IN UROLOGY

By J. C. NEGLEY, M. D., Los Angeles

*Reports over five thousand patients without a death.
Success means careful attention to all details.*

IMPORTANT DISCUSSIONS by R. L. Rigdon, San Francisco; Miley B. Wesson, San Francisco; Arthur B. Cecil, Los Angeles; Granville MacGowan, Los Angeles.

IN PRESENTING this paper, I wish to tabulate our experiences, impressions and conclusions regarding spinal anesthesia at the Los Angeles General Hospital. It was introduced at this institution over twenty years ago by Dr. Granville MacGowan, and since that time it has been used in approximately 5500 cases for either operation or cystoscopic examination in difficult cases. Doctor MacGowan first used cocain, grain $\frac{1}{4}$, dissolved in 2 cc. of water. This method proved unsatisfactory, in that syncope and respiratory difficulty were frequent, and this drug had to be abandoned. Stovain was next tried and this drug also proved to be dangerous. Two cases in which stovain was used, Doctor MacGowan reports a localized necrosis of the external surface of the calf of the legs and heels, limited to the skin and down to but not through the deep fascia. This necrosis seemed to follow the distribution of the peroneal nerves. Finally, he began the use of tropacocain, which he has found most satisfactory and which he still uses. During the last six years novocain in 1 or 2 grain doses has been the drug most commonly used at this institution. Either drug may be dissolved in sterile distilled water or in the spinal fluid itself. There is very little difference in the toxicity of novocain and tropacocain.

TECHNIC OF ADMINISTRATION

The drug to be used is placed in a small glass vial of 1 or 2 cc. capacity and sterilized dry at a temperature of 90 to 100 C. for one hour. The already prepared ampules of the dry drug put out by the drug firms answer the purpose just as well, but are too expensive in large amounts. Using a 5 or 10 cc. Luer, with a 24 gauge needle loaded with one-half per cent novocain, a wheel is made over the third or fourth lumbar interspace directly in the center. The small needle is then removed from the Luer, and one two inches long, gauge 21 or 22, is substituted. With this, one can infiltrate the fascia and muscles clear down to the dura, after which the puncture itself will be practically painless. A Quincke needle of about 22 gauge is then used for the puncture. The dry crystals may be dissolved in the spinal fluid, if preferred, or may have been previously dissolved in sterile distilled water. This seems to be a matter of no importance. About 10 cc. of the spinal fluid is drawn up into the syringe and reinjected, repeating this procedure (four or more times) so that proper diffusion of the drug in the subdural space will be accomplished. In such a large teaching institution, where the administration of the anesthetics must be co-operated in by a number of individuals, the anesthesia is often insufficient to perform supra-pubic operations painlessly, perhaps in about 20 per cent of the cases. However, in those cases where the procedure is in the hands of one person thoroughly trained and skilled in its use, the percentage of failures of complete anesthe-

sia falls to 4 per cent, or even less. In the event of partial anesthesia, a surprisingly small amount of ether or nitrous oxide will complete the anesthesia. Absorption of the drug is rapid, and if the anesthesia is going to be successful, one can begin the operation in five or six minutes, and probably more than 90 per cent of the drug is absorbed in ten minutes. After ten or fifteen minutes, the patient can be put in the Trendelenburg position with safety. In fact, like the toxic effects of general anesthesia, the patient will respond much better in this position than in a recumbent one.

The most marked and noticeable effects of spinal anesthesia is the rapid drop in blood pressure and a change in type of respiration due to anemia of the brain and the reflex started in the solar plexus. The pulse beat becomes feeble and slower, and almost imperceptible at times. These effects are terrifying, but the real adjustment of both respiration and circulation is almost as rapid as their onset. The patient is apt to have nausea and vomiting at this time, which is not prolonged for any great length of time.

SELECTION OF CASES FOR THIS FORM OF ANESTHESIA

It is particularly useful in the operation of suprapubic prostatectomy where we have feeble old men with chronic bronchitis and emphysema, damaged kidneys, and a heart that is susceptible to strain. Following operation, there is often no nausea or vomiting, and when there is gastric distress it usually subsides much more quickly than that from a general anesthetic. This is a great advantage, since most of these patients need an abundance of fluids, and also lessens the danger of hernia from an operation in which a necessarily large hiatus in the aponeurosis of the rectus muscle is left. (At this institution, the greatest number of patients who receive spinal anesthesia occur in the rectal clinic. Here anesthesia is nearly always successful, whereas it doesn't always reach the suprapubic region.) Hemorrhage may occasionally follow prostatectomy with this anesthetic, if one is not careful to use a Pilcher bag, or pack the bladder. There may seem to be no hemorrhage when the operation is completed, but as the blood pressure returns to normal, bleeding may set in. Headaches follow spinal anesthesia in a smaller percentage of cases than from simple lumbar puncture for this reason: In most of the cases operated upon the patient is kept in a recumbent position for at least many days, and when a simple lumbar puncture is done he is apt to be up and about after the first or second day. Practically, the only cases that have severe headaches are for very minor surgical procedures or examinations where the patient is allowed to get up or sit up at a very early date following the operation.

DISADVANTAGES

It is not a method to be used with satisfaction by anyone not thoroughly familiar with the technique, even to the slightest detail. Such a rapid and marked fall of blood pressure acts as a profound shock to some of these old men with greatly lowered resistance. Patients who are neurotic sometimes become so restless and move about so much as to interfere materially with the operation. The head-

aches that sometimes follow are a detriment, in that they retard convalescence from the distress and lack of sleep.

Once given, the anesthetic cannot be stopped except by reinsertion of the needle and withdrawal of spinal fluid, which is a dangerous and awkward procedure in a patient with shock.

It cannot be given in graduated amounts to suit the different stages of the operation as can a general anesthetic. In cases that do not get anesthesia, the operation must be postponed or a general anesthetic given, which is not always possible.

Spinal anesthesia in this series of cases seems to have been the best possible anesthetic and, in that type of cases before mentioned, is far superior to the general anesthetics. Time alone will tell whether it will be supplanted by sacral, parasacral, and other methods of regional anesthesia.

219 West Seventh Street.

DISCUSSION

R. L. RIGDON, M. D. (291 Geary street, San Francisco)—It has seemed best to make this discussion in the first person, rather than to review the experience of others. These records are open and can be read as well, or better, in other reports than mine, and each surgeon can formulate his own conclusions.

Many years ago I began the employment of intradural injections, and for a time I was very enthusiastic over my results. Then disaster came my way, and a patient died on the table. Reluctantly I took up general anesthesia. After a number of years, such glowing reports were made from clinics that had continued the use of spinal anesthesia that I found myself once more impelled to resume that method. This was during the war. Again I was delighted, but having lost one patient before I was rather apprehensive; in fact, I was a bit "gun shy," as it were, and when I was operating and I would notice the patient's face taking on an ashy hue, I would become very much alarmed and would pass a very uncomfortable fifteen or twenty minutes, wondering if the patient would ever come back. In the meantime, the administration of gas and oxygen as an anesthetic had become so satisfactory in skillful hands, that I felt myself almost compelled to use that method. For a number of years this has been the only anesthetic I have used, except now and then ether. The patients do very well, but of course there are occasional symptoms of nausea, vomiting, general malaise, and perhaps a tendency to freer bleeding. Now comes this report which shows a remarkable record of successes and no fatalities.

Perhaps I may once more revert to the spinal needle and novocain. If so, I hope I may be able to control my disposition to sweat, when the symptoms of collapse come.

MILEY B. WESSON, M. D. (Flood Building, San Francisco)—In this very interesting and concise paper the author has clearly brought out that the success and safety of spinal anesthesia is the user rather than the method; if it is dangerous it is because it is used without full understanding or recourse to necessary antidotal safeguards; if it is ineffective, the technique has not been acquired; and if there are frequent post-operative complications, it is because something has been done that should not have been done.

Intra- and extra-dural nerve blocking are new procedures, spinal anesthesia having been introduced by Bier in 1904 and sacral anaesthesia by Stoeckel in 1909, consequently reports are meager. Statistics are worthless unless there is a large volume to deal with. Bromfield, in a recent study of 2,171,461 anesthesia administrations, found the mortality from ether to be 1 in 8010, and in spinal analgesia 1 in 515. Babcock, in a series of 15,000 spinal inductions, found a mortality of 1 in 10,000 in selected cases, and 1 in 500 in unselected; while Steel had 3 deaths in 5000 cases in a period of fourteen years, none occurring during the last five years. In analyzing statistics, one is impressed with the facts that the unto-

ward effects occur during the first years of use and before the operator has acquired his technique.

In 1912, following an epidemic of cerebrospinal meningitis, I published a series of 800 uncomplicated lumbar punctures, and I found at that time that the use of serum by the incompetent caused about the same complications as Dr. Negley has noted.

We have all been trained with the idea that little skill is required to give an anesthetic, so such duties fall to the junior intern or the nurse. When such an assistant is given a Quincke needle and a book of instructions, someone's series of a hundred cases or less is going to show complications ranging from paralysis to exitus. Since the reports of complications in the literature generally come from such small series of cases, the question naturally arises whether the method is at fault or personal incompetence should be blamed. Sacral anesthesia has proven very satisfactory at the Mayo Clinic, because Labat was brought from Pauchet's Clinic in Paris to teach its use. Intra- and extradural nerve-blocking is a delicate procedure, requiring more skill than the suprapubic removal of a prostate, and the anesthetist should not only be a surgeon, but have an intimate and an exact knowledge of physiology and pharmacology.

Any operation whose technique cannot be quickly mastered by the average surgeon should not be used by any but trained specialists. Spinal anesthesia administered by experts to properly selected cases is efficient and harmless, but in the hands of amateurs is still pregnant with dangerous possibilities, hence I do not feel that its general use should as yet be encouraged.

ARTHUR B. CECIL, M. D. (Pacific Mutual Building, Los Angeles)—It gives me great pleasure to discuss Dr. Negley's article on spinal anesthesia in urology. He has made a contribution which is notable not only for giving exact methods of technique, but for his unbiased discussion of a subject with which he is thoroughly familiar. There are undoubtedly cases in urology where general anesthesia is to be avoided, and I take it that Dr. Negley would more or less limit the use of spinal anesthesia to these instances.

Personally, I do not believe that as a routine spinal anesthesia will ever replace general anesthesia. I believe that, all in all, it is more dangerous; that one would have more accidents than would be the case where general anesthesia was properly administered. Unconsciousness of itself should never be a deciding factor. I am not at all sure that the state of unconsciousness of one's patient does not many times result in a better surgical procedure than one could carry out were the patient conscious.

So far as I have been able to determine, unless there were definite indications for local or spinal anesthesia, I would much prefer to have the urological case under a general anesthetic properly administered; and yet in making this choice I realize that very few people have the ability to carry out spinal anesthesia with the degree of success of which Dr. Negley is capable.

GRANVILLE MACGOWAN, M. D. (Brack Shops Building, Los Angeles)—In examining the discussions of Dr. Negley's paper by Drs. Rigdon, Wesson, and Cecil, I am reminded of the Asiatic proverb that "Most of the evils we fear never happen." All the dangers which are conjured up by suspicious and timid souls, as applying to spinal anesthesia were thought of by me and resulted in my most bitter opposition to this method of producing analgesia during the first year after the method had been proposed and its possibility demonstrated. An accidental circumstance led me to overcome my prejudice and use it in a case where any method of anesthesia involved more danger than the operation itself. The agent at this time was cocaine, and it was with much fear that I used it. The results were so satisfactory and so astounding to me that, with great caution, I occasionally used spinal anesthesia for perhaps a year. Although no fatalities occurred in my practice, there were sufficient that arose throughout the world to make its dangers seem very real. Then tropo-cocaine with a toxicity enormously less than cocaine was discovered and introduced for use in spinal anesthesia. I became one of its users, and it has been my favorite method of obtaining anesthesia in my cases of genito-urinary surgery in which the circulatory or respiratory condition was unfavorable for the use of a general anesthetic, or when there existed a morbid fear of being rendered unconscious, or when it was desirable that the person on

whom the operation was being performed should have the muscles of the lower abdomen and of the perineum entirely relaxed during the period of operation. I have never had any fatality, nor any serious trouble arising from this anesthetic. During the same period of time, where from reasons of prejudice, or as during the war when tropo-cocaine was for a time unobtainable, a general anesthesia—gas oxygen or ether—had to be administered, I have often experienced very real difficulty and much trouble and interruption of the operation to restore or revive the patient.

I do not believe that routine spinal anesthesia will ever replace general anesthesia, not because it is more dangerous, but because it seems to require a considerable amount of mechanical skill and judgment that the average surgeon does not possess and will not learn.

By using a small and delicate needle for the spinal puncture, there is, in my opinion, no chance for any mechanical injury to the cord if the surgeon does not possess the idea that the only way of obtaining access to the subarachnoid space is by means of rape of the spinal column. In performing lumbar puncture, either for diagnosis or for anesthesia, I teach the humane method of anesthetizing the skin and the deeper tissues down to the dura with a half per cent solution of novocaine before inserting the spinal needle.

The headache which one occasionally sees follow spinal anesthesia is not due to the drug, because it very frequently follows a simple spinal puncture where the individual is allowed to be up and about too soon. The fact that the nature of the operations upon the uro-genital organs in which I use spinal anesthesia requires a long sojourn in bed is usually sufficient prophylaxis against these headaches. It is never necessary to have the patient out of bed early. The trail of stinking urine marking their progress is, to my mind, an evidence of cruelty and indifference to comfort upon the part of the operator.

There is another point upon which I wish to dwell, which is, that the relaxation obtained by spinal anesthesia avoids the necessity for the extremely rapid operative procedures which are regarded by so many as absolutely necessary in genito-urinary surgical work, a rather nefarious belief, founded entirely upon the evil effects which are known to result from a prolonged anesthetic. Under a spinal anesthetic, plenty of time can be taken for deliberative movements and completion of the operation, which should be finished when once commenced.

Individually, I have been very glad that such an agent existed, not only on account of the many cases of bad risks which I have been able to conduct to a favorable conclusion, but also on my own account, because for many years I have been obliged to operate with one arm, the subject of a traumatic neuritis which never has been during the whole period without pain, and the muscular relaxation of the patient has saved me from struggling with him, as so commonly happens in supra-pubic manipulations inside of the bladder and in perineal operations where the patient does not lie quiet under a general anesthesia conducted by timorous or unskillful anaesthetists.

DOCTOR NEGLEY (closing)—Doctor MacGowan, in his masterful discussion of this paper, has left very little for me to say, as he has answered both Dr. Rigdon and Dr. Cecil in their attitude toward this method of anesthesia.

Dr. Wesson's concluding remarks regarding the use of spinal anesthesia cover my attitude exactly, except that I think surgeons in general, and urologists in particular, should learn the technique absolutely and use it more frequently.

Mails Closed to "Cures"—The Postoffice Department has issued "fraud orders" against two alleged tuberculosis cures recently, and they are getting quite busy with certain other classes of "fakirs" who use the mails to exploit the sick. One of the tuberculosis "cures" fooled a lot of newspapers by sending out their "news" stories as quotations from Dr. X, quoted as "a prominent doctor of —." The doctor referred to proved to be an osteopath. "Doctor — of California," said by the newspaper stories to be a "national authority" on tuberculosis, was given front-page prominence for another "cure" for tuberculosis. Investigation showed that no such doctor lived in California.

A STUDY OF TWENTY-ONE CONSECUTIVE AMBULATORY BACK INJURIES, WITH SPECIAL REFERENCE TO FRACTURES OF THE SPINE.

By H. W. SPIERS, *Los Angeles*

The frequency of bone injury to the spine.

The infrequency of malingering.

The necessity of careful clinical study of the injured back.

The value of stereoscopic and lateral x-ray examination of the suspected area, and above it.

DISCUSSION by E. W. Cleary, *San Francisco*; D. I. Aller, *Fresno*; C. E. Early, *Los Angeles*.

FROM May 1, 1922, to October 1, 1923, I examined fifty-five back injuries. All were ambulatory patients. A large majority were men. All but a few had been seen and studied by from one to several surgeons. In the main, their diagnoses were not very definite. Of the fifty-five patients, twenty-one were found to have a definite spine injury, as shown by the x-ray examination. It is these twenty-one with bony injury that I wish to discuss.

About half of them were referred by physicians; the remainder were referred by the Industrial Accident Commission. Thus, the man with the injured back is frequently seen by the orthopedic surgeon as referee. Some of these individuals are keen type of men, but the most of them are of the class among whom one would hardly expect a clever malingerer. Of the series examined, none was proven a definite malingerer. That a good many exaggerated their symptoms I am certain, but all had some basis for their complaint. A number showed no signs definite enough to warrant a diagnosis of serious injury. In others, whose previous diagnosis had been "neurosis" or "railroad spine," I was able to demonstrate definite bone injury.

A careful history, an orderly examination, including intelligent x-ray study, goes a long way toward getting to the root of the trouble.

In the history, the type and manner of the injury should be given consideration. The distance of a fall may not be of as much importance as of the way in which the individual landed or of the object upon which he landed. I found it fairly common to find a crush fracture of a body of the lower dorsal or upper lumbar spine when the fall was such as to cause the man to land on his upper back and shoulders. This is reasonable when one considers that a bow breaks most frequently near its middle, not at its end. Fractures of muscular violence are not unusual. The individual in the bent-forward position lifting a heavy object, who slips or is suddenly forced to carry more than his muscles are mechanically able, frequently fractures parts of his spine. Fractures of the transverse processes are frequently from muscular violence. Usually there has been a rotary violence also. The articulating facets occasionally give way under similar violence, in my opinion.

An orderly examination includes an inspection of

the entire back, with the patient entirely stripped. The position and attitude of the head and shoulders should be noted. The normal curves of the spine and their variations if any, should be checked up. The weight line of the body, both lateral and antero-posterior, is of importance. A study of the function of each of the segments of the spine should be made. It is to be remembered that the greater part of the motion of the spine takes place in the lumbar region. Here forward, lateral and backward movements, as well as rotations, have the widest range. Limitation of movement in this region is much more easily demonstrated than in the upper and middorsal segments, but even there careful observation will demonstrate it if present. It is my custom to palpitate the spinous processes and the area lateral to them throughout the entire spine. Deep pressure over the injured vertebra is liable to produce marked subjective symptoms. If there is an injury to the transverse process, as one would expect, active movements which involve the muscle groups attached will produce symptoms, while passive movements will usually be painless. An injury to the articulating facet localizes itself if a study of the signs, symptoms, and function of the segment involved is made. I feel that injury to these facets is more frequent than is generally recognized. Rotary, muscular or direct violence, if the leverage is right, will frequently result in fracture. Fractures of the body of the vertebrae may give symptoms similar to any of the other types of fractures. I think it is only just to say that there are crushing injuries to the bodies of the vertebrae which cannot be demonstrated early, but which on later examination show the definite wedge shape that is so characteristic. The probable explanation is that the body was damaged and its structural strength impaired, giving way gradually under the superimposed weight of the trunk.

Stereoscopic x-rays are of much more value in demonstrating the lesser bony injuries to the spine than the flat plates. Lateral views are essential in the study of the spine, and we are only just beginning to appreciate the value of these. All examinations were made with the aid of the Bucky diaphragm. Certain films which had previously been taken of these patients were seen. Some were simply poor plates, which, of course, eliminate good diagnosis. Others were not well localized, the region of the injury had not been included, and many where the injuries were included were flat plates in which the injury of the lesser processes could not be demonstrated. A good lateral view of the spine until recently has been a difficult thing to secure. Many of them are altogether inadequate. It is my experience that one is likely to localize the injury lower than it actually is. One must keep in mind that referred symptoms radiate downward in all spine injuries. In other words, have your x-ray study include several vertebrae higher than the supposed injury, as indicated by the findings. A mistake to avoid is trying to cover too large an area in the individual film. After one's study has been carefully made, the region of the injury can usually be indicated to the radiographer and a clearer knowledge of the bony structure thereby obtained.

Some of the outstanding clinical facts noted in

this series were: the importance of muscle spasm, the value of studying with the range of motion of all segments of the spine, and the comparative rarity of definite evidences of nerve lesions. It is my opinion that definite muscle spasm means definite pathology. An injury to the spine almost invariably limits the motion of the segments to some degree. The point of maximum subjective symptoms during palpation is usually taken as the clue to the segment that should be most thoroughly studied. It is not difficult to make a diagnosis of a fractured spine if one has evidences of definite cord or root lesion, or a good lateral view and sees a wedge-shaped vertebra. It is more difficult, however, to account for some of these injured spines that have the lesser bony processes only involved. These usually have at most only referred pain as evidences of nerve disturbance and can be demonstrated only by the most clear-cut films and painstaking study.

Regarding malingerers: A study of the table of cases shows that, out of twenty-one, six were definitely said to be malingerers. Of the remaining fifteen, practically all were thought to be exaggerating their symptoms. I am definitely of the opinion that we, as surgeons, have made many greivous mistakes in our diagnosis of the neurotic spine. Since x-rays show that the lesser processes of the spine are frequently damaged and that compression fractures are not at all infrequent, due even to muscular violence, one must admit that this proposition has a great deal of basis of fact. It does not seem reasonable to me that an individual whose earning capacity is far greater while at work than when laying off, receiving insurance or individual compensations, might, for some imaginary or minor disability, greatly exaggerate his symptoms.

The points I wish to bring out are:

1. The frequency of bony injury to the spine.
2. The infrequency of malingering.
3. The necessity of careful clinical study of the injured back.
4. The value of stereoscopic and lateral x-ray examination of the suspected area and above it.

No. 1—M. V., 28 years old. Injured April 6, 1921. He was injured by lifting a weight of about fifty pounds in an awkward stooped position. Examined twelve months later. Previous diagnosis, sprain of the low back. He complained of low back pain, which radiates down the left leg. The pain is relieved by rest, and increased by exertion. Examination showed limitation of movement and muscle spasm in the low back. X-ray findings show a rotary luxation of the fifth lumbar vertebra on the sacrum, and a fracture of the right sacral articulating facet; also impingement of the left transverse process of the fifth lumbar vertebra on the iliac crest.

No. 2—A. R. P., 54 years old. Injured August 10, 1921, by falling from a building a distance of fifteen feet, landing on his upper back. Examined nine months later. Previous diagnosis, neurosis. He complained of constant pain in the low back, which radiated downward to the region of the left knee; also pain in the lower abdomen. There was evident limitation of movement in all directions in the region of the upper lumbar and lower dorsal vertebrae and marked muscle spasm. X-ray examination showed a compression fracture of the bodies of the second, third, and fourth lumbar vertebrae with bony overgrowths.

No. 3—J. C., 69 years old. Injured December 7, 1921, by being struck by an electric trolley car, suffering a broken jaw, broken ribs, and injured back. Examined ten months later. Previous diagnosis, as regards the back, was neurosis. He complained of backache on standing

and walking. Examination showed marked muscle spasm throughout the entire low dorsal and lumbar spine, with marked limitation of flexions in the lumbar regions. X-ray findings showed a fracture of the transverse processes of the second and third lumbar vertebrae.

No. 4—C. O., 38 years old. Injured September 25, 1922, by being crushed by a mass of falling dirt. Examined one month later. Previous diagnosis, contusion and sprain of the back. He complained of pains in the left hip, thigh, and lower leg. There was marked muscle spasm in the low lumbar region and slight limitation of movement in that region. The x-ray findings showed a fracture of the transverse process of the fifth lumbar vertebra.

No. 5—H. E. B., 33 years of age. Injured November 30, 1921, by an automobile body falling on him, causing numerous abrasions and injury to the cervical spine. Examination made one year later. His complaint then was stiffness in the cervical spine, sensitiveness and discomfort on movement of the spine which radiated down the left arm, and to a less extent down the right arm. Previous diagnosis, hypertrophic arthritis. Examination showed limitation of motion in the cervical spine. X-ray examination showed a crush fracture of the bodies of the fourth and fifth cervical vertebrae, with slight backward displacement of the fifth.

No. 6—B. M. B., 54 years of age. Injured August 29, 1922. He fell twelve feet from a scaffolding, striking on his right shoulder and head. Examined three months later. Previous diagnosis, concussion of the brain and sprain of the neck. His complaint now is of constant pain and stiffness of the neck and shoulder. Examination showed marked limitation of movement in the cervical spine below the second cervical, with considerable atrophy of the muscles of the left shoulder. X-ray findings show a compression fracture of the bodies of the fifth and sixth cervical vertebrae and sprain fracture of the body of the fourth and fracture of the superior posterior angle of the right scapula.

No. 7—A. B., 35 years old. Injured March 2, 1922, by being caught in the door of a cotton press, and his shoulders and back pressed violently together. Examined nine months later. Previous diagnosis, neurosis. He complained of pain in the back between the shoulders. This pain radiated forward, greatly increased by lifting and bending. There is bilateral muscle spasm in the mid-dorsal region, and slight limitation of motion in the dorsal spine. X-ray examination shows a rotary disturbance between the sixth and seventh dorsal vertebrae. The descending articulating facet on the right side showed evidences of an old fracture.

No. 8—C. E. P., 64 years old. Thirty-five years prior to examination he fell and was laid up for three months. He gradually improved and returned to work. Has had no particular difficulty until seven months ago, when he fell and struck a step and had a return of his symptoms. Examined April 17, 1923. Previous diagnosis not made. He had been treated by manipulations, with exaggeration of symptoms. The objective symptoms were marked limitation of movements throughout the entire lower dorsal and lumbar spine and muscle spasm. The x-rays show an old fracture of the bodies of the eleventh and twelfth dorsal and first and second lumbar vertebrae, with proliferative arthritis of the first and second lumbar vertebrae. It is felt that, in all probabilities, that the original injury was thirty-five years ago, and that the present injury was a fracture of the fusion between the first and second lumbar vertebrae which the x-rays seemed to demonstrate.

No. 9—A. T. H. Injured February 21, 1923. Examined two months later. Twenty years previous he had a serious injury in a wreck in which his spine was hurt. He was laid up for many months. This injury took place while lifting a heavy weight. No previous diagnosis had been made. He complained, at time of examination, of pain in the middorsal region, which extends downward and forward. Herpes zoster developed, but did not relieve the pain. The scars of the rash were present and marked muscle spasm in the dorsal region. The x-rays showed a compressed fracture of the fifth, sixth, and seventh dorsal vertebrae. There was marked callous formation.

No. 10—H. J. S., 60 years old. Injured April 13, 1923,

in a cave-in of earth. Examined two months later. Previous diagnosis, back strain. He complained of pain in the lower back when stooping or lifting. If he was quiet he was fairly comfortable. The objective symptoms showed marked muscle spasm. There was a structural curve of the spine and limitation of all movements of the lumbar spine. The x-ray showed a sprain fracture of the body of the third lumbar vertebra and a fracture of a superior articulating facet of the fourth lumbar vertebra.

No. 11—J. R., 55 years of age. Injured January 29, 1923, by having a truss fall on him, striking him in the back. Examination made five months later. Previous diagnosis, hypertrophic arthritis. He complained of chronic pain in the low back. The pain was increased by exercise and movement. The objective symptoms were limitation of motion of the entire spine and muscle spasm in the same region. X-ray examination showed a separation of the fused hypertrophic process on the right side between the third and fourth lumbar vertebrae.

No. 12—R. B., 33 years of age. Injured January 20, 1923, when he fell from a scaffolding, striking on his back on a plank. Examined six months later. He complained of backache and headache. The lower dorsal and lumbar spine showed marked muscle spasm. There is a very marked exaggeration of the lumbar lordosis. Previous diagnosis, neurosis. X-rays show a crush fracture of the bodies of the eighth, ninth, and tenth dorsal vertebrae.

No. 13—J. C. G., 34 years of age. Injured May 19, 1923. While lifting a kettle of hot fat weighing about ninety pounds he slipped, and in his effort to throw the fat away from him so as not to scald himself he injured his back. Examined two months later. He complained of pain in the low back and right hip, and of discomfort on forward bending and lifting. Examination showed marked muscle spasm throughout the lumbar region. There was a structural curve of the spine which seemed to be a left dorsal, right lumbar curve. All movements of the lower spine were guarded. X-ray examination showed a fracture of the transverse process of the third lumbar vertebra and of the vertical articulating facet of this same vertebra on the same side.

No. 14—L. W. M., 39 years old. First injured July 9, 1921. At that time he was struck by a freight elevator door while he was standing in the forward flexed position. He was disabled for a number of weeks, but gradually got around, although for a period of one year he complained of back pains. He recovered, however, until he was doing a normal day's work. On March 21, 1923, while in a similar flexed position he was hit in the same region by a truck. He had a similar pain as in the previous injury, and since that time had been unable to work. Examined four months after the second injury. He complained of pain in the low back. The previous diagnosis in each case had been sprain. Objectively, his back showed marked muscle spasm from the middorsal region to the sacral region. The x-ray examination showed a vertical fracture through the lamina of the fourth lumbar vertebra to the right of the spinous process; also a healed similar injury to the fifth lumbar vertebra. In this case it was our opinion that the fractures occurred at the time of the original injury, but the condition was reopened by the second.

No. 15—F. R., 49 years of age. Injured July 9, 1923, by falling into a hopper, with one leg extended and the other flexed, landing on his back on a hard, projecting pipe. Examined two weeks later. Examination showed marked limitation of flexions and extensions of the lower spine. The lumbar and low dorsal muscles were in marked spasm. Previous diagnosis, sprain. X-ray examination showed a crush fracture of the body of the first lumbar, with fracture of the inferior articulating facet of the third on the right side; also a fracture of the lamina on the right side of the second lumbar vertebra.

No. 16—H. H. P., 41 years of age. Injured December, 1922, while endeavoring, with an assistant, to lift a crossbar of steel weighing about three hundred pounds. His assistant slipped, throwing the entire weight on him. Examined nine months later. Previous diagnosis, sacro-iliac slip. He had been manipulated several times—last time under ether—following which he was very much worse. Objectively, his spine showed an extreme list to the right, exaggerated lumbar lordosis and marked muscle

spasm from the sixth dorsal vertebra downward and limitation of motion in the lumbar spine. X-ray examination showed an old fracture of the transverse processes of the fourth lumbar vertebra.

No. 17—W. A. C., 28 years old. Injured in 1918 from a fall from an airplane. Examined August 3, 1922. He complained of chronic low back pain on the left side which had been constant since injury. Objectively, there was muscle spasm and limitation of motion in the lumbar region. Previous diagnosis has been neurosis. He had been treated for a long period on this basis in the army hospital. X-rays showed a compression fracture of the first lumbar vertebra and lesser evidences of a compression fracture of the fifth lumbar vertebra.

No. 18—J. P. K., 34 years of age. Injured in a motor-car accident four years ago. Examination made April 6, 1923. He complained of backache intermittently since his injury. Examination showed muscle spasm and limitation of lateral movements of the spine. Previous diagnosis, strain. X-ray findings showed an old compressed fracture of the first lumbar vertebra.

No. 19—J. C. H., 84 years old. Injured March 28, 1923, by falling in the bathroom. He fell in such a way that he was doubled up between the wall and the tub. Examined the next day. He complained of acute pain in the low back. There was marked muscle spasm throughout the entire dorsal spine. He was unable to lift himself up or stand except with great difficulty. The spine sagged laterally, and there was a beginning kyphus. X-ray examination showed a crush fracture of the bodies of the first and second lumbar vertebra.

No. 20—J. D., 30 years old. Injured May 5, 1923, by being struck in the back by a crowbar. Examined four months later. Examination showed marked muscle spasm and limitation of motion of the back. He complained of back pain. Previous diagnosis, sacro-iliac strain. X-ray examination showed a forward luxation of the fifth lumbar vertebra on the sacrum.

No. 21—J. L. S., 33 years old. Injured November 12, 1922, by muscular violence, lifting with a severe twist. Examined in consultation one week later. Diagnosis of fracture of superior articulating facet of the fifth lumbar was made. Two days later was seen by another surgeon, who disputed diagnosis and manipulated the spine without result. Again seen three months later. X-rays showed definite callous development about the fractured facet.

614 Westlake Professional Building.

DISCUSSION

E. W. CLEARY, M.D. (177 Post Street, San Francisco)—Dr. Spiers has brought to our attention a number of points of major significance in investigating back injuries.

My experience has led me to conclude that actual malingering is rare, but exaggeration quite common as a complication of back injuries. Carelessness and lack of precision in the examination of back injuries have contributed to bring about a bad situation. The individual who desires to exploit someone through the compensation law has come to believe that he may readily do so by claiming disability associated with a lame back.

Definite physical signs are, I believe, always present in instances of disabling back injury. It is up to every surgeon who assumes the responsibility of passing opinion upon such a patient to make sufficiently thorough investigation, including x-ray examination to discover the physical signs present. In the absence of physical signs, I believe, that symptoms alone can safely be accepted as proof of disability only in instances where there is an unquestionable history of actual severe and unusual stress having been brought upon the spinal column.

I have not yet seen a compression fracture of a vertebra which I am sure was due to a lifting strain. I have seen several such fractures, which had been attributed to lifting strain, but in every instance careful inquiry discovered a history of a previous severe fall or crushing accident, which, in my opinion, accounted for the vertebral distortion credited to the more recent lifting strain. I would like to ask Dr. Spiers how many compression fractures of vertebrae he has seen which were unquestionably the result of lifting strain.

D. I. ALLER, M.D. (Mattei Building, Fresno)—I have

read with interest Doctor Spiers' excellent paper on fractures of the spine, and I find that he has stressed many points upon which I insist in all severely traumatized backs.

In all spine injuries one never is too careful or exacting in determining the exact nature of the fall, crush, or body position at time of accident.

In my experience, both as to private cases, industrial cases and in work at the General Hospital, there has always been clinical evidence of sufficient moment to warrant a thorough investigation in the x-ray laboratory.

The anomalies of the fifth lumbar vertebra are in some instances apt to be misleading, and may result in an incorrect diagnosis.

It has never been my privilege to see a compression fracture of a vertebra due to a lifting strain; however, do not understand that I question such a possibility in spines weakened from disease or previous injury.

C. E. EARLY, M. D. (Golden State Hospital, Los Angeles)—This paper presents several interesting points. The more proficient we become in the examination of injuries and the interpretation of x-rays, the less malingering we see. Exaggeration of existing symptoms is not uncommon. This is especially noted in back injuries, and is due to a faulty psychological impression often induced by the surgeon. The surgeon treating back injuries should explain, in detail, the condition to his patient, giving him as good a prognosis as possible. A fractured vertebra should never be called a "broken back." Correct mental stimulation is good therapy in back injuries.

Careful, painstaking study and examination with the clothing entirely removed is essential. Examine the entire body. Focal infections and pre-existing diseases are oftentimes an important factor in diagnosis, treatment and prognosis. Rectal examination should always be made. I believe that spinal fractures will show definitely localized symptoms. When my patient is unable to localize his pain and rubs his hand over a considerable area of his back, I look upon the case with suspicion. Careful x-ray study is of greatest importance. Stereoscopic and lateral views should be had. It is unfortunate that we are unable to secure lateral views of the upper dorsals, but it is seldom that a compression or crushed fracture occurs in that region.

I have never seen a crushed fracture due to strain, nor do I recall having seen a fractured transverse process due entirely to strain unless it were a very small avulsed chip from the tip of the process. I do not believe a healthy vertebral body was ever fractured entirely by straining. Fractured transverse processes do not cause prolonged disability. The disability ordinarily does not exceed sixty days. In only two cases have I removed fractured transverse processes for continued pain. If I examined a painful back several months after injury and found only fractured transverse processes, I would conclude that there was other cause for the pain.

Impingement of the transverse processes of the fifth lumbar on the iliac crests is more theoretical than real. It seldom if ever occurs unless the process is malformed. Examine a skeleton and note the distance between the process and the ilium; also note the downward and backward curve of the iliac crest. Fractures through the articular processes and facets are rare, but probably occur in many cases where they are not demonstrable by the x-ray.

The percentage of cases that show nerve symptoms is small, unless the crushing has been severe. In these cases the nerve symptoms generally follow immediately upon the injury. In a few cases of compression of the body of a dorsal vertebra I have found pain due to pressure on the nerve root referred around the rib to the front of the chest. Fractures of the fifth lumbar often refer pain down the legs by irritation or pressure on the lumbo sacral nerves.

Remember, in examining back injuries, that we see few spines that are entirely normal. These injuries usually occur during the years of our active working life, and by that time most of us have some deviation from the normal. Remember, also, that there is considerable normal variation in the width of the vertebral bodies.

DOCTOR SPIERS (closing)—Regarding compression frac-

tures due to muscular violence, I have seen one which was unquestionably due to such. Several husky mechanics were testing their lifting ability at a garage. The champion, to demonstrate that he could lift still more, endeavored to lift a weight of about eleven hundred pounds. While in the extreme effort he suddenly cried out in pain and practically "froze" in the position in which he was standing. He was taken immediately to a hospital where x-rays films disclosed a compression fracture of the body of a vertebra. There was no bony pathology present causing any particular weakness to the spine.

Fractures of the transverse processes, in my experience, do cause long periods of disability at times. I have frequently found them among the hardest of cases to give symptomatic relief. I attribute this to the fact that the nerve trunks lie directly anterior to these processes.

I appreciate the discussion this paper has brought forth.

CALIFORNIA ASSOCIATION OF PHYSIOTHERAPISTS

(Reported by Beret Stenvig, secretary San Francisco Branch)

The San Francisco branch of the California Association of Physiotherapists held its meeting on March 11 in the form of a general discussion by the members of the association, with a very interesting and stimulating exchange of ideas on physiotherapy practice.

The next meeting will be on Wednesday, April 8, at 8 p. m. at St. Luke's Hospital, Twenty-seventh and Valencia. Richard W. Harvey, M. D., will speak on the use of hydrotherapy in the treatment of neurasthenia. Following Dr. Harvey's talk, the technician at St. Luke's will give a demonstration in the physiotherapy department.

The Family Doctor as a Community Asset—One of the inducements that leads to the setting up in a small village of a doctor's office is the rendering of service for hire. He locates in a community and grows up with the country and the people. He has succeeded them in sickness and in sorrow, has battled their diseases, rescued them in their accidents, warned, cheered and exhorted them. *He has been one of them.* He has not only been their physician and surgeon, he has assumed and earned a place of responsibility in their lives, and his interests have become so entwined and thought-bound with theirs that he is in the position of friend and counselor, and he not only is a country doctor, but he remains a country doctor.—Austin Flint, Iowa Medical Journal.

A Convalescent and Rest Home for Nurses—A group of New York women have purchased ten acres of land and provided suitable buildings, personnel, and financing for a convalescent and rest home for nurses. What a beautiful and worthy thought! The earning life of a good nurse is short, and the future after her active usefulness is too problematical. Even at the wages they now charge and to which many unjustly object, these worthy servants of the health of others cannot, even by practicing thrift, provide against the day when they can no longer earn a living. The well-thought-out plan now taking shape in New York might well interest benefactors of mankind elsewhere.

"Syphilis," says the Public Health Service, "may be held responsible for 52 per cent of all the deaths resulting from heart trouble, or 88,417 fatalities. When this sum is added to the 15,811 deaths credited to syphilis by the census figures, the result is a total of 104,228 deaths caused by syphilis directly or indirectly, and this total is arrived at without taking into consideration deaths caused by some other diseases which are in many cases a result of syphilitic infection. Experiments recently made in Paris would seem to indicate that 76 per cent of syphilitics have heart trouble."

EDITORIALS

BUNNELL MEMORIAL

It is fitting that the medical profession of California at the coming meeting in Yosemite Valley should honor the memory of the doctor who, in 1851 as a member of the Mariposa Battalion, the first white men to enter the valley, had imagination enough to appreciate the scenic wonders of the gorge. While his companions would have named it Happy Valley or something equally inane, Doctor Bunnell suggested that they name the valley for the tribe of Indians which lived there and which the battalion was pursuing.

The name "Yosemite" is otherwise appropriate, for it signifies the bear, to this day one of the denizens of the valley, typifying also the State of California.

The committee appointed at the Los Angeles meeting has had a plaque cast in bronze, commemorating Doctor Bunnell and his naming of the valley which, with permission of Mr. Stephen T. Mather, Director of National Parks, it is proposed to mount on a suitable rock at the foot of El Capitan, across the river from where the Mariposa Battalion made its principal camp in the valley, and dedicate it with appropriate ceremonies on Tuesday morning, May 19.

IS THE MEDICAL BAND GETTING TOO FAR AHEAD OF THE HEALTH PARADE?

Whenever the leading band gets too far ahead of the parade, the marchers not only get out of step and become confused, but groups of them are led off to side streets by the tunes of lesser attractions.

That a condition analogous to this is before us in the parade of medical and health progress, is attested by many facts which will readily occur to any reader. Surely, there is a band on every corner, each playing a different tune in a different key. Part of the leading band goes marching on, while other parts have turned back to see what has become of the parade. The paraders are confused and divided, as well they might be. Some are following this or that side show, while others drop into way-side inns for rest and sustenance. Corned beef and cabbage appeal more strongly to many than the blare of the canned music they are urged to follow. While aides of so many colors that they camouflage the whole situation rush up and down the lines exhorting, pleading, and commanding in a hundred tongues, nature, propelled by her inimitable and inexorable laws, rolls upon the paraders, taking toll from many who should be exempt if they only knew where to go and how to get there.

Every limb and branch of the tree of life has its group yelling at the tops of their voices that their branch is the main trunk of the tree, while others soar noisily through the air about until their gas is exhausted when they fall crushed, often taking with them some of the overloaded limbs of the health

tree. Is it any wonder that constantly increasing thousands of people are led to mistake the noise, the show, the shadows, for the substance of health? Having been uprooted from their generations of faith in a health leadership that marched close to and hand in hand with them by the razzle and dazzle of a thousand gaily colored lights flickered by false prophets, too many are growing weary of changing step and following where neither they nor their alleged leaders know.

One large group, for example, that has millions of followers, sets up scales, measuring-rods, and other mechanical devices as health diagnostic images for the ails of children. It does not require any particular intelligence to employ the images nor to interpret their readings. According to them, you either have, or have not "malnutrition," "undernutrition," or "overnutrition"—whatever these terms may mean. And having arrived at a diagnosis, you either take milk and vitamins or you don't. Like all "sure cures," based upon "sure fire," quick-acting, infallible diagnostic and treatment features, they do no measurable harm so long as there is nothing the matter. Just recently, there have been reported instances of chronic appendicitis, ulcers of stomach and intestine, tuberculosis, osteomyelitis, rickets, malaria, diabetes, and syphilis that had been diagnosed by totally incompetent persons as "malnutrition" by the use of mechanical diagnostic devices *and treated by milk and vitamins*. The outcome in more than one of these instances was needlessly tragic. One of these days public opinion is likely to be focused on a serious tragedy, and some "near doctors" are likely to be defendants in a manslaughter suit.

Another large group is pounding away upon the slogan of periodic health examinations. Health examinations of themselves have only a statistical value. It's the carefully written record of competent examinations and diagnosis placed in the hands of the person and his physician and followed up by them that is of value. This is precisely what is not being done extensively, nor is there any indication that it is what is wanted by those who make the most noise.

And so we might go on through many, many of the "loud-speaking" practices. Scales and weights furnish incomplete evidence of limited value; medical examinations furnish evidence of great value, *provided* only that in both cases the evidence is written, completed, and checked where necessary, *and* placed in the hands of the patient *and* his physician *and* followed up.

Let us, by all means, encourage the weighing and measuring of school children and all others. Let us have more and more health examinations, but we should stop the idea that is now being absorbed by millions of people that the one furnishes sufficient diagnostic data, or that either are end-results that mean health progress. The average citizen may be more of a moron than some of those who pronounce him so, but he is intelligent enough to understand a broader, more constructive, and more useful health message than he is now getting.

ADVERTISING AND ETHICS

Polk Daniels, in the Howard (Kansas) Courant, says: "Doctors don't advertise. Ethics prohibit. And so the opportunity is open for quacks to unload fake nostrums and cures upon the uninformed public. No wonder a French woman asked: 'What is an ethic?'"

"We have been accustomed and resigned to hearing this specious stuff," says the Medical Standard editorially, "but we are going to make one more effort, just the same, and rise to remark once more that it is specious and silly. WHAT IN THE WORLD HAS THE DOCTOR TO ADVERTISE? He puts up a shingle or a plate outside his door, and probably carries a card in his town newspaper if he lives in any other than a large city, and this announces to the public that he is a properly qualified practitioner examined and licensed by the state to treat the sick. If he is a specialist in some particular branch of medicine, his sign or his card announces that he treats diseases of the eye, ear, nose and throat, or diseases of children, or what-not. WHAT ELSE, IN HEAVEN'S NAME, COULD HE TELL?"

"... The argument that the doctor's refusal to go any further in advertising himself 'opens the opportunity for quacks to unload fake nostrums and cures upon an uninformed public' is both gratuitous and foolish. In the first place, even if that were true, it would not be a valid argument. That the quack, by utilizing improper means of exploitation, is able to put himself across is no justification for the decent practitioner employing improper methods of publicity. In a certain sense the unscrupulous man always has an advantage over a gentleman; he can and does perpetrate things that the gentleman's code prohibits him from doing. But to argue that the gentleman should adopt the cad's methods is an argument as silly and vicious as it is old. That being done, there would then be absolutely no way of differentiating the gentleman from the cad.

"But, as a matter of fact, the statement upon which the argument is based hasn't a grain of truth in it. The informing of the public on matters of true and false medical claims and medical achievement is not a subject for individual advertising, but for education and instruction at the hands of the profession at large; and everyone with a handful of sense knows perfectly well that in no department of human activity has there been such a widespread and efficient campaign of public enlightenment as in that which pertains to health and sickness and the treatment of the sick.

"So far from compromising with the methods of the quack, the decent methods of the profession have driven the old, rotten quack advertising from the face of the earth, and forced the quack to observe some form of decency, at all events. *The quack is on the defensive nowadays. In order to survive at all, he has to pay the homage which vice pays to virtue, and imitates the reputable physician.*

"*An uninformed public—tra-la-la! The public, in the main, knows quite well the difference between the reputable medical man and the quack. The trouble is that a large proportion of the dear public actually like quackery; and that will be true for a long time to come. And if, as our critics suggest, the reputable medical practitioner were to throw ethics to the winds and advertise in the same manner as the quack, that portion of the public would turn to him, not because he was a reputable, decent practitioner, but because they would take him to be a quack.*"

There is still another phase of Mr. Daniels' criticism of medical ethics. He overlooks the fact that his public press also has a code of ethics even longer than that of physicians. His code, among other things, stands for "*truth in advertising.*" Admitting as he does that quacks advertise, we would like to ask him what he does with *his* ethics when he accepts a quack's advertising copy. Most good newspapers live up to their ethics as do most good doctors, but still far too many of both classes skate

along the edge of honesty and some still continue to slop over.

It is pretty poor taste for a paper or periodical to criticize doctors for trying to live up to a moral code of procedure because that code prevents the periodical from selling space for unworthy purposes, while at the same time the publication sells space for purposes which the ethics of its own profession prohibits.

"Truth in advertising" in essence is part of medical ethics as it is of newspaper and magazine advertising ethics.

We should all "hold fast to that which is good."

THE FUTURE OF THE MEDICAL PROFESSION

In his presidential address before a branch of the British Medical Association, Thomas MacCarthy speaks conservatively of a situation that is only a few jumps ahead of us and on the road we are traveling in high with the gears locked. Among the things he said were that: "It is well that we should consider from time to time non-scientific subjects which concern the honor and welfare of our profession. The pressure of hard circumstance has compelled us to spend much time and thought on medico-political matters during past years, more especially since 1912 (when the compulsory health insurance went into effect), and this has been necessary unless we were content to allow the best interests of our profession to go by default. By interests I do not mean merely, or even mainly, financial ones, but our professional interests in the art of healing. We have been engaged in a hard struggle to maintain what is best, and have had to contest the ground foot by foot. We are still doing so, and I can see no chance of any surcease from strife in the immediate future, but rather from time to time fresh exacerbations of it. . . ."

"It is commonly and truly said that change of occupation is as good as a holiday, but he would be a bold man who advised the overtaxed doctor to turn his thoughts, as a relaxation from his professional work, to the consideration of the medico-political problems with which he is surrounded and oppressed. Nevertheless, it is of the first importance to all of us, and to those who come after, that we should try to work our way through these difficulties. . . ."

"As a profession we are prone to go on doing our work, striving to keep up with the progress of science in so far as it concerns the practice of physic, and not to heed the changes in social and political thought and the effects these must have on our profession, until a momentous change rapidly comes within the range of practical politics and soon is an accomplished fact, leaving us stampeded by its apparent suddenness. Such a change is often called revolutionary. At first sight it may seem so, but most of the changes are evolutionary and of comparatively slow growth. The actual change is sudden, but the factors producing it are of a steadily accumulating nature. One with eyes to see can tell what the gradually increasing weight must do some time before the catastrophe occurs.

"The days are gone, never to return, when the

doctor can plough his furrow in his own way, thinking only of his patient and how best to treat his malady, working just as an individual and according to his conscience. For good or ill the state has stepped in, or, perhaps more properly, has put both feet in, and in the future will interfere more and more with what it considers to be the interests of its citizens. The health of the community is of such importance that the state feels that the best skill and attention must be available for everyone, and apparently is on the way to making medical service a national one, as the army and navy are.

"Things have progressed too far to go back on these arrangements; we must accept them as they are, . . . for the only alternative to the present system is a whole-time state medical service, which, in the best interests of the community, we wisely side-tracked by accepting the panel system. . . .

"There are about 13 millions of insured persons in England and Wales, and the ministry of health estimates their dependents at 17½ millions. The inclusion of these latter for medical attendance has been in the minds of many from the very beginning, but it was thought better to start on the workers as being a more manageable and less expensive matter, and if this proved a success the addition of the dependents would follow. It is fairly obvious that adequate treatment is just as necessary for the dependents as for the insured person in the interests of public health. Financial stringency is a bar, but we must remember that where the health of the community is at stake, or (what amounts to the same thing) is thought to be at stake, money will be found. When and if this extension takes place there will be over 30 millions of the population attended on the panel system. Secondly, there is an insistent and growing demand for an extension in the range of medical services for insured persons, to include everything—operation, consultations, specialist services. This is being pushed forward very vigorously at the present moment, especially by the approved societies, and cannot be long delayed.

"It does not require much imagination to realize that the increase in number from 13 to 30 millions, coupled with the scheme embracing all kinds of medical services, must greatly alter medical practice for us all, and make us to a still greater extent a state-paid and state-regulated profession. At present only general practitioners are intimately concerned, and not all of these, but with the extensions foreshadowed still larger proportion of these, and even specialists and consultants, will be involved. Another important factor is the hospital question. This is a large and complex matter which is causing a great deal of discussion with, so far, apparently little result. It is, however, slowly crystallizing, and a few years will find us at grips with it as we now are with the panel question.

"A satisfactory solution of this hospital question is a matter of great importance to all who do hospital work, but I do not propose to enter into it save to suggest that the voluntary system, which is so in keeping with the genius of this country and under which such a high state of efficiency has been

attained in hospital service, is not likely to continue much longer."

ALCOHOL AS A METABOLITE IN NORMAL TISSUES

Ever since W. Hutson Ford of New Orleans demonstrated (in 1872) that tissues of animals contain preformed alcohol, investigators have debated from time to time the possible origin of this normal alcohol. The quantity and concentration, of course, are not very large, though large enough to permit quantitative estimation. Pringsheim and Schweisheimer estimated the following concentrations: Rabbit blood, 0.0018 per cent; rat muscle, 0.0028 per cent; rat liver, 0.0023 per cent; human blood, 0.0029 to 0.00367 per cent. Although these concentrations appear trifling, they are not so small when they are compared with certain ordinary metabolites of the blood, and with reported concentrations of alcohol after its oral administration. For instance, Miles found the concentration in blood during the first two hours after taking one liter of 2.75 per cent alcohol to be from 0.018 to 0.03 per cent, and 0.028 to 0.036 per cent after taking 100 cc. of 27.5 per cent alcohol. The appearance of alcohol in blood and organs of individuals not receiving it suggests its origin from the dietary or tissues, or both. Its origin appears to be rather complicated. The fact that the blood alcohol varies somewhat with carbohydrate diet indicates that the class of carbohydrates is responsible in part, at least.

Recently, Kühn of Jena has suggested the following schematic representation of its formation from sugar; dextrose → glycerine and triose → d-lactic acid → d-alanin and pyrocatechuic acid → acetoacetic acid, acetaldehyde and ethyl alcohol → acetic acid, which is finally oxidized to carbon dioxide and water. Accordingly, ethyl alcohol may be regarded as an intermediary product of carbohydrate metabolism, a fact perhaps hitherto insufficiently appreciated. As long as the alcohol does not exceed certain concentrations, it would hardly be regarded pharmacologically as a protoplasmic poison. However, the information regarding the concentrations in disease conditions, in anomalies of metabolism, and the effects from low concentrations over very long periods is lacking. The few existing investigations of the concentration of alcohol in blood and cerebrospinal fluid of normal and alcoholic individuals after ingestion of alcohol under practically acute conditions do not furnish the information desired about disease and chronic conditions. The recent studies of Kühn do not quite meet these latter requirements, but are nevertheless worthy of attention.

Kühn studied the blood alcohol of abstinent students from 21 to 26 years old, during starvation, on a carbohydrate diet and after the administration of small quantities of alcohol. The concentration in the blood of starved subjects ranged from 0.0006 to 0.0051 per cent, average 0.00154 per cent, which is about one-third of that claimed previously. These figures were not changed when the subjects were on a liberal carbohydrate diet. After the administration of from 18 to 26.6 cc. of absolute alcohol with liberal carbohydrate diet, the alcohol content increased to an average of 0.0033 per cent, the maximum con-

tent found at the end of an hour being 0.0057 per cent. The blood alcohol, after drinking two bottles of German beer, with a liberal carbohydrate diet, was less than the blood alcohol on the diet alone. The cause of this inhibitory influence of the dietary was not ascertained, but some interference with the absorption of the alcohol of the ingested liquor is suggested. A curious feature is that the blood alcohol of carbohydrate dietary alone was decreased when alcohol was taken with the diet, as though the presence of alcohol in the alimentary tract prevented or inhibited the process originating dietary alcohol. From this it is suggested that the blood alcohol of dietary has a fermentative origin in the alimentary tract which leads up to a further suggestion, namely, that blood alcohol might serve as a useful criterion of intestinal fermentation and putrefaction, instead of the blood phenol frequently employed.

The fermentation theory of blood alcohol is not new, but neither the theory nor the entire question of blood alcohol have received the attention that they appear to merit. The work of Kühn does not quite agree with the results of the older investigators, but it has the merit of having been done with accuracy and of calling attention again to a matter that deserves more than passing notice.

Ford, W. H.: N. Y. Med. J., 1872, 15:561—"Normal Presence of Alcohol in the Blood."

Pringsheim, J.: Biochem. Zeitschr. 1908, 12:143—"Chemische Untersuchungen über das Wesen der Alkoholtoleranz."

Schweisheimer, W.: Dtsch. Archiv. f. klin. Med., 1913, 109:271—"Der Alkoholgehalt des Blutes unter verschiedenen Bedingungen."

Miles, W. R.: J. Pharm. Exp. Therap., 1922, 22:265—"The Comparative Concentrations of Alcohol in Human Blood and Urine at Intervals After Ingestion."

Kühn, G.: Arch. exp. Path. Pharm., 1924, 103:295—"Untersuchungen über Alkohol. II. Mitteilung: Über den Alkoholgehalt des menschlichen Blutes im nüchternen Zustand, nach Kohlehydratzufuhr und nach Genuss geringer Alkoholgengen."

UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL OPENS GRADUATE SUMMER COURSES

Announcements have been sent out that the University of California Medical School and the University of California Hospital will give summer courses to graduates in medicine, surgery, and medical specialties between dates of June 15 and July 11. Doctor Eugene Kilgore is director of the courses.

PRACTICAL THERAPEUTICS AND THE ART OF MEDICINE

Abstracts from Alumni Lectures, University California Medical School, 1924

Dr. Dewey R. Powell—I would rather do \$100 worth of work for \$25 and know the person will be able to pay without depriving his family of the necessities of life, thereby gaining a friend, then charge \$75 or \$100 and have it pain in small dribbling amounts and leaving the impression of being overcharged.

Dr. James Sewell—You will be called on to take an active part in politics in the community in which you reside. You should regard it as your duty. If we are to have a free country, if we are to have a country we can love and respect, we must all take part in its government. You don't need to be too active nor too partisan, but pay enough attention to what is going on, so if patients ask for advice—as they do—you can tell them what to do.

Dr. J. Wilson Shiels—The "old doctor" should not pass. As a matter of fact, the young, well-educated medical man can, in reverence, emulate him.

California Medical Association

GRANVILLE MacGOWAN, M. D., Los Angeles..President
EDWARD N. EWER, M. D., Oakland.....President-elect
EMMA W. POPE, M. D., San Francisco.....
.....Secretary and Associate Editor for California

YOSEMITE AND THE ANNUAL SESSION, MAY 18-21, 1925

Spring comes early to Yosemite National Park. Already the meadows are turning green and soon they will be filled with all kinds of blossoms which have given Yosemite the sobriquet of "The Park of a Thousand Flowers." There will be Mariposa lilies, snowplants, evening primroses, and scores of less famous flowers, blooming in the emerald meadows or in the rich forest mold underneath the giant trees.

However, this article is not to be an adjective-laden description of Yosemite's natural charms, of which everybody knows, but a precise statement of what kind of weather may be expected by the members of the California Medical Association during the annual convention May 18 to 21. Of course, it is impossible to predict, but official government records of weather conditions over a long period of years certainly will be indicative of possibilities.

"One often reads praises and generalities about Yosemite climate and weather," says Park Naturalist Ansel F. Hall, in his most excellent book, "Handbook of Yosemite National Park," "but, so far as the writer knows, no concise statement as to exactly what might be expected at any given time of year has ever been published.

Recent reports from the Valley Incomparable indicate an early spring, and May should be unusually beautiful. Heavy snows during the winter will make the falls run in large volume and the plant life extremely luxuriant. The Wawona Road will probably be passable in April this year, so that those professional men who desire to drive to Yosemite in their own automobiles should find the road in good condition the middle of May. The majority of the visitors doubtless will go the easier and more beautiful route by train via Merced to El Portal through the canyon of the Merced River and the old gold diggings, and by Yosemite Transportation System automobiles, fifteen miles over the government boulevard from El Portal to Yosemite Valley, still paralleling the Merced River and passing through the famous "Gates of Yosemite," where El Capitan stands on one side, Three Graces and Bridal Veil Falls on the other, with a wonderful vista in the distance.

The road from Yosemite Valley to the Mariposa Grove of Big Trees also will be open during the convention, affording delegates and their families the opportunity to see what experts say is the finest of all groups of sequoia gigantea. The Yosemite Transportation System will operate daily motor-car trips during the convention from Yosemite Valley to the Mariposa Grove of Big Trees by way of Artist and Inspiration Points. Another interesting trip operated daily is the tour of Yosemite Valley.

ANNUAL SESSION C. M. A., YOSEMITE, MAY 18, 19, 20, 21, 1925

The Fifty-fourth Annual Meeting of the California Medical Association promises to be well attended, 400 reservations having already been made.

Due to the most efficient co-operation of section secretaries, the completed program appears in this issue of CALIFORNIA AND WESTERN MEDICINE. The program holds much of interest for the membership, and should secure a good attendance at section meetings, despite the counter-attractions of beauty and grandeur in our wonderful Yosemite Valley.

The March issue should be referred to for any information concerning hotel rates and train schedules.

DELEGATES AND ALTERNATES TO A. M. A.

California delegates to the A. M. A., with their corresponding alternates, are:

Victor G. Vecki, San Francisco, 1925; alternate, C. Van Zwalenburg, Riverside, 1925.

Hans Lisser, San Francisco, 1925; alternate, William E. Stevens, San Francisco, 1925.

Albert Soiland, Los Angeles, 1925 and 1926; alternate, Charles D. Lockwood, Pasadena, 1925 and 1926.

Robert V. Day, Los Angeles, 1925 and 1926; alternate, Robert Pollock, San Diego, 1925 and 1926.

Lemuel P. Adams, Oakland, 1925 and 1926; alternate, O. D. Hamlin, Oakland, 1925 and 1926.

For full details, see minutes of 150th meeting of the Council, as published on this page.

ABSTRACTS FROM THE MINUTES OF THE ONE HUNDRED AND FIFTIETH MEETING OF THE COUNCIL OF THE CALIFORNIA MEDICAL ASSOCIATION.

Held in the offices of the editor of CALIFORNIA AND WESTERN MEDICINE, 806 Balboa Building, San Francisco, California, Saturday, February 14, 1925, at 10 a. m.

Present—Doctors Parkinson, MacGowan, Ewer, Alderson, Musgrave, Kinney, Kiger, Edwards, De Lappe, McArthur, Gibbons, Hamlin, and Pope.

Absent—Doctors Beattie, Coffey, Smith, McLeod, Bine, Kress, Curtiss, and General Counsel Peart.

The secretary reported that Rene Bine and General Counsel Peart were both unable to attend because of illness. G. H. Kress of Los Angeles and C. L. Curtiss of Redlands were also unable to attend because of illness. Letter from J. H. McLeod of Santa Rosa was then read, in which he conveyed his regrets that he would be unable to attend any but the evening session.

Minutes of the Council—On motion of Kiger, seconded by McArthur, it was

RESOLVED, That the minutes of the 148th and 149th meetings of the Council as mailed to each member thereof be approved.

Minutes of the Executive Committee—The secretary read the minutes of the 79th and 80th meetings of the Executive Committee.

Action by the Council—On motion of Kiger, seconded by Gibbons, it was

RESOLVED, That the minutes of the 79th and 80th meetings of the Executive Committee be approved and made an official part of the minutes of this Council.

Resignation of T. C. Edwards as Delegate to A. M. A.—T. C. Edwards of Salinas presented his resignation as a delegate to the A. M. A.

Action by the Council—On motion duly made, the resignation of T. C. Edwards of Salinas as a delegate to the A. M. A. was accepted.

Delegates to A. M. A.—The secretary reported that, by reason of the increase in membership, the C. M. A.

was now entitled to five delegates and five alternates to the A. M. A., and also stated that it would be impossible for the California House of Delegates to elect the necessary delegates and alternates at its annual meeting on May 20 and comply with the requirements of the A. M. A. That it would, therefore, be necessary for the Council to take some action in the matter prior to the annual meeting, in order to secure the proper certification of delegates at the A. M. A. convention; such action to be later confirmed by the California House of Delegates. The following are those delegates with corresponding alternates, whose terms expire: Albert Soiland, Los Angeles; alternate, Robert V. Day, Los Angeles. John C. Yates, San Diego; alternate, Charles D. Lockwood, Pasadena.

Action by the Council—On motion of McArthur, seconded by Kiger, it was

RESOLVED, That Albert Soiland and Robert V. Day, both of Los Angeles, be elected as delegates to the A. M. A. for the ensuing two years.

Alternates to A. M. A.—On motion of Kiger, seconded by McArthur, it was

RESOLVED, That Charles D. Lockwood of Pasadena be elected as alternate to Albert Soiland of Los Angeles for the ensuing two years; and that Robert Pollock of San Diego be elected as alternate to Robert V. Day of Los Angeles for the ensuing two years.

Delegate to Replace T. C. Edwards, Resigned—On motion of Alderson, seconded by Gibbons, it was

RESOLVED, That Hans Lisser of San Francisco be elected delegate to the A. M. A. to fill the unexpired term of T. C. Edwards of Salinas, resigned; William E. Stevens of San Francisco remaining as alternate to Doctor Lisser.

Fifth Delegate to A. M. A. Under 1924 Apportionment—The election of a fifth delegate and corresponding alternate as apportioned by the A. M. A. for the 1925 session and thereafter was brought up. The question was then raised as to whether such representatives should be elected from the North or the South, to conform with the usual custom of giving equal representation to the North and the South.

The Chair suggested that it be decided by lot from what district the fifth delegate should be elected for the 1925 and 1926 sessions. The decision fell to the North; and it was the sense of the Council that, at the expiration of such term the fifth delegate would be elected from the South and, thereafter, alternate each second year between the North and the South. The election of the fifth delegate and alternate was postponed till the afternoon session.

Election of Trustee of Indemnity Defense Fund—The secretary advised the Council that the term of William Duffield of Los Angeles as a trustee of the Indemnity Defense Fund had expired January 1, 1925.

Action by the Council—On motion of MacGowan, seconded by Alderson, it was

RESOLVED, That William Duffield of Los Angeles be elected to succeed himself for the ensuing three years as a trustee of the Indemnity Defense Fund.

Medical Radio Broadcasting—The secretary read a report from the Committee on Medical Radio Broadcasting as submitted by the chairman, George H. Kress of Los Angeles. This report and the question in general was then fully discussed.

Action by the Council—On motion of Ewer, seconded by Gibbons, it was

RESOLVED, That the report of the Committee on Medical Radio Broadcasting be adopted as submitted, and that action be taken as outlined therein.

Membership Directory—The Chair raised the question of including in the membership directory the home address, as well as the office address, and both telephone numbers of all members; and recommended that such additions be made to the next directory.

Action by the Council—On motion of McArthur, seconded by De Lappe, it was

RESOLVED, That the home address, office address, and both telephone numbers of all members be included in the next issue of the membership directory.

Income Tax Deductions—The president submitted the following amendment to the Revenue Act as prepared by the general counsel, in accordance with instructions re-

ceived at the last Council meeting. (Words in italic type comprise the proposed amendment.)

"Sec. 214 (a). In computing net income, there shall be allowed as deductions: (1) All the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade, business, *or profession*, including a reasonable allowance for salaries or other compensation for personal services actually rendered; traveling expenses (including the entire amount expended for meals and lodging) while away from home in the pursuit of a trade or business, *or profession, or in attending professional conventions of the profession of which the taxpayer is a member.*"

The president then stated that the best way would be to have some member of the House of Representatives present this amendment and have the united medical profession of the country support it.

Action by the Council—On motion of De Lappe, seconded by McArthur, it was

RESOLVED, That the amendment to the Revenue Act as proposed by the general counsel be adopted; and that the secretary be instructed to take the necessary steps to have the amendment passed, and to place the matter before the various state medical, bar, and other professional associations of the Union.

Legislative Procedures—The secretary read, for the information of the Council, a report submitted by the general counsel regarding legislative procedures. No action was taken.

Application for Affiliate Membership—The secretary presented an application from Doctor J. S. Wheeler of Lincoln for affiliate membership, together with endorsement of such application by the secretary of the Placer County Medical Society.

Action by the Council—On motion of Alderson, seconded by Ewer, Doctor J. S. Wheeler of Lincoln was elected an affiliate member of the California Medical Association.

Status of Associate Members of County Medical Societies—The secretary read a letter from Councilor Kinney, covering the situation now existing in San Diego County and calling attention to discrepancies in the state constitution and by-laws regarding associate membership. The secretary then reported that the general counsel suggested that the Council temporarily take care of the situation and that he would prepare an amendment to the constitution for presentation at the annual meeting.

After full discussion, it was the sense of the Council that no action be taken in the absence of a report from the general counsel, and that the matter be postponed till the annual meeting.

History of the California Medical Association—Suggestion of Councilor Kress of Los Angeles that the Council appoint a "Committee on the Preservation of the History of the California Medical Association" was considered. The Council was informed that there were several medical historical societies now in existence in California.

Action by the Council—On motion of McArthur, seconded by Kiger, it was

RESOLVED, That the chairman, if deemed wise after a thorough investigation, be authorized to appoint a committee of three or five on the "Preservation of the History of the California Medical Association"; and further that the chairman be included in the membership of such committee.

Financial Statements—Detailed statements of the finances of the California Medical Association and California and Western Medicine were presented for discussion, in accordance with instructions given at the last Council meeting; copies of such statements having been mailed to all members of the Council.

After general discussion, it was the sense of the Council that financial statements be included in the report of the Council to the House of Delegates and, at the same time, that the association be advised that every fraternal publication must be credited with one-half the subscription price of such publication for every member of the association.

Present Status of the Journal—The editor reported that in 1924 the Journal had published 1536 pages, 864,000 words of reading matter, exclusive of advertising; 117 original articles, and had rejected 19 manuscripts. He also advised that on February 14, 1925, 127 accepted but unpublished manuscripts were on hand, which did not include the material for the Historical (May) number; and that this is more than a year's supply of articles. He then requested recommendations or suggestions as to how this congestion was to be relieved; whether by adding another folio and thereby increasing materially the cost of the Journal, or by being more critical in accepting manuscripts. After a full and general discussion, the editor submitted the following resolution:

"WHEREAS, The increasing prominence of CALIFORNIA AND WESTERN MEDICINE is resulting in a marked increase in the number of articles offered for publication, thus amplifying the editor's responsibilities in deciding what to accept and what to decline, now, therefore, be it

"RESOLVED, That the editor is authorized and instructed to arrange with such members of the California Medical Association as he sees fit to serve as members of an editorial council. It shall be the duty of these editorial councilors to advise with and assist the editor with his problem of accepting and declining matter submitted for publication. Following the usual custom of periodicals, the names of members serving on this council will be kept confidential between the editor and each member."

Action by the Council—On motion of Edwards, seconded by McArthur, it was

RESOLVED, That the resolution as submitted by the editor be adopted as the sense of the Council; and that the question of relieving the congestion in the publication material for CALIFORNIA AND WESTERN MEDICINE be further considered and made a part of the report of this Council to the House of Delegates, together with the financial report for 1924 and the outlook for 1925.

Subscription Price of Journal—The editor recommended that the paid subscription price of CALIFORNIA AND WESTERN MEDICINE be increased to \$5 per year and 50 cents per single copy, as the actual cost of publishing the Journal is more than the present subscription price, which is \$4 per year.

Action by the Council—On motion of MacGowan, seconded by Gibbons, it was

RESOLVED, That, commencing with the March issue of CALIFORNIA AND WESTERN MEDICINE, the paid subscription price be fixed at \$5 per year and 50 cents per single copy.

Publication Cost of Journal—The secretary presented a report from the James H. Barry Company covering the present publication cost of CALIFORNIA AND WESTERN MEDICINE, as requested by the Executive Committee at its last meeting.

Action by the Council—On motion of Edwards, seconded by McArthur, it was

RESOLVED, That the Council, having heard the report of the James H. Barry Company on the present publication cost of CALIFORNIA AND WESTERN MEDICINE, recommends that commencing with the March issue, the cost to the Journal be based on the following monthly rates: Five thousand copies, 128 pages and cover, \$1,600; additional 100 copies, \$26.25; this being an increase of approximately 5 per cent over the present cost.

Commissions on Journal Subscriptions—The question of paying commissions on Journal subscriptions, as referred to the Council by the Executive Committee, was considered.

Action by the Council—On motion of Kiger, seconded by De Lappe, it was

RESOLVED, That, upon recommendation of the editor, the payment of commissions on subscriptions to CALIFORNIA AND WESTERN MEDICINE be not approved.

Legislative Matters—Mr. Celestine J. Sullivan, executive secretary of the League for the Conservation of Pub-

lic Health, being present by request, submitted a digest of the medico-legal bills now before the Legislature, which were then fully discussed.

Action by the Council—On motion of McArthur, seconded by Kiger, it was

RESOLVED, That the Council, having heard the report of the League for the Conservation of Public Health on proposed legislation touching public health and public welfare, believes that such measures should have wide publicity to elicit comment and suggestions from those interested.

Election of Fifth Delegate to A. M. A.—On motion of Kiger, seconded by Alderson, it was

RESOLVED, That Lemuel P. Adams of Oakland be elected as the fifth delegate from the California Medical Association to the American Medical Association for the ensuing two years.

Election of Fifth Alternate to A. M. A.—On motion of Kiger, seconded by Alderson, it was

RESOLVED, That O. D. Hamlin of Oakland be elected as alternate to Doctor Lemuel P. Adams for the ensuing two years.

Clinical Prize—The Chair reported that he desired to confer with Councilors Bine and Kress, both of whom were absent, before appointing the "Committee on Clinical Prizes," and, therefore, requested further time, stating that the matter would be included in the annual report of the Council, and in that manner would go before the association as a whole.

It was the sense of the Council that the matter be referred over to the next meeting.

Medical Section of Officers' Reserve Corps—The Chair reported that he had succeeded in securing from the Surgeon-General's office a list of the Reserve Officers in California, and that it was the Surgeon-General's desire that members of this committee be composed of members of the Reserve Corps and those who would be most influential in securing members for the corps.

After discussion, it was the sense of the Council that a statewide committee of fifteen be appointed to function separately from the California Medical Association, but that the personnel of such committee be limited to members of the association only; and that further time be extended the Chair in the matter of appointment of such committee.

Attendance at Council Meetings—The question of attendance at Council meetings was considered, and the secretary was instructed to ascertain if there was any ruling or section in the old records or constitutions prior to 1900 that covered this point.

Sciences Allied to Medicine—The secretary reported that, in accordance with instructions received at the last Council meeting, she had endeavored to secure a ruling from the A. M. A. as to "what constitutes sciences allied to medicine"; and that the secretary of the A. M. A. had just wired that the Judicial Council was still considering the question and that it would probably be some time before a decision was reached. Pending receipt of a report from the A. M. A., no action was taken.

Status of Legal Department—The secretary presented, for the information of the Council, a brief report prepared by the general counsel on the present status of the legal department.

Expression of Regret—The secretary was instructed to convey to the General Counsel and those members, whose illness prevented attendance, the sincere regrets of the Council at their enforced absence from this meeting.

Report of Committee on Prenatal Care—The secretary presented the report of the Committee on Prenatal Care as submitted by the chairman, Reginald Knight Smith.

It was the sense of the Council that the secretary be instructed to furnish mimeographed copies of this report to each member of the Council, as the length and importance of this report demanded more detailed considera-

tion; and that each Councilor be requested to return his signed copy with suggested changes or approval.

Adjournment—There being no further business, the Council adjourned to hold an open meeting with the Committee on Industrial Medical Practice.

ALAMEDA COUNTY

Alameda County Medical Society (reported by Pauline S. Nusbaumer, secretary)—At the regular meeting of the Alameda County Medical Association held February 16, the following program, arranged by George Rothganger, was presented by the staff of Merritt Hospital:

A case report of diabetes complicated by gout was given by Hobart Rogers and A. H. Rowe, and was followed by a symposium on the treatment of fractures of the extremities. "The Closed Treatment," by Sumner Everingham; discussion opened by H. H. Hitchcock. "Treatment by Open Operation," by Mark L. Emerson; discussion opened by F. J. Carlson. "Treatment of Complications," by Warren B. Allen; discussion opened by D. N. Richards. "Treatment of Non-union," by George Rothganger; discussion opened by W. L. Bell. In his paper, "Closed Treatment of Fractures," Sumner Everingham said that careful early treatment of fractures is essential to give best results anatomically and functionally; that of prime importance is an x-ray to (1) demonstrate the presence of a fracture, (2) the variety and position of the fragments, (3) a co-existing dislocation, and (4) the presence of gas gangrene; that the essentials for successful treatment of long bones are (1) to replace the broken ends at the earliest possible moment, (2) proper retention until nature has provided for adequate healing in restoring the continuity, (3) adequate supervision of the nutrition and function of the soft parts by massage, electricity, passive and active motion. In discussing "The Open Treatment of Fracture," M. L. Emerson said that less than 2 per cent of fractures are subject to open treatment. Wire of some type is still pre-eminent as a means of fixation. In regard to the discussion of which is the better in non-union—internal medullary beef bone splint, external periosteum osteal sliding graft, or wire. He suggests the use of all three. Perhaps one of them will give the desired results. He advises against putting one's faith in any *one* method. The doctor has discarded the use of kangaroo tendons in any type of bone work. In the treatment of fracture complications, Warren B. Allen calls special attention to injured parts following fracture to prevent thrombosis and embolism. He thinks that symptoms of fat embolism are frequently overlooked. The writer claims that the diagnosis of fat embolism is facilitated by finding fat globules in the urine. The doctor also states that nerve injuries frequently are not discovered until the splints have been removed weeks later, and he gives hemorrhage into joints as a cause for ischemic paralysis. In his paper George Rothganger stated non-union should be distinguished from delayed union, which follows so frequently upon crushing and automobile fractures. Failure of union in the great majority of cases is due to malposition, occurring rarely with good contact of fragments. In such cases of malposition excision of the overlapping ends and correction of the displacement is satisfactory. In those with loss of substance and in the rare cases of non-union with good approximation, some type of transplant must be used, the writer giving the special type for each long bone.

As is the custom after the close of the program, refreshments and a social hour were enjoyed.

The annual banquet of the association was celebrated on Wednesday evening, February 18. Some 150 of the members attended. Spring flowers in profusion formed the decorations upon all of the twenty odd tables.

The speakers' long table at the head of the room was occupied by the speakers and the officers of the association and O. D. Hamlin and S. H. Buteau, two of the deans of the medical profession of Alameda County. The president gave a brief address of welcome, and vocal music was dispensed throughout the evening.

One of the interesting pleasantries was an address by E. N. Ewer on many original topics of the day regarding the profession and the public, which was not only interesting and pleasing, but subtle in the extreme. The speaker of the evening was Mr. Franklin H. Kean. His

subject was "The Physician as the Man." Mr. Kean held his audience enchanted from the opening to the closing of his address.

Judged by the expressions of enjoyment by the guests, the evening was very worth while, and the president, H. B. Mehrmann, has every reason to be proud.

At the regular meeting of the Merritt Hospital Council held February 2, Charles L. McVey president, the program was divided into three main sections: 1. Hospital betterment under which any member is invited to offer suggestions or participate in discussions. 2. The paper of the evening, "Liver Abscess," by W. E. Mitchell. 3. Case and autopsy reports, mistakes in diagnosis, new therapy or technique, etc., any number invited to take part.

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CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The regular monthly meeting of the Contra Costa County Medical Society was held at the Women's Clubrooms at Walnut Creek, Saturday, February 28, under the direction of J. Emmett Clark. The meeting was called to order at 9:30 p. m. by the president, Dr. Denninger-Keser. The minutes of the previous meeting were read and approved.

Discussions were entered into and a motion made and carried that each program chairman would have three months' notice to prepare for the meeting, to get speakers, place of meeting, etc. This was adopted as a permanent ruling. A committee of three was appointed, two members to hold office for the year, and for the third, the special program chairman appointed for the one meeting. J. Emmett Clark was appointed as the permanent member for the year 1925. The secretary will always be the other, as he will be in a position to handle all the correspondence.

The next meeting will be held at Martinez.

The speaker of the evening was George Warren Pierce of San Francisco. His subject was "Care of the Injured Hand." He illustrated his lecture with lantern slides, and handled the subject in a masterly style. We were very fortunate in securing him, as he is master of the subject. The following members were present: George McKenzie, J. Emmett Clark, E. C. Love, E. Merrithew, John Beard, Rosa A. Powell, H. L. Carpenter, Denninger-Keser, L. St. John Hely, C. R. Leech.

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FRESNO COUNTY

Fresno County Medical Society (reported by T. Floyd Bell, secretary)—A meeting of the board of governors of the Fresno County Medical Society was held March 2, 1925, in Dr. Anderson's office. Drs. Couey, Cross, Miller, Tillman, Anderson, and Bell present.

Bills were audited and ordered paid. The secretary announced the withdrawal of the application for membership of Dr. H. Robertson. (Note: Through a publication error, Dr. Robertson was reported last month elected to membership.)

The president and secretary were instructed to act as delegates to the general council of the Fresno Community Chest.

In regard to the examination of children entering school for the first time, Miller moved, Tillman seconded, that the board recommend that the society undertake such examinations as requested by the Children's Bureau of the State Board of Health and the Fresno City School Department. Uniform examination blanks were requested. These examinations are to be done in the offices of the family doctors free of charge. Carried.

Drs. Anderson and Cowan were requested to again interview officials of the San Joaquin Light and Power Corporation, to see if they are going to take action as promised to discontinue medical aid to families of employees free of charge, and if so when.

A communication from Dr. J. C. Drake of Kerman was read in regard to nurses of the Sun-Maid Raisin Growers practicing medicine and surgery. The president was authorized to appoint a committee, he being chairman, to take this matter up with Mr. Ralph Merritt. Drs. Anderson, C. D. Collins, T. F. Madden, J. D. Morgan, were appointed.

The secretary was instructed to get more data from the

Red Cross nurse about the prescribing of medicines by an alleged doctor at one of the local drug stores.

Several matters of proposed state legislation were discussed.

The regular meeting of the Fresno County Medical Society was held March 3, at the Nurses' Home of the General Hospital. There were thirty-five members and eleven visitors present. Members—Allen, Aller, Anderson, Bell, C. D. Collins, Couey, Craycroft, H. O. Collins, Diedrich, Dahlgren, Dau, Goldberg, Hopkins, Kjaerbye, Lamkin, Larson, Manson, Mathewson, Miller, Mitchell, Hilholland, Madden, Newton, Nider, Pettis, Schottstaedt, Sheldon, Staniford, Stein, Tillman, Vanderburgh, J. R. Walker, Weddle, Wheeler, and Willson. Visitors—Shiels, McClure, Newbecker, Yocum, Tourtillott, and interns from the General Hospital.

The communication was read from Dr. J. C. Drake, and the action of the board of governors in regard to same was approved.

In regard to examination of children entering school for the first time, Madden moved, Tillman seconded, that the recommendation of the board of governors be adopted. Carried.

Dr. Madden, as chairman of the staff of the General Hospital, gave a cordial invitation to members of the profession to attend the monthly staff meetings the second Tuesday of each month.

Staniford moved, Madden seconded, that a committee of three be appointed to investigate the merits of the San Joaquin Valley Health Association, particularly the work of the Nutritional Home. Carried. Cowan, H. O. Collins, and Dau appointed.

J. Wilson Shiels of San Francisco was the speaker of the evening. He presented three interesting cases from his clinic, presenting diagnostic difficulty.

The first patient was one of fifth nerve palsy who first complained greatly of pain in the eyes. Physical examination showed all three branches involved without any other pathology anywhere in the body, except a slight irritation in the spinal fluid and blood gave strong Wassermann reactions. Under treatment he cleared up well. However, the prognosis was poor on account of the parietic gold chloride curve in the spinal fluid. He showed charts of the fifth nerve anatomy to refresh the minds of the audience on same.

The second case was one of aneurism of the anterior cerebral artery with eventual rupture and death. He said that aneurism of cranial vessels was very seldom luetic, but usually due to some other pathology in the walls of such vessels, such as arteriosclerosis, infection, etc. The symptoms in this case were very acute. He pointed out that acute brain conditions are mostly due to tumors of some kind. He showed the pathological specimen removed at necropsy.

The last case showed a very interesting and rare condition of gumma of the mediastinum. This was illustrated by radiographs of the chest during various periods of treatment, and showed the marked improvement by the use of mixed treatment by mouth and mercury rubs, without salvarsan.

A buffet luncheon was served after the meeting.

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ORANGE COUNTY

Orange County Medical Society (reported by D. R. Ball, secretary)—The thirty-seventh annual banquet of the Orange County Medical Association was held at the new Ebell Clubhouse in Santa Ana the evening of January 6. The social program included vocal and instrumental selections, and music by the Santa Ana Symphony Orchestra. On the request of toastmaster, Dr. F. E. Coulter, responses were made by Rowland P. Yeagle, retiring president; Dr. H. D. Newkirk, incoming president; C. D. Ball, J. I. Clark, Mrs. J. P. Brastad, and the Reverend Walter Thornton. The officers for the new year were duly installed.

The February meeting was held at the Orange County Hospital on the 3d. The paper of the evening was read by M. L. Pindell of Santa Ana on the subject, "Some Indications for Roentgen Ray Therapy." A most instructive talk was given, and in conclusion a number of interesting roentgenograms were shown by the author.

The Santa Ana Clinical Society met at Ketner's Cafe

the evening of January 23. An interesting talk was given by Dr. H. H. Lissner of Los Angeles on "Observations on a Recent Trip to Eastern and European Clinics." Officers for the ensuing year were elected as follows: President, Bessie Stokes Martell; vice-president, Rowland P. Yeagle; secretary-treasurer, W. C. Dubois.

New members since the first of the year include J. Muncey Bulpitt and Zoe N. Bulpitt, formerly members of the Stanislaus County Society; Frank H. Paterson, transfer from the Santa Clara Society; and M. L. Pindell, transfer from the Madison County, Iowa, Society.

The society has recently lost one of its most active members, W. Leland Mitchell, County Health Officer. Dr. Mitchell came here some two years ago from the Rockefeller Foundation as the first full-time health officer in the county. During his stay he handled many difficult situations and established many needed institutions in the health department, including a very efficient laboratory with full-time workers at the County Hospital. He was recalled to New York by the parent organization the first of the year. His place has been taken by V. G. Presson, who has come here from Alabama.



SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by Bert L. Thomas, secretary)—The February meeting of the Sacramento Society for Medical Improvement was held at the Hotel Sacramento on the 17th. There were thirty-nine members in attendance. The minutes of the January meeting were read and approved.

Presentation of Cases—Schoff presented two patients with a most diffuse head and body distribution of trichophytosis. Both cases were of the licheniform type, and were in youngsters.

Brendel demonstrated two cases to show most satisfactory operative results. The first was of a broken back that came in paralyzed from the waist down. An immediate operation resulted in obtaining excellent function. The second was of a congenital deformity—an exceedingly motile vertebral inter-articulation—causing the patient to assume almost a crouch position. Spinal column bone-splints gave this man a most satisfactory working back.

Gundrum displayed some interesting snapshots of a patient only 18 months old who possessed a 5 cm. thyroid gland which was causing a typical exophthalmic goitre picture.

The speaker of the evening was Dr. Charles Schoff. His presentation of interesting skin cases was rendered through lantern slides. Schoff had recently returned from a number of skin clinics in the East, and the plates obtained there, together with those from his own large collection, gave to all present a most delightful skin clinic that could only have been surpassed by the presence of the patients themselves. Fay discussed the possible merits of proper surgery in early keloids. Zimmerman inquired about the types of epitheliomata amenable to surgery and x-ray. Schoff suggested that neither are used in the Skin and Cancer Hospital, but that radium is the only therapeutic agent applied here. Yates discussed a case that had come under his observation. The case was probably an actinic affair, and so would yield probably to mere covering of the parts.

Application for membership was received from Doctor Sanborn, the resident physician at Folsom prison. Dimit applications from Dr. James Thom, formerly of San Francisco, and from Dr. Richard Scribner, formerly of Hammon, were received. Both of these applications had been acted upon by the board of directors, and thus both were declared members of the local society.

The board of directors reported that the annual banquet to be held on March 17 was being taken care of by a committee comprised of Drs. Hale, Jones, Dunlap, Schoff, and Harris. Alanson Weeks of San Francisco will present the paper of the evening. They also reported that Dr. Pottenger of Monrovia will present a paper at the April meeting.

The board appointed Drs. Parkinson and Hall as a committee to revise the by-laws in accordance with those of the state, the secretary of the State Society suggesting those of the San Francisco County as a correct model.

A letter from the state secretary, Dr. Emma W. Pope, was read to the society, calling attention to the optional

medical defense offered by the State Society. Some confusion had arisen, since both the state dues and the fee for the optional defense were the same.



SAN DIEGO COUNTY

San Diego County Notes (reported by Robert Pollock)—During February the County Society presented two very interesting scientific programs. One, a clinical evening at the San Diego County General Hospital, with a program of unusual excellence furnished by members of the visiting and house staffs. The other meeting, a dinner session at the Cabrillo Restaurant, was addressed by Dr. Clarence G. Toland of Los Angeles, who gave a comprehensive and practical paper on surgery of the upper abdomen. Beginning his talk with a review of the nerve supply to the structures in this area, he constantly kept this before his audience in discussing symptoms and diagnosis. His talk was entertainingly illustrated by Dr. K. S. Davis, roentgenologist of St. Vincent's Hospital, Los Angeles, who showed a large series of x-ray plates illustrating various upper abdominal conditions. Discussion on the paper was opened by H. C. Oatman of San Diego and A. B. Smith, roentgenologist of the Scripps Memorial Hospital, La Jolla, after which the paper enjoyed a rather liberal general discussion by members of the society.

The society has accepted an invitation from Commander Owen of the Hospital Ship Relief to spend the evening of Saturday, March 14, on board ship, at which time an interesting scientific program will be presented by medical officers of the navy.

The recently elected officers of the medical staff of the San Diego County General Hospital are Clarence E. Rees, chairman; Louis Strahlmann, vice-chairman; and C. L. Stealy, secretary.

Things look promising for breaking ground during March for San Diego's first physicians' building, pictures of which, the so-called "Medical Arts Building," show a beautiful ten-story structure, admirably adapted for its purposes—that of housing exclusively physicians, dentists, and their necessary aids. This building will be placed at the corner of Eleventh and C streets, directly in line with the natural growth of the business district, and yet, for the time, slightly beyond the greatest traffic congestion.



SAN FRANCISCO COUNTY

St. Joseph's to Rebuild—Staff to Discuss Medical Economics—March 12 St. Joseph's Hospital staff and patronesses, San Francisco, met at dinner, offered by the Sisters, and advanced the drive for \$500,000 in April for the fire-proof reconstruction of the main buildings. Dr. A. S. Musante, head of the staff, represented the latter, and Mrs. W. T. Cummins was invited as president of the patronesses. Attorney Hugo Newhouse, leader in legal and financial circles, as the general chairman of the campaign committee, was the principal speaker. He spoke of the thirty-six years of service of the Sisters of St. Joseph's, which had always the lowest rates in the city, enabling self-reliant patients to pay their way through the wards for \$17.50 per week. The highest standing in standardization had been received from the American College of Surgeons, and the American Medical Association had endorsed the hospital for intern or fifth year for medical graduates. The school of nursing was accredited by the California State Board of Health. Mr. Newhouse reported upon two meetings held the previous Monday—one a luncheon of bankers and financial men, and the other a dinner of the heads of the different religious fraternities—and another to be held at the Palace Hotel the following Wednesday, composed of 300 of the prominent civic representatives. Archbishop Edward J. Hanna, honorary chairman, made stirring appeals at these gatherings and has entered actively into the drive.

At the crowded staff meeting on "Medical Economics," after the supper Attorney J. F. Denman spoke on "Principles in Handling Patients' Accounts." He distributed a page form with single-line entries of charges, receipts, date, name and address of patient and person responsible, service, and remarks, and another for a loose ledger page for posting each patient's financial data. Carelessness in necessary details concerning debtor, proper fees, sending bills, following up "skips" and referring to collector were exemplified. Legal claims against estates must be filed

within four months after death. A simple income tax sheet was also distributed. Doctors were urged to have their accounts attended to by others if they cannot give them the proper attention.

Percy A. Wood of the Wells Fargo Bank discussed "Fundamentals of Investments for Doctors," saying:

"Safety, marketability and rate of interest are the three factors in investments, and it is impossible to find all rank high in any one of them. For example, bonds of the United States Government have the greatest safety and marketability, as they can be sold any time without delay, but the rate of interest is less than a savings bank pays. Doctors cannot study the investment field, as few have the knowledge, time and means to do it right, and an investment banker must be consulted. He recommends after a critical study the use of his organization, expert staff, and financial resources. His feeling of responsibility continues till the bond (principal and interest) is paid. I suggest that you diversify your holdings, i. e., distribute your risks as much as possible so that they will be subject to different principles of fluctuation and the losses of one will be neutralized by the gains of another. Each investment should be a separate risk and independent of the forces influencing the hazard of any other investment you may have."

Irving H. Frank, manager of the hospital bond division of the National Surety Company, presented a paper on "Insurance—the Economics of Misfortune," abstracted as follows:

"Ancient Greeks started insurance by advancing money on ships, which was to be repaid with interest if the voyage was successful. Belgium, in the fourteenth century, had the first insurance with direct charge of premium. Insurances have improved and now, by paying a specified sum to a company, one can be insured against almost every possible loss. Large investments of companies tend towards better living conditions, which aid the individual. The latest form of insurance is the Hospital Bond, which up to the amount of coverage purchased, pays for bed and board, use of operating-room, anesthetic, x-ray and laboratory treatments, medicines, and ambulance in any hospital in the United States and Canada. CALIFORNIA AND WESTERN MEDICINE endorses it as protection for the patient and beneficial to the hospital and physician, as hospital expense is a big item in illness."

C. A. Mariani, manager of the Professional Men's Clerical Bureau, discoursed on "The Doctor as a Better Business Man," summarized below:

"The doctor as a business man is a failure, as attention to his profession makes it impossible for him to attend to his accounts properly. A competent aid is necessary. A doctor should have a plan for getting certain information when with the patient which can be used by his accountant. He must make with every call a record of the name, address, phone, and occupation of person to whom to charge the account; then the patient's name and address, reference and address, and get a copy of the hospital record of patients treated there, the name of a doctor calling him for a consultation or assistance in operation, as well as the history, and record the proper charge at the time of the service. He should make receipts in duplicate for payments and note how patients will pay. Collections must be requested on the same day monthly, and enforced after 120 days."

Drs. I. Gobar, Walter Smith, and H. Deering suggested a black list for dead-beats and prevention of imposition.

Southern Pacific General Hospital (reported by W. T. Cummins, secretary)—The regular monthly clinical meeting was held at the Southern Pacific General Hospital, Huntington Hall, on Wednesday, March 4, at 8:30 p. m.

L. B. Crow presented a paper on "Pulmonary Infarcts," in which he stated that this is a relatively common lung complication, and that it is frequently overlooked by the internist. As a sequel of major operations, it is much more frequently present than has been suspected, for it has been mistaken for pleurisy and pneumonia. Pulmonary congestion caused by any pathological condition favoring a slowing of the blood stream from the right ventricle favors infarction.

It is quite essential to correlate carefully the clinical and roentgen findings in every post-operative lung complication, so that a correct diagnosis may be made. All patients that show any pulmonary congestion following

major operations should be kept in bed and closely watched for a longer period of time than is customary, so as to avoid, if possible, any embolic complications. The paper was illustrated with numerous roentgen pictures, one series showing progressive resolution in an infarct.

J. H. O'Connor gave a roentgen-illustrated talk on "Closed Reduction of Comminuted Fractures." The technique, as applied to fractures of the lower extremity, is as follows:

A plaster cast is applied to the foot a few days before attempted reduction. The foot is well padded with sheet wadding, and over this a layer of thick felt is applied. In the cast there is incorporated part of a muslin bandage, leaving a loop to project from the sole of the foot. Reduction is effected under anesthesia, the pelvis being fixed by a skein of woolen yarn passing around the upper part of thigh of affected side and fixed by a hook in the wall back of the patient. Extension is made by a windlass in the wall at the foot of the patient. The wire from this is hooked to the protruding muslin loop incorporated in the cast so that proper traction may be maintained until the cast is sufficiently hardened. As a matter of safety the cast is then split down the center, for this will maintain the reduction as well as an unsplit one, and pressure sores will then be eliminated.

W. T. Cummins reviewed 274 of the General Hospital autopsies, and illustrated with charts 498 clinical and pathological conditions. A number of interesting cases were cited, such as ruptured aneurysms, dyspituitarism, dextrocardia, pulmonary abscesses, odiococcidioid disease, etc. He emphasized the importance of the intern's position in getting permission for autopsies, and regretted the lamentable apathy of many clinicians towards autopsies. He believes that there should be better co-operation of the clinician and the laboratory and, aside from the subject in hand, that the clinician should know a little more about the details of laboratory technique and preparation therefor, as exemplified in occult blood, examinations of stools and basal metabolism determinations.

Franklin Hospital Clinical Society (reported by Ewald H. Angerman, secretary)—The regular staff meeting of the Franklin Hospital Clinical Society was held March 2 at the hospital, Frank R. Dray presiding.

The paper of the evening was ably presented by William W. Washburn before a large audience. A resume of his talk follows:

This paper covered many of the more practical aspects of goiter surgery. A few minutes were taken during the early part of the reading of the paper to show slides from microscopic sections, illustrating clearly the various types of thyroid disease, giving one a definite pathological classification upon which the paper was based.

While it may be admitted that exophthalmic goiter or Basedow's disease is a self-limiting disease, one cannot predict the degree of toxicity which any given case may exhibit. Statistics based upon mortality rates from any line of treatment do not tell the whole truth, for the morbidity should be seriously considered in cases treated over a long period of time by medical measures.

A type history was read, illustrative of a case of Basedow's disease of moderate severity. The significance of various signs and symptoms were discussed, particularly laboratory data. Emphasis was laid upon the necessity of a careful consideration of these clinical signs and symptoms in weighing the degree of toxicity in a given patient. The basal metabolic rate, particularly when a single reading is taken, should be accepted only in a relative sense. When taken *in conjunction with other factors* the basal metabolic rate is an index of the intensity of the disease in all types of hyperthyroidism and is of great aid in selecting the best time for operation and the best type of surgical procedure. Exophthalmic goiters run a higher average basal metabolic rate than do toxic adenomas, yet a case of 60 plus may be a better surgical risk than one of exophthalmic goiter with a 30 plus rate, because of the greater likelihood of cardiovascular changes in the former type case. Hyperthyroidism from toxic adenoma should be carefully differentiated from that of Basedow's disease. Exophthalmos and a bruit over the gland is not gotten with adenomas unless there be an associated hyperplasia. All adenomas becoming toxic or giving pressure symptoms should be removed. Adenomas in patients over 40

years of age become malignant in over 2 per cent of cases. The importance of a pre-operative laryngoscopic examination in all adenomatous conditions was emphasized.

The full Kocher collar incision should be used, as it allows an exploration of the entire gland. Lugol's solution, as well as preliminary arterial ligations, is of great aid in preparing exophthalmic goiter patients for operation.

Improvement in method or means of preparing patients for thyroidectomy has resulted in a marked lowering of operative mortality rate.

A large number of lantern slides were shown at the conclusion of the paper.

Discussion by Falconer, Yoell, Bruck, Cook, Newall, Weil, Day, Taylor, and Quinn.



SAN MATEO COUNTY

San Mateo County Medical Society (reported by Dr. Callaway, secretary)—The regular monthly meeting of the San Mateo County Medical Society was held February 18 at the Community Hospital, in conjunction with the commission of the Community Hospital. This was the first annual meeting of the society with the hospital, and at this meeting a report of the commission was rendered showing the activities of the hospital during the past year. Talks were given by the Rev. Father Ramm on the commission form of government of county hospitals. Dr. W. P. Lucas of the University of California Hospital talked on hospital organization.

San Mateo County is indeed fortunate to have this new and beautifully equipped institution for the care of county patients, as well as full-pay and part-pay patients. The medical society of the county is supporting the institution with their services, and it has been a great means of cementing the society into an active organization.

Since the reorganization of the county society in June of 1923, we have met each month, except one, and at each meeting interesting cases have been presented by members of the society, or interesting talks have been given to us by physicians from San Francisco. It is indeed gratifying to see the interest that is now being shown in the society, and I trust that it will continue.



SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by Alex C. Soper, Jr., secretary)—A joint meeting of the County Medical and Dental Societies was held at the University Club, succeeding a dinner there, at which fifty-two members and guests participated, the occasion being the presence of Dr. Henry S. Pritchett, president of the Carnegie Foundation, and Dr. F. V. Simonton, head of the Dental Research Laboratory at the University of California.

The meeting began at 8:45 p. m., Franklin Nuzum, president of the County Medical Society, in the chair. The following resolution was read by the secretary, and on motion duly passed, with an order that copies be sent to the daily press, the Carnegie Foundation, and the state association:

"WHEREAS, Over a period of years the medical and dental professions have viewed with increasing respect the constructive and progressive activity of the Carnegie Corporation and the Carnegie Foundation for the Advancement of Teaching, and

"WHEREAS, Of the executives concerned in this distinguished service, Dr. Henry S. Pritchett has always been outstanding, be it

"RESOLVED, That the Medical Society and the Dental Society of Santa Barbara County at this joint meeting record herewith their recognition of, and sympathy with, these services, and express to the Carnegie Corporation, the Carnegie Foundation for the Advancement of Teaching, and Dr. Henry S. Pritchett, their respect and appreciation."

Henry C. Bagby, M. D., D. D. S., introduced with some facetious remarks Dr. Simonton, who described at length the research work done at the University Dental Laboratories, with especial reference to pyorrhea and the hope of speedy solution of the problem.

Franklin R. Nuzum introduced Dr. Pritchett, who spoke upon the similar interests of the medical and dental pro-

fessions and the advisability of their greater co-operation and unity; compared the care of the diseases of the mouth with the care of those of the eye, nose, throat, etc., as specialties.



SANTA CLARA COUNTY

Santa Clara County Society (reported by Alson A. Shufelt, secretary)—The last regular meeting of the year for the Santa Clara County Medical Society was held December 17, 1924. Dudley Fagerstrom, E. L. Cottrell, C. H. Arnold, were elected to membership, and the resignation of C. E. Wintermute was accepted. The election of officers was then taken up, and the following elected for 1925: President, Doxey Wilson; first vice-president, J. B. Bullitt; second vice-president, Jonas Clark; third vice-president, J. H. Kirk; secretary, Alson Shufelt; assistant secretary, E. A. Turco; treasurer, B. E. Loehr. Councilors-at-large: F. S. Ryan, E. P. Cook, A. E. Fillipello. Delegates: J. H. Shepherd, D. A. Beattie. Alternates: C. E. Saunders, G. A. Barry.

The first meeting of 1925 was held January 21 at the Santa Clara County Hospital, with an attendance of forty members. After a short business meeting in which three new applications for membership were presented, and a few minor matters disposed of, the main program of the evening was presented. This was made up of demonstrations of clinical cases by the hospital staff. Clarke Saunders showed a case of a young man who was regaining his vision after total blindness from a luetic keratitis, discussing briefly the treatment and prognosis. Clement Arnold followed with two interesting neurological cases—one a post-influenza encephalitis of the typical Parkinsonian type; the other a spastic paraplegia in a young adult that had been present since birth with accompanying mental deterioration, and in which there was a question of differential diagnosis. Next, a case of lung abscess was discussed by George Gray, and a case of bronchiectasis in which pneumo-thorax had been tried without result, was shown by Louis Boonshaft. A report of the activities of the year at the County Hospital was then read by Dr. Doxey R. Wilson, after which he presented an unusual case of an ovarian tumor. This patient had known of its presence for many years, but had only recently applied for treatment. Eight gallons of fluid had been aspirated within a short time, but the tumor mass still present seemed to weigh more than the patient herself. (This was later proven true.) Henry Dahleen showed a case of ureteral stone with resultant kidney destruction. Demonstration of unusual pathological specimens by Dr. Proescher concluded the scientific part of the meeting. Refreshments were then served, and the meeting adjourned. It was an excellent program, and members not present really missed an opportunity.

The regular February meeting of the Santa Clara County Medical Society was held at the Commercial Club rooms on February 18, it being the annual dinner meeting. Over fifty members were present to enjoy an excellent dinner and a good program. Scientific subjects were more or less banned for the evening, and the time spent in friendly discussions and in a renewal of old relationships. It was pleasing to see several members from towns other than San Jose, and we only regret that there might not have been more. The speaker of the evening, J. Wilson Shiels of San Francisco, was presented by Doxey R. Wilson, and in his inimitable way delighted his audience with his humor, and with his reminiscences of the old-time practitioner and the "good old family doctor," whose passing he deeply regretted.

Before the meeting adjourned, it was entertained by a half-hour of magic by a deaf and dumb artist of rare talent.



SONOMA COUNTY

Sonoma County Medical Society (reported by G. A. Hunt, secretary)—The Sonoma County Medical Society met in Santa Rosa, March 12. Twenty-five members were present.

Samuel H. Hurwitz of San Francisco gave an excellent address on "The Treatment of Asthma."

A myxedema patient was presented by Doctors Cline and Bonar of Santa Rosa.

The establishment of a professional credit bureau in

connection with the Luce Adjustment Agency of Santa Rosa was discussed and voted on. The majority decided in favor of a credit bureau. From this bureau the professional credit standing of many patients that apply for treatment can be obtained.

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VENTURA COUNTY

Ventura County Medical Society (reported by C. F. Schultz, secretary)—At a meeting of the County Medical Society on January 19 the annual election took place. The 1924 officers were elected for another year; also the delegates and alternates to the state meeting.

Santa Paula's members had been present at all of the 1924 meetings, namely, Blaisdell, Merrill, and Schultz, and only one other member had a clean record, Bianchi of Ventura.

At the February meeting at Ventura, Verne Mason of Los Angeles presented a paper on abdominal tumors which proved very interesting.

The society anticipates a renewed interest in its meetings and programs for this year. The next meeting will be held at the Ventura Country Club on March 3.

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YOLO COUNTY

Yolo County Medical Society (reported by John D. Lawson, secretary)—A meeting of the Yolo County Medical Society was held on March 3 at the Woodland Clinic building. There were present, T. C. Cooper, W. E. Bates, W. J. Blevins, C. H. Fairchild, F. R. Fairchild, J. E. Harbinson, E. E. Larson, H. D. Lawhead, W. J. Spencer, L. P. Bell, J. D. Lawson. Visitors—H. M. Elberg, D. D. S., Shaffer, D. D. S., Pertins, D. D. S., and twenty members of the professional staff of Woodland Clinic.

E. Eric Larson of the Woodland Clinic spoke on "Ethylene Anesthesia"; L. P. Bell on "Regional Anesthesia"; and H. M. Elberg, D. D. S., on "Conduction Anesthesia."

E. Eric Larson of the Woodland Clinic surgical staff, a graduate of Rush Medical College, 1920, and Walter J. Spencer were elected to membership.

Walter J. Spencer has been added to the staff of the Woodland Clinic, assuming the chair of Pediatrics. Doctor Spencer is a graduate of Rush Medical College, 1916. He served in the navy during the war, since which time he has extensively studied children's diseases in various American clinics.

Since the last report the Woodland Clinic has had two talks open to the public at their regular monthly educational meetings. In January, L. P. Bell presented "Goiter" in a popular way. In February, E. Eric Larson gave a talk on "Indigestion." In March, W. J. Spencer spoke on "Preventable Diseases of Childhood." All of these presentations are made in lay language and are purely educational. The chief purpose is to instill into the minds of the layman the necessity of treatment by competent physicians and the utter lack of competence of the various "pathies."

CHANGES IN MEMBERSHIP

New Members—Robert K. Cutter, Eugene S. Maxson, Berkeley; Fred Ewing, H. O. Ellis, Szabo Kalman, John A. Dougherty, Charles E. Marquis, Oakland; Donald V. Burke, John J. Lalor Doyle, Chico; C. B. Cowan, Selma; Roland W. Dahlgren, Neil J. Dau, Gerald K. Nider, Fresno; C. S. Ambrose, F. L. Courley, John R. Brown, Herman Lando, Joseph N. Kolisch, Benjamin F. Hoyt, B. G. DuPre, Cecil Sutherland, W. Q. Harper, Fred Lindenberg, A. M. Hansen, Conrad I. Hubert, John Frederick Clark, Carl C. Cowin, Lars A. Dahl, John H. Hooval, Raymond W. Huntsberger, Wilma H. Jacobs, Mary L. Neff, Frances I. Richman, Ernest H. Ruediger, A. A. McClurkin, Los Angeles; George Wells, Bell; Guy L. Bliss, Long Beach; Fred L. Horton, Pomona; John L. Steffy, Santa Monica; Dean M. Walker, Sherman; George I. Dawson, Napa; J. Hudson Sale, Ernest K. Stratton, Sigurd von Christierson, F. H. Redewill, Dorothy W. Atkinson, Elizabeth A. Davis, Curtis E. Smith, Henry L. Wagner, San Francisco; H. L. Mawdsley, Frank Gehrels, San Mateo; William H. Murphy, Redwood City; Joseph D. Lewis, Santa Barbara; E. H. Eiskamp, Watsonville.

Transferred—Norman C. Paine, from Tulare County

to Los Angeles County; Horace A. Hall, from Riverside County to Los Angeles County; Frederick P. Shafer, from San Francisco County to Siskiyou County; Gwendolyn Stewart, from San Francisco County to Los Angeles County.

Resigned—Joseph Fife, Victor Randolph, Anna K. Davenport, San Francisco; Henry D. Rinehart, Herbert C. Jones, Pasadena; Robert E. Merritt, Leon W. Mansur, Frances C. Turley, Los Angeles; Robert C. Nichols, Ontario.

Retired—George Adam, San Francisco.

Honorary Members—A. Liliencrantz, Oakland; R. C. Shawhan, Soldiers' Home, Sawtelle; J. H. Utley, James S. Calder, Los Angeles; George B. Kalb, Monrovia.

Deaths—Cook, Francis Steven. Died at Hollywood, February 28, 1925, age 60. Graduate of the University of California Medical School, San Francisco, 1887. Licensed in California in 1888. Doctor Cook was a member of the Contra Costa County Medical Society, the California Medical Association, and the American Medical Association.

Eddy, George Sigel. Died at Los Angeles, March 8, 1925, age 63. Graduate of the University of Illinois College of Medicine, Chicago, 1896. Licensed in California in 1897. Doctor Eddy was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Gourley, Frederick Lantz. Died at Los Angeles February 10, 1925, age 48. Graduate of the University of Illinois College of Medicine, Chicago, 1903. Licensed in California in 1920. Doctor Gourley was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Mitchell, William Leland. Died at Santa Ana, February, 1925. Graduate of the Washington University Medical School, St. Louis, Mo., 1918. Licensed in California in 1923. Doctor Mitchell was a member of the Orange County Medical Society, the California Medical Association, and the American Medical Association.

The Price—Winning a prize from life is like gathering a crop from the garden. Unless we dig deep, putting our backs into the job, unless we feed the soil, and sow and water, weed and cultivate, rise early and stay out late to guard what we planted, unless we ache with the labor of its growing, we never harvest the crop of our dreams. We have not paid in full.—Angelo Patri.

STIMULANTS, DEPRESSANTS, HUMOR

"I do appreciate very much your interest in my article. This labor on your part must be the cause of the excellence of your journal. In changing the paper along the lines of your suggestion, I have also shortened it several pages."—Los Angeles.

In Three Generations

Teacher—Jimmie, define and give an example of heredity.

Jimmie—It means that—that—that if your grandfather didn't have no children your father wouldn't have none neither—and neither would you.

Jakie—Ikey, you should put the curtains down when you kiss your wife; I saw you last night.

Ikey—The chokes on you, Jackie; I wasn't home last night.

There Are Pioneers, Plodders, and Parasites

Pioneers make the venture and the conquest. Plodders consolidate and hold what has been gained. Parasites follow to live off others' labors. Each fulfills a purpose, even the parasite. He is pretty low down in the scale, like the maggot, but his presence is an advertisement that something exists on which he can live. It is likewise a warning that that "something," whatever it may be, should be eliminated.

Now that the glands are the fashion as a panacea for every ill or want, why not give the sweat glands a good tryout and see what happens?—San Diego Union.

PROGRAM

THE FIFTY-FOURTH ANNUAL SESSION
OF THE CALIFORNIA MEDICAL ASSOCIATION TO BE HELD
AT YOSEMITE NATIONAL PARK, CALIFORNIA, MAY
18, 19, 20, 21, 1925



OFFICERS AND COMMITTEES, 1925

Granville MacGowan, Los Angeles, President.
Edward N. Ewer, Oakland, President-Elect.
Harry E. Alderson, San Francisco, Vice-President.
Emma W. Pope, San Francisco, Secretary.
W. E. Musgrave, San Francisco, Editor.
Hartley F. Peart, San Francisco, General Counsel.
Hubert T. Morrow, Los Angeles, Assistant General Counsel.
William H. Barry, Superintendent of Publications.

COUNCILORS

First District—Lyell C. Kinney, San Diego (1927)—San Diego, Riverside, Orange, San Bernardino, and Imperial Counties.

Second District—William H. Kiger, Los Angeles (1925)—Los Angeles, Santa Barbara, Ventura, and Kern Counties.

Third District—T. C. Edwards, Salinas (1926)—San Luis Obispo and Monterey Counties.

Fourth District—Fred R. DeLappe, Modesto (1925)—Fresno, Kings, Tuolumne, Merced, Mariposa, Madera, Tulare, and Stanislaus Counties.

Fifth District—David A. Beattie, San Jose (1926)—Santa Clara, San Mateo, San Benito, and Santa Cruz Counties.

Sixth District—Walter B. Coffey, San Francisco (1926)—San Francisco County.

Seventh District—Dudley A. Smith, Oakland (1926)—Alameda, Contra Costa, San Joaquin, and Calaveras Counties.

Eighth District—James H. Parkinson, chairman, Sacramento (1925)—Sacramento, Amador, El Dorado, Alpine, Placer, Nevada, Yuba, Sutter, Sierra, Yolo, Butte, Plumas, Lassen, Mono, Inyo, Glenn, Colusa, Tehama, Shasta, Modoc, and Siskiyou Counties.

Ninth District—James H. McLeod, Santa Rosa (1926)—Marin, Sonoma, Lake, Mendocino, Solano, Napa, Del Norte, Humboldt, and Trinity Counties.

Councillors-at-Large—O. D. Hamlin, Oakland (1925); Rene Bine, San Francisco (1926); George H. Kress, Los Angeles (1926); William T. McArthur, Los Angeles (1926); Morton R. Gibbons, San Francisco (1927); C. L. Curtiss, Redlands (1926).

DELEGATES AND ALTERNATES TO A. M. A.

Delegates—Victor G. Vecki, San Francisco (1926); Hans Lisser, San Francisco (1926); Albert Soiland, Los Angeles

(1927); Robert V. Day, Los Angeles (1927); Lemuel P. Adams, Oakland (1927).

Alternates—C. Van Zwahlenburg, Riverside (1926); William E. Stevens, San Francisco (1926); Charles D. Lockwood, Pasadena (1927); Robert Pollock, San Diego (1927); O. D. Hamlin, Oakland (1927).

COMMITTEES

Committee on Scientific Program—Emma W. Pope, chairman; Lemuel P. Adams, Oakland (1926); F. M. Pottinger, Monrovia (1927); Joseph Catton, San Francisco (1928); Walter V. Brem, Los Angeles (1925).

Committee on Arrangements—James H. Parkinson, chairman; Rene Bine, T. C. Edwards, Clinton D. Collins, Joseph K. Smith.

Executive Committee—Rene Bine, chairman; Granville MacGowan, Edward N. Ewer, Harry E. Alderson, James H. Parkinson, Emma W. Pope, W. E. Musgrave, Hartley F. Peart.

Auditing Committee—Rene Bine, chairman; Morton R. Gibbons.

Committee on Bunnell Memorial—Emmet Rixford, chairman; Saxton T. Pope, Egerton Crispin.

Publicity for 1925 State Meeting—Celestine J. Sullivan.

GENERAL HEADQUARTERS AND MEETING HALLS

Diagrammatic map, showing location of various offices and meeting halls, will be distributed at Registration and Information desks. See also diagram, page 472.

- (A) Secretary's office—Council Room, Lodge.
- (B) Registration Bureau—Lodge Registration Office.
- (C) Information offices—Lodge Registration Office; Sentinel Hotel Lobby in Village; Lobby at Camp Curry.
- (D) Consolidated Ticket office—Transportation office at Lodge.
- (E) Publicity Committee—Advertising room in Village.
- (F) Council Room—Lodge.

- 1. Tent, seats 800 located in Lodge.
 - 2. Government Pavilion, seats 400, located in Village.
 - 3. Pillsbury Pavilion, seats 300, located on Lodge side.
 - 4. Dining room, Sentinel Hotel, seats 150, located in Village.
 - 5. Antler's Club, seats 75, located back of church in Village.
 - 6. Sentinel Lobby, seats 100, located in Village.
 - 7. Pillsbury Studio, seats 100, located in Village.
- (Letters and figures refer to locations shown on the map.)

DIAGRAM OF MEETINGS									
(In case of inclement weather, General Sessions will be held in Government Pavilion, Village)									
		Tent	Government Pavilion	Pillsbury Pavilion	Sentinel Dining Room	Antler's Club	Sentinel Lobby	Pillsbury Studio	
Sunday May 17	8-10								Council
Monday May 18	10-12:30	General Sessions							Council
	2-4:30	Industrial Medicine	General Medicine	Obstetrics	Neuropsychiatry	Dermatology	Pathology	Anesthesiology	
	8-10	House of Delegates	General Surgery	Pediatrics	Eye Ear, Nose and Throat	Urology	Radiology		
Tuesday May 19	10-12	BUNNELL	MEMORIAL	EXERCISES	AT FOOT	OF EL	CAPITAN		Council
	12	Secretaries'	Luncheon	at Sentinel	Dining Porch,	Yosemite	Village		
	2-4:30		General Surgery	Pediatrics and Obstetrics	Eye Ear, Nose and Throat	Urology	Radiology	Anesthesiology	
	8-10	Industrial Medicine	General Medicine	Med. Soc. (Optional Defense Group)	Neuropsychiatry	Dermatology	Pathology	Tech. Spec. Physiotherapists	
Wednesday May 20	10-12:30	League				Dermatology			Council
	2-4:30		General Surgery	Pediatrics	Eye Ear, Nose and Throat	Urology	Radiology	Anesthesiology	
	8-10	House of Delegates				Western Urological Society	Pathology	Tech. Spec. Med. Social Workers	
Thursday May 21	10-12:30	General Sessions							Council
	2-4:30	Industrial Medicine	General Medicine	Obstetrics	Neuropsychiatry				

GENERAL OUTLINE OF THE MEETINGS

There will be three sessions on Monday, Tuesday and Wednesday, and two sessions on Thursday.

Uniform hours for all meetings are provided for 10 a. m. to 12:30 p. m.; 2 to 4:30 p. m., and 8 to 10 p. m.

The time of each meeting is shown in the diagram.

General Sessions—Two general sessions open to members and guests will be held on Monday and Thursday mornings.

Bunnell Memorial—The unveiling of the plaque to Doctor Lafayette Houghton Bunnell at the foot of El Capitan with appropriate ceremonies will be held on Tuesday morning. Automobiles leave the Lodge Porch at 10 a. m.

Section on Medical Economics, Education, Public Health and Hospitals—This meeting is held under the auspices of the League for the Conservation of Public Health on Wednesday morning.

The Medical Society of the State of California (Optional Defense Group)—All members of the California Medical Association and guests are invited to attend this meeting, which will be held Tuesday evening.

The following sections will hold meetings:

Anesthesiology.
Dermatology and Syphilology.
Eye, Ear, Nose and Throat.
General Medicine.
General Surgery.
Industrial Medicine and Surgery.
Neuropsychiatry.
Obstetrics and Gynecology.
Pathology and Bacteriology.
Pediatrics.
Radiology, Roentgenology and Radium Therapy.
Technical Specialties.
Urology.

Council Meetings

First Meeting—Sunday, May 17, at 8 p. m.
Second Meeting—Monday, May 18, at 2 p. m.
Third Meeting—Tuesday, May 19, at 2 p. m.
Fourth Meeting—Wednesday, May 20, at 2 p. m.
Fifth Meeting—Thursday, May 21, at 2 p. m.

Meetings of the Council With the Presidents and Secretaries of Constituent Societies

All members of the Council and all presidents and sec-

retaries and assistant secretaries of constituent societies are requested to be present at a luncheon to be held in the Porch Dining Room of the Sentinel Hotel, Yosemite Village, on Tuesday, May 19, at noon.

HOUSE OF DELEGATES

Membership

Councilors—First District, Lyell C. Kinney (1927); Second District, William H. Kiger (1925); Third District, T. C. Edwards (1926); Fourth District, Fred R. DeLappe (1925); Fifth District, David A. Beattie (1926); Sixth District, W. B. Coffey (1926); Seventh District, Dudley A. Smith (1926); Eighth District, James H. Parkinson (1925); Ninth District, James H. McLeod (1926).

Councilors-at-Large—O. D. Hamlin (1925), Rene Bine (1926), George H. Kress (1926), William T. McArthur (1926), Morton R. Gibbons (1927), C. L. Curtiss (1926).

Ex-Officio—President Granville MacGowan, President-Elect Edward N. Ewer, Vice-President Harry E. Alderson.

DELEGATES

ALTERNATES

Alameda County (6)

W. S. Kuder	F. H. Bowles
Chas. L. McVey	W. L. Channell
A. M. Meads	C. A. De Puy
Gertrude Moore	Henning Koford
Pauline S. Nusbaumer	R. T. Legge
George Rothganger	A. H. Rowe

Butte County (1)

Edward E. Baumeister

Contra Costa County (1)

U. S. Abbott	Marguerite Deininger-Keser
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Fresno County (2)

T. F. Madden	R. B. Tupper
H. J. Craycroft	Burt B. Lamkin

Glenn County (1)

W. H. Walker	Etta S. Lund
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Humboldt County (1)

O. R. Myers	John N. Chain
-------------	---------------

Imperial County (1)

Eugene Le Baron	F. F. Malone
-----------------	--------------

Kern County (1)

F. A. Hamlin

F. J. Gundry

Lassen-Plumas County (1)**Los Angeles County (27)**

John V. Barrow
Michael Creamer
Robert V. Day
George Dock
William Duffield
Joseph M. King
Carl H. Parker
R. E. Ramsey
Harlan Shoemaker
Albert Soiland
Willard J. Stone
C. G. Toland
John D. Gillis
George Piness
Elmer E. Kelly
John G. Mackey
Percy T. Magan
V. R. Mason
A. W. Moore
A. T. Newcomb
Scott D. Gleeten
James F. Percy
Leroy B. Sherry
C. P. Thomas
E. C. Moore
E. O. Palmer
W. B. Bowman

E. G. Butt
George L. Cole
A. S. Granger
R. B. Hill
J. B. Luckie
S. R. Monaco
F. L. Rogers
H. H. Sherk
O. R. Stafford
F. C. Swearingen
R. A. Terry
H. P. Wilson
Homer S. Wilson
L. S. Welbourn
A. E. W. Yale
David Thomson
E. D. Ward
W. H. Gilbert
Eleanor C. Seymour
Olga M. McNeile
Philip H. Stephens
Thomas W. Moffitt
Joseph K. Swindt
Foster K. Collins
Russell Sands
G. A. Laubersheimer
C. W. Cook

Marin County (1)

R. G. Dufficy

C. A. De Lancey

Mendocino County (1)

Harper Peddicord

L. K. Van Allen

Merced County (1)

W. C. Cotton

C. H. Church

Monterey County (1)

Edwin Wiley Reeves

W. H. Bingaman

Napa County (1)

D. H. Murray

W. O. Moore

Orange County (1)

Harry E. Zaiser

R. A. Cushman

Placer County (1)

F. E. McCullough

H. M. Kanner

Riverside County (1)

R. A. Card

Will H. Holmes

Sacramento County (2)

G. N. Drysdale
A. K. Dunlap

C. B. Jones
N. G. Hale

San Benito County (1)

E. E. McKay

San Bernardino County (2)

R. S. Gibbs
E. J. Eytinge

P. M. Savage
A. T. Gage

San Diego County (3)

Martha Welpton
Thos. O. Burger
Robert Pollock

Lillian Mahan
M. C. Harding
L. H. Redelings

San Francisco County (16)

W. C. Alvarez
Edmund Butler
Joseph Catton
W. E. Chamberlain
W. R. P. Clark
E. C. Fleischner
M. R. Gibbons
J. H. Graves
Sol Hyman
W. J. Kerr
A. R. Kilgore
E. S. Kilgore
A. C. Reed
H. A. L. Rykogel
Wm. E. Stevens
V. G. Veckl

Orrin S. Cook
L. A. Emge
C. F. Gelston
Edward F. Glaser
Thos. H. Kelly
A. S. Musante
R. R. Newell
P. H. Pierson
Chas. B. Pinkham
R. L. Richards
F. H. Rodenbaugh
K. L. Schaupp
John A. Sperry
Harry Spiro
J. F. Sullivan
Wm. C. Voorsanger

San Joaquin County (2)

Fred J. Conzelmann
R. T. McGurk

Barton J. Powell
N. B. Gould

San Luis Obispo County (1)

Roy M. Cox

Gifford L. Sobey

San Mateo County (1)

W. C. Chidester

W. O. Callaway

Santa Barbara County (1)

Henry J. Ullmann

William J. Mellinger

Santa Clara County (2)

J. H. Shephard
D. A. Beattie

C. E. Saunders
G. L. Barry

Santa Cruz County (1)

H. G. Watters

P. T. Phillips

Shasta County (1)

Sherman T. White

Clarence E. Reed

Siskiyou County (1)

E. W. Bathurst

Solano County (1)**Sonoma County (1)**

A. A. Thurlow

M. J. Fulmer

Stanislaus County (1)

R. E. Maxwell

C. E. Pearson

Tehama County (1)**Tulare County (1)**

Roy N. Fuller

Austin Miller

Tuolumne County (1)

Homer DeWitt Rose

Wm. L. Hood

Ventura County (1)

Benjamin E. Merrill

Harold B. Osborn

Yolo County (1)

Fred R. Fairchild

W. E. Bates

Yuba-Sutter County (1)

E. E. Gray

FIRST MEETING OF HOUSE OF DELEGATES

Tent, Lodge, Monday, May 18, at 8 p. m.

Order of Business

1. Calling to Order.
2. Roll Call.
3. Report of President.
4. Appointment of the Reference Committee by the President.
5. Report of the Council, James H. Parkinson, chairman (presented before the General Sessions).
6. Report of the Committee on Scientific Program, Emma W. Pope, chairman.
7. Report of the Auditing Committee, Rene Bine, chairman.
8. Report of Committee on Bunnell Memorial, Emmet Rixford, chairman.
9. Report of Secretary, Emma W. Pope.
10. Report of Editor, W. E. Musgrave (presented before General Sessions).
11. Unfinished Business.
12. New Business.
13. Reading and Adoption of Minutes.
- Adjourment.

SECOND MEETING OF HOUSE OF DELEGATES

Tent, Lodge, Wednesday, May 20, at 8 p. m.

Order of Business

1. Calling to Order.
 2. Roll Call.
 3. Announcement of the Place of Meeting, 1926.
 4. Election of Officers:
 - (a) Election of President-Elect.
 - (b) Election of Vice-President.
 - (c) Election of Councilors.
- Second District**—Incumbent, William H. Kiger, Los Angeles (1925)—Los Angeles, Santa Barbara, Ventura, and Kern Counties.
- Fourth District**—Incumbent, Fred R. DeLappe, Modesto (1925)—Fresno, Kings, Tuolumne, Merced, Mariposa, Madera, Tulare, and Stanislaus Counties.
- Eighth District**—Incumbent, James H. Parkinson, Sacramento (1925)—Sacramento, Amador, El Dorado, Alpine, Placer, Nevada, Yuba, Sutter, Sierra, Yolo, Butte, Plumas, Lassen, Mono, Inyo, Glenn, Colusa, Tehama, Shasta, Modoc, and Siskiyou Counties.
- Councilor-at-Large**—Incumbent, O. D. Hamlin, Oakland (1925).
- (d) Election of Member on Program Committee (four years)—Incumbent, Walter V. Brem, Los Angeles (1925).
 - (e) Confirmation of Election by Council of Hans

Lisser, San Francisco, to replace T. C. Edwards, Salinas (1926), resigned Delegate to A. M. A.

(f) Confirmation of Election by Council of three Delegates to A. M. A. needed to complete five authorized—Albert Soiland, Los Angeles (1927); Robert V. Day, Los Angeles (1927); Lemuel P. Adams, Oakland (1927).

(g) Confirmation of Election by Council of three Alternates to A. M. A. needed to complete five authorized—Charles D. Lockwood, Pasadena (1927); Robert Pollock, San Diego (1927); O. D. Hamlin, Oakland (1927).

5. Report of Reference Committee.
 6. Presentation of President.
 7. Presentation of President-Elect.
 8. Reading and Adoption of Minutes.
- Adjournment.

GENERAL INFORMATION

General Sessions—In case of inclement weather, General Sessions scheduled for the Lodge Tent will be held in the Government Pavilion, Yosemite Village, and other changes will be announced at the General Sessions.

Registration and Information—The registration and information desk is located at Yosemite Lodge. All persons attending the Convention, whether members or not, are requested to register immediately on arrival. Beginning Sunday, May 17, registration secretaries will be on duty daily from 9 a. m. until 4 p. m.

Guests and Visitors—All guests and visitors are requested to register. All General Sessions and scientific meetings are open to visitors and guests.

Badges—Four kinds of badges will be issued by the registration bureau. Members: Only active, associate, affiliate or honorary members of the California Medical Association will be issued the usual membership badge. Guest: A special badge will be issued to all fraternal delegates, visiting physicians, physiotherapists, medical social workers, nurses and other technical specialists who are attending the meetings upon official invitation of the Association. Delegates and Alternates: The usual official badge is provided for this purpose and will be issued to all persons authorized to wear it. Councilors: An official badge is provided for all members of the Council.

Membership Cards—Every member in good standing in the California Medical Association has been issued an official membership card for 1925. This card may be useful in connection with railroad tickets, and all members are requested to have their cards with them.

Suggestions and Constructive Criticism—The officers and committees have tried to do everything possible to make the meeting a success. Suggestions and constructive criticism calculated to make future meetings more useful will be welcomed by any of the officers. Complaints of whatever character should be made to the Registration Desk, where they will receive attention.

Social Program—No set social program has been arranged. The unusual attractions of Yosemite are believed to make this inadvisable. It is hoped that members and guests will form their own social contacts for sports, dinners, hiking and visits to places of interest. The program has been arranged so as to allow much time for amusement and recreation. There are no meetings before 10 a. m. and none between 12:30 and 2 p. m., and none between 4:30 and 8 in the evening.

Hospital—The Yosemite Hospital is located near Yosemite Lodge. Dr. Claude H. Church, who is in charge of the hospital, states that physicians and nurses are on duty at all hours.

Bus Line—The Yosemite Transportation System will maintain an adequate "street car" service between all meeting places of the various sections and the various hotels, including Camp Curry and the Lodge.

Press Representatives—Accredited press representatives are welcome and they will be accorded every possible courtesy.

Publicity—All publicity is in the hands of the Publicity Committee. It is requested that all persons having matter of "news" value report it to this committee. It is particularly requested that all "news" about any phase of the Convention be given out through the official committee and in no other way.

Exhibits—After mature deliberation by the Council and the Executive Committee it has been decided that no exhibits will be authorized. Accredited representatives of firms recognized in the advertising columns of California and Western Medicine will be accepted as accredited visitors to the Convention and authorized to solicit members and guests. Exhibits by all such representatives will be located in Oak and Cedar Cottages in Yosemite Village.

Rules Regarding Papers and Discussions at the State Meeting—Upon recommendation of the Executive Committee the following rules regarding papers have been adopted by the Council:

1. The maximum time that may be consumed by any paper is fifteen minutes, provided that not to exceed ten minutes' latitude may be allowed invited guests at the discretion of the presiding chairman.
2. Motions from the floor to extend the time of an author may not be entertained by the presiding officer.

3. The maximum time permitted any individual discussant on any paper is four minutes. This also applies to the author in closing his discussion. No discussant may speak more than once upon the same subject.

4. A copy of each and every paper presented at the State meeting must be in the hands of the chairman or secretary of the section or in the hands of the general secretary before the paper is presented.

5. Manuscripts not accepted by the Executive Committee for publication in the Journal will be returned to the author as soon as practicable. Authors desiring to publish their paper elsewhere than in the Journal may have their manuscript returned to them upon written request to the State Secretary.

6. No paper will be accepted by the General Program Committee nor by Section Program Committees unless accompanied by a synopsis of not to exceed fifty words.

7. Papers shall not be "read by title."

8. No member may present more than one paper at any one State meeting, provided that members may present additional papers before Sections on Technical Specialties; and provided further, that a member may be a collaborator on more than one paper, if these papers are presented by different authors.

9. Failure on the part of an author to present a paper precludes acceptance of future papers from such author for a period of two years, unless the author explains to the satisfaction of the Executive Committee his inability to fulfill his obligation.

FIRST GENERAL SESSION

GRANVILLE MACGOWAN, M.D., President,
Brack Shops Building, Los Angeles.

EMMA W. POPE, M.D., Secretary,
1016 Balboa Building, San Francisco.

Tent, Lodge, Monday, May 18, 10 a. m.

1. *President's Annual Address*—Granville MacGowan, M.D., Brack Shops Building, Los Angeles.
2. *Address of President-Elect*—Edward N. Ewer, M.D., 251 Moss Avenue, Oakland.
3. *Annual Report of the Council*—James H. Parkinson, M.D., chairman, 1601 I Street, Sacramento.
4. *Report of the Editor*—W. E. Musgrave, M.D., 806 Balboa Building, San Francisco.
5. *Report of the Legal Department*—Hartley F. Peart, General Counsel, 514 Humboldt Bank Building, San Francisco.

SECOND GENERAL SESSION

GRANVILLE MACGOWAN, M.D., President,
Brack Shops Building, Los Angeles.

EMMET RIXFORD, M.D., Chairman,
1795 California Street, San Francisco.

Dedication of Lafayette Houghton Bunnell
Memorial

Foot of El Capitan, Tuesday, May 19, 10 a. m.

Automobiles conveying members to the dedication ceremony will leave Yosemite Lodge at 10 a. m., headed by officers of the California Medical Association and invited guests.

1. *Introductory Speech and Unveiling of Plaque to Doctor Lafayette Houghton Bunnell*—Granville MacGowan, M.D., President California Medical Association, Brack Shops Building, Los Angeles.
2. *Address*—Mr. W. B. Lewis, Superintendent Yosemite National Park.
3. *Explorers in the Sierras*—Francis Farquhar, Sierra Club, San Francisco.
4. *Doctor Lafayette Houghton Bunnell*—Emmet Rixford, M.D., Chairman Committee on Bunnell Memorial, 1795 California Street, San Francisco.

THIRD GENERAL SESSION**Medical Economics, Education and Hospitals**

This Meeting Is Under the Auspices of the League
for the Conservation of Public Health

DUDLEY SMITH, M. D., President,
Oakland.

W. T. McARTHUR, M. D., Secretary,
Los Angeles.

Open to the Public and to all Members of the
California Medical Association

Tent, Lodge, Wednesday, May 20, 10 a. m.

1. *What the League Is Doing*—Dudley Smith, M. D., President League for the Conservation of Public Health.
2. *What Does the Public Want?*—William Duffield, M. D., Los Angeles.
3. *Advertising That Preys*—Celestine J. Sullivan.
4. *What Does the Medical Profession Want?*—W. B. Coffey, M. D., San Francisco.
5. *Science Versus Ignorance*—Dr. David Starr Jordan, President Emeritus Stanford University.

FOURTH GENERAL SESSION

Tent, Lodge, Thursday, May 21, 10 a. m.

1. *A Discussion of Some of the Problems Relating to the Symptomatology, Prognosis and Treatment of Arteriosclerosis and Arterial Hypertension*—John Phillips, M. D., Assistant Professor of Therapeutics, Western Reserve University; Associate Visiting Physician, Lakeside Hospital, and Directory of Medicine, Cleveland Clinic, Cleveland, Ohio.
2. *The History and Problems of Disease*—Walter V. Brem, M. D., 932 Maltman Avenue, Los Angeles.
3. *The Importance of Prognosis in Surgery*—Roland E. Skeel, M. D., Westlake Professional Building, Los Angeles.

THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

(Sub-organization of the California Medical Association organized in June, 1923, to eradicate conditions giving rise to malpractice actions, and to further the protection of its members in such actions.)

JAMES H. PARKINSON, M. D., Chairman,
1601 I Street, Sacramento.

EMMA W. POPE, M. D., Secretary,
1016 Balboa Building, San Francisco.

Pillsbury Pavilion, Lodge, Tuesday, May 19, 8 p. m.

1. Chairman's Address: *The Organization and Purposes of The Medical Society of the State of California*—James H. Parkinson, M. D., 1601 I Street, Sacramento.
2. *The Doctor in Court*—Address by Hon. George F. McNoble, President California State Bar Association, Farmers and Merchants Bank Building, Stockton.

ANESTHESIOLOGY SECTION

J. ROBERT BURROWS, M. D., Chairman,
2305 Sacramento Street, San Francisco.

LOUISE A. OLDENBOURG, M. D., Secretary,
3032 Colby Street, Berkeley.

MEETING

Pillsbury Studio, Village, Monday, May 18, 2 p. m.

1. Chairman's Address: *Teamwork*—J. Robert Burrows, M. D., 2305 Sacramento Street, San Francisco. Secretary's Report.

2. Election of Section Officers and Transaction of Other Section Business.
3. *Nitrous Oxide and Regional Anesthesia in Abdominal Surgery*—P. K. Gilman, M. D., 350 Post Street, San Francisco.
4. *Cardiac Decompensation in Pregnancy*—Karl L. Schaupp, M. D., 516 Sutter Street, San Francisco.
5. *Local Anesthesia in Abdominal Surgery*—H. A. L. Ryfkogel, M. D., 516 Sutter Street, San Francisco; E. Carlson, M. D., San Francisco Hospital, San Francisco.
6. *Collaborating on the Effects of Impurities Often Present in Nitrous Oxide*—William Hutchinson, M. D., Detwiler Building, Los Angeles; Donald E. Baxter, M. D., 910 North Brand Boulevard, Glendale.

PACIFIC COAST ASSOCIATION OF ANESTHETISTS

Joint meeting with the Section on Anesthesiology of the
California Medical Association

CAROLINE B. PALMER, M. D., President,
2401 Sacramento Street, San Francisco.

ELEANOR SEYMOUR, M. D., Secretary,
845 West Tenth Street, Los Angeles.

FIRST MEETING

Pillsbury Studio, Village, Tuesday, May 19, 2 p. m.

1. Presidential Address: *Medication in Conjunction With Anesthesia*—Caroline B. Palmer, M. D., 2401 Sacramento Street, San Francisco.
2. *Evaluation of the Surgical Risk*—F. F. Gundrum, M. D., Capital National Bank Building, Sacramento; J. B. Harris, M. D., Capital National Bank Building, Sacramento.
3. *The Handling of Goitre Cases Demanding Surgery*—V. R. Mason, M. D., Pacific Mutual Building, Los Angeles; C. T. Sturgeon, M. D., 1136 West Sixth Street, Los Angeles.
4. *The Psychological Aspect of the Prospective Patient—and Special Reference to Pressure Induction*—Frank W. Chandler, D. D. S., Hollywood.
5. *Indications for General Anesthesia in the Extraction of Deciduous Teeth*—Evangeline Jordan, D. D. S., Los Angeles.
6. *Economies to be Effected in the Efficient Administration of Nitrous Oxide*—Donald E. Baxter, M. D., 910 North Brand Boulevard, Glendale.

SECOND MEETING

Pillsbury Studio, Village, Wednesday, May 20, 2 p. m.

1. *The Influence of Pre-operative Administration of Sugar in Acidosis*—Edgar I. Leavitt, M. D., 184 Forest Side Avenue, San Francisco.
2. *Preparation of the Diabetic for Surgery*—Horace J. Hagen, M. D., Santa Barbara.
3. *A Study of the Endocrines in Relation to Operative and Anesthetic Risk*—Clifford A. Wright, M. D., 2417 South Hope Street, Los Angeles.
4. *Blood Changes in Chronic Alcoholism—Their Similarity to Those Occurring in Chloroform and Ether Narcosis*—F. R. Nuzum, M. D., Cottage Hospital, Santa Barbara.
5. *Carbon Dioxide Method of De-Etherization*—Ethel Righetti, M. D., 305 Walnut Street, San Francisco.
6. *What is the Present Day Attitude of the Medical Profession Toward the Anesthetist?*—Jean Martin, M. D., 190 Twenty-seventh Avenue, San Francisco.

DERMATOLOGY AND SYPHILOLOGY SECTION

GEORGE DE WITT CULVER, M. D., Chairman,
323 Geary Street, San Francisco.

HIRAM E. MILLER, M. D., Secretary,
380 Post Street, San Francisco.

FIRST MEETING

Antler's Club, Village, Monday, May 18, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. *Treatment of Poison-Oak Dermatitis*—Harry E. Alderson, M. D., 240 Stockton Street, San Francisco.
Discussion opened by W. G. Donald, M. D., 2251 Telegraph Avenue, Berkeley.
3. *Trichophytosis of the Glabrous Skin as a Clinical Problem*—Moses Scholtz, M. D., Brockman Building, Los Angeles.
4. *Vincent's Angina—The Significance of Fusiform Bacilli and Vincent's Spirochetes in Mucous Membrane Lesions*—Hiram E. Miller, M. D., 380 Post Street, San Francisco; Norman Epstein, M. D., University of California Hospital, San Francisco.
5. *Favus*—Kendal P. Frost, M. D., Pacific Mutual Building, Los Angeles; George F. Koetter, M. D., Pacific Mutual Building, Los Angeles.

SECOND MEETING

Antler's Club, Village, Tuesday, May 19, 8 p. m.

1. *Electro-Coagulation and Electro-Dessication as a Means of Destroying Malignant and Benign Skin Lesions*—Ernest K. Stratton, M. D., 350 Post Street, San Francisco.
2. *Treatment of Skin Cancer*—Edwin D. Ward, M. D., 361½ South Columbia Avenue, Los Angeles.
3. *Acne Vulgaris*—Charles E. Schoff, M. D., Farmers and Merchants Bank Building, Sacramento.
4. *Skin Diseases in Twins*—Thomas J. Clark, M. D., Oakland Bank of Savings Building, Oakland; Frank H. Stibbens, M. D., Oakland Bank of Savings Building, Oakland.

THIRD MEETING

Antler's Club, Village, Wednesday, May 20, 10 a. m.

Symposium on Treatment of Syphilis

1. Election of Section Officers and Transaction of Other Section Business.
2. *Sulpharsphenamine—Indications for Its Use and Technic of Intramuscular Injection*—Irwin C. Sutton, M. D., Taft Building, Hollywood.
3. *The Present Status of Bismuth in Anti-Syphilitic Treatment*—Samuel Ayres, M. D., 2007 Orange Street, Los Angeles.
4. *Therapeutics of Syphilis*—Howard Morrow, M. D., 380 Post Street, San Francisco.

Discussion on Symposium to be opened by LeRoy H. Briggs, M. D., 380 Post Street, San Francisco; Ernest D. Chipman, M. D., 391 Sutter Street, San Francisco.

EYE, EAR, NOSE, AND THROAT SECTION

ERNEST W. FLEMING, M. D., Chairman,
Pacific Mutual Building, Los Angeles.

PERCIVAL DOLMAN, M. D., Secretary,
Flood Building, San Francisco.

FIRST MEETING

Sentinel Dining-room, Village, Monday, May 18,
8 p. m.

1. Chairman's Address and Secretary's Report.
2. *Epinephrin in Glaucoma*—Kaspar Pischel, M. D., 135 Stockton Street, San Francisco.
3. *Studies in Ocular Dominance*—Lloyd Mills, M. D., Citizens National Bank Building, Los Angeles.
4. *A Study of the Sighting Eye in Young Children*—Percival Dolman, Flood Building, San Francisco.

SECOND MEETING

Sentinel Dining-room, Village, Tuesday, May 19,
2 p. m.

1. *The Correction of External Nasal Deformities (Lan-*

tern Slides)—J. D. Lewis, M. D., San Marcos Building, Santa Barbara.

2. *Treatment of Cicatricial Stenosis of the Larynx*—Simon Jesberg, M. D., 1151 West Sixth Street, Los Angeles.
3. *Primary Carcinoma of Middle Ear With X-ray Progressive Study*—Frank Albert Burton, M. D., Watts Building, San Diego.
4. *Pregnancy as a Complicating Factor in Ear Infection (Report of a Case)*—Harold A. Fletcher, M. D., 135 Stockton Street, San Francisco.

THIRD MEETING

Sentinel Dining-room, Village, Wednesday, May 20,
2 p. m.

1. Election of Section Officers and Transaction of Other Section Business.
2. *Value of Visual Field Findings in Cranial Injuries*—Theodore C. Lyster, M. D., 1920 Orange Street, Los Angeles.
3. *Present Status of the Mechanism of Accommodation as Confirmed by Experimental Data*—P. Obarrio, M. D., 350 Post Street, San Francisco.
4. *Technique of a Safer Method of Cataract Extraction*—Otis Allen Sharpe, M. D., 516 Sutter Street, San Francisco.

GENERAL MEDICINE SECTION

ERNEST S. DU BRAY, M. D., Chairman,
Flood Building, San Francisco.

ROY E. THOMAS, M. D., Secretary,
1136 West Sixth Street, Los Angeles.

FIRST MEETING

Government Pavilion, Village, Monday, May 18,
2 p. m.

1. *The Triple Syndrome Affecting Blood, Digestive and Nervous Systems*—Alfred C. Reed, M. D., 380 Post Street, San Francisco; Harry A. Wyckoff, M. D., Stanford University Medical School, San Francisco.
The syndrome consists of a toxemia affecting: 1. Gastro-intestinal tract, tending toward atrophy, exemplified in sprue. 2. Blood system, tending toward pernicious anemia. 3. Nervous system, consisting of progressive combined degeneration of the postero-lateral tracts. All systems are affected, but with a wide variation of intensity. Etiology lies in protein poisoning or blood infection. Illustrated by cases.
2. *Sickle Cell Anemia (Lantern Slides)*—Gordon E. Hein, M. D., 1225 Bay Street, San Francisco; Randolph McCalla, M. D., San Francisco Hospital, San Francisco; George W. Thorne, San Francisco Hospital, San Francisco.

A male negro, aged 20 years, whose mother had the latent phase of sickle cell anemia, was observed in the active phase of the same condition. What constitutes the clinical picture. Are the joint and muscle pains, the epigastric pain, the fever, the slightly enlarged heart with a systolic murmur, the presence of gall-stones to be interpreted as part of the disease, or are they complications? X-ray evidence suggests duodenal ulcer. How is it to be interpreted? A compilation of the symptoms and signs (exclusive of the blood findings) of the published active cases is presented. Observations of the blood at different periods in the course, particularly during exacerbations and remissions, were made. A few of the factors influencing the sickling were studied.

3. *The Treatment of Nephritis*—James W. Sherrill, M.D., La Jolla.

The correlation between renal function tests and clinical findings in nephritis; changes in water balance in nephritis; hyperfunction in early renal lesions; renal function and changes in blood chemical

constituents; red cell volume and water balance in experimental partial nephrectomies.

4. *The Values of Gastro-Intestinal Motor Indices* (Lantern Slides)—Quinter O. Gilbert, M. D., Medical Building, Oakland.

Visceral symptoms arise largely from involuntary muscle disturbance. The symptomless abdomen has a rhythmic, orderly movement of contents, with a definite time sequence. Gastro-intestinal contents at the wrong place at the wrong time gives rise to local and reflex motor phenomena. A disturbance at one point influences the motility of the rest of the tract. The correct interpretation of these changes suggests the proper medical and surgical treatment. With a standard, fixed method of study, these changes may be expressed in a motor index formula.

5. *Diffuse Gastric Polyposis*—Four Cases (Lantern Slides)—Harold Brunn, M. D., 380 Post Street, San Francisco; Felix L. Pearl, M. D., 380 Post Street, San Francisco.

An analysis of fifty cases of diffuse polyposis of the stomach; this being a survey of all the cases reported in literature to date, with an additional report of four cases from the surgical service of the University of California Medical Department, three of which were operated upon by one of us. The analysis includes statistics of incidence, symptoms and signs, pathological anatomy, diagnosis and surgical treatment, supplemented by discussions of the history, etiology, and prognosis of the disease.

6. *Clinical Picture of Beginning Carcinoma of the Stomach (With Animadversions on the Radiological Illustrations in Gastro-Intestinal Diseases)*—Harry I. Wiel, M. D., 135 Stockton Street, San Francisco.

History and clinical picture given of a patient who was operated upon and after pathological examination of tissues showed an actual incipient carcinoma of the stomach. As far as we can find, it showed the earliest stage of carcinoma of the stomach that has been seen and followed clinically and surgically. Comparison between the clinical picture of earliest carcinoma of stomach as evidenced by this patient and the usual picture of carcinoma of stomach which is always full-blown by the time we diagnose. The x-ray findings in this case are of interest out of the routine and lead to reflections on similar radiological experiences in other patients with gastro-intestinal diseases. Remarks as to the conclusiveness of positive x-ray findings in gastro-enterology.

SECOND MEETING

Government Pavilion, Village, Tuesday, May 19,
8 p. m.

1. Chairman's Address: *Comments on Body Weight in Relation to Health and Disease*—Ernest S. du Bray, M. D., Flood Building, San Francisco.
Secretary's Report.
2. *Prognosis and Choice of Treatment in Graves' Disease*—J. Marion Read, M. D., 870 Market Street, San Francisco.

The natural clinical course has an important bearing on the treatment and prognosis of Graves' disease. The prognosis varies with age, sex, and the particular stage of the disease the patient is in when seen by the physician. The nervous make-up of the patient is an important factor, especially in the more chronic types. An attempt to properly evaluate in each case the various factors concerned in producing and maintaining this disease state should yield more satisfactory therapeutic results. About 2 per cent of patients who have this disease will succumb. These are mostly the acute, fulminating cases. Prognosis in the remainder of the acute cases is favorable for recovery. The chronic cases, which constitute about one-half of those seen, offer more difficulty from a therapeutic standpoint, and the prognosis for permanent cure is unfavorable.

3. *The Diabetic at Home*—Howard F. West, M. D., 1032 West Eighteenth Street, Los Angeles.

A discussion of some of the problems met with in an effort to keep the diabetic patient under control

and to aid him in realizing the health promised by modern methods after he leaves the hospital and the first intensive study. Illustrative cases showing the various sources of difficulties and some suggestions for their solution.

4. *The Clinical Significance of Bundle Branch Lesions*—Arthur Stanley Granger, M. D., 2007 Orange Street, Los Angeles.

Introduction: Pathology of these lesions. Mechanism of production of the very interesting electrocardiographic findings in the so-called bundle branch lesions. Symptoms and clinical signs in a group of thirty-five cases. Importance of demonstrating this condition, particularly from the standpoint of prognosis. Electro-cardiograms illustrating the typical findings, with a few case reports.

5. *A Clinical and Surgical Check on Liver Function Tests*—John V. Barrow, M. D., Westlake Professional Building, Los Angeles; William H. Olds, M. D., 607 South Hill Street, Los Angeles; Eugene L. Armstrong, M. D., 2005 Orange Street, Los Angeles.

1. The tests in every-day laboratory use; their technic and usability by the general profession.
2. What is shown in the normal individual under changes of physiologic conditions, as starvation, full stomach, fatty diet, starchy diet, and other conditions.
3. Application to clinical cases with reports.
4. Relative value of each test. 5. Conclusions.

THIRD MEETING

Government Pavilion, Village, Thursday, May 21,
2 p. m.

1. Election of Section Officers and Transaction of Other Section Business.
2. *The Value of the Salivary Index as a Practical Office Procedure*—Clair L. Stealy, M. D., 415 Elm Street, San Diego.
1. Method of obtaining saliva, technique of test and salivary index (Hench and Aldrich). 2. Comparison of salivary urea by use of index with blood urea. 3. Type of cases used in, with findings. 4. Kidney function estimation by use of salivary urea, blood urea, urinary urea and phenolphthalein test. Summary of value.
3. *The Diagnosis of Chronic Amebiasis*—W. T. Davidson, M. D., 350 Post Street, San Francisco.
1. Prevalence in California. Soldiers returned from World War. Former residents of tropical and sub-tropical regions. Indigenous. 2. Diagnosis. Clinical symptoms. Typical cases. Series examination of stools following treatment, an important feature frequently overlooked in previous handling of case. Technic of these examinations. A typical case. Metastatic infections. Cytologic diagnosis. Specific organism; cysts.
4. *Therapeutics of Rest*—Allen H. Williams, M. D., 11 East Delaguerra Street, Santa Barbara.
5. *Pneumonic Plague*—Emil Bogen, M. D., 1100 Mission Road, Los Angeles; George Maner, M. D., 1100 Mission Road, Los Angeles.

Plague endemic in California. Recent epidemic of pneumonic form in Los Angeles emphasizes danger. Clinical diagnosis based upon history of exposure, high fever, severe prostration, diffuse bronchopneumonia, bloody sputum, and glandular enlargements. Laboratory aids by sputum smear, gland aspiration, guinea pig inoculation, and post-mortem findings. Therapy unsatisfactory. Prognosis poor. Prevention essential.

6. *Medical Management of Trophic Changes Incident to Vascular Disease*—J. Edward Harbinson, M. D., Woodland.

1. Selected cases of trophic changes, including gangrene, complicating endarteritis and other types of vascular disease can be treated with success medically. 2. Treatment: (a) General treatment of underlying cause. (b) Supplemental treatment: elimination of infection, rest in bed, heliotherapy, massage, sodium citrate intravenously and by mouth. 3. Results are good if economically feasible. 4. Report of cases.

GENERAL SURGERY SECTION

WALLACE I. TERRY, M. D., Chairman,
380 Post Street, San Francisco.

C. T. STURGEON, M. D., Secretary,
1136 West Sixth Street, Los Angeles.

FIRST MEETING

Government Pavilion, Village, Monday, May 18,
8 p. m.

1. Chairman's Address and Secretary's Report.
2. *The Relationship of the Clinical Pathologist to Surgical Practice*—Verne C. Hunt, M. D., Mayo Clinic, Rochester, Minnesota.

A discussion of the present-day role of the clinical pathologist. A statistical presentation illustrating the necessity of co-operation between pathologist and surgeon. A consideration of the influence of the clinical pathologist in the exercise of surgical judgment. Method of determining operability and a guide for the magnitude justifiable of a proposed surgical procedure. A basis of relative prognosis.

3. *Prophylaxis in the Treatment of Wound Infections*—Karl F. Meyer, M. D., Hooper Foundation, San Francisco.

A brief presentation of the various methods which have recently been developed to combat wound infections. In particular, the following will be considered: Sterilization of skin, the use of antitoxins against anaerobic infections, bacteriophage treatment, local application of filtered cultures, chemotherapy with vuzin, rivanol, etc.

Discussion opened by A. S. Lobingier, M. D., 307 West Eighth Street, Los Angeles; L. W. Hotchkiss, M. D., San Marcos Building, Santa Barbara.

4. *Some Surgical Aspects of Tubercular Peritonitis*—Charles D. Lockwood, M. D., 295 Markham Place, Pasadena.

A brief review of the literature of this subject, with special reference to the sources of infection and the routes of invasion. The possibility of direct infection from ruptured mesenteric glands. Discussion of surgical treatment and results. The surgical treatment of this condition has made very little progress and is still very unsatisfactory. The possibility of improved results by other methods of treatment. Report of cases.

Discussion opened by H. Brunn, M. D., 380 Post Street, San Francisco; Homer C. Oatman, M. D., Watts Building, San Diego.

5. *A Brief Outline of the Cause and Treatment of Chronic Polyarthrititis* (Report of 104 Cases)—Rea Smith, M. D., 1136 West Sixth Street, Los Angeles.

The cause of chronic deforming polyarthrititis lies in the ileocecal coil. The joints are a constitutional expression of a local disease. Treatment which does not include perfect intestinal drainage is not rational. Perfect intestinal drainage followed by restoration of bacterial balance will arrest disease and affect symptomatic cure, after which orthopaedic procedures to restore joint mobility can be carried out without fear of lighting up joint inflammation.

Discussion opened by Ellis Jones, M. D., 1136 West Sixth Street, Los Angeles.

6. *Thyroiditis*—Henry H. Searls, M. D., 1308 Fifth Avenue, San Francisco.

Division into acute, subacute, and chronic thyroiditis. Discussion of these groups with regard to incidence, etiology, diagnosis, treatment, and prognosis. In the main, a detailed study of the possible etiology and the clinical picture of chronic diffuse thyroiditis, together with its relationship to and differentiation from hyperplasia of the thyroid gland. References

Discussion opened by C. G. Toland, M. D., 523 West Sixth Street, Los Angeles; E. I. Bartlett, M. D., 240 Stockton Street, San Francisco.

SECOND MEETING

Government Pavilion, Village, Tuesday, May 19,
2 p. m.

1. *The Value of Ventriculography in Localizing Brain*

Tumors—Carl W. Rand, M. D., 140 South Norton Street, Los Angeles.

Summary of writer's cases in which the ventricle study has been carried out. Value of the procedure (a) as confirming previous neurological findings; (b) in the absence of localizing signs; percentage of cases in which tumors were localized; failure of ventricle study due to errors in technique. Mortality.

Discussion opened by H. C. Naffziger, M. D., 380 Post Street, San Francisco; Edward B. Towne, M. D., Stanford University Medical School, San Francisco.

2. *Surgical Judgment*—Fred R. Fairchild, M. D., Woodland.

Surgical judgment sound only if based on detailed knowledge of every factor of each case. These facts can only be known by facts obtained from (a) complete history, (b) complete physical examination, (c) all essential laboratory data. Since disaster often follows surgical operations, based on poor judgment (which is usually lack of knowledge of facts that should have been obtained) it is submitted that some constituted authority should have the right to demand for review the records of any case. The purpose of this review would be to determine whether or not the patient's safety had been properly guarded.

Discussion opened by A. B. Cooke, M. D., Hollingsworth Building, Los Angeles; C. M. Fox, M. D., Electric Building, San Diego.

3. *Knee-joint Surgery*—Ellis W. Jones, M. D., 1136 West Sixth Street, Los Angeles.

The present status of surgery in relation to disabilities of the knee-joint presents a wider scope for more efficient treatment and favorable prognosis in the end-results in cases of deranges menisci, loose bodies, infectious arthritis secondary to trauma, monoarticular types of chronic hypertrophic arthritis and fractures involving the joint.

Discussion opened by W. I. Baldwin, M. D., 380 Post Street, San Francisco.

4. *Diaphragmatic Hernia*—Case Reports (Lantern Slides)—John Homer Woolsey, M. D., 135 Stockton Street, San Francisco.

Diaphragmatic hernia is not of rare occurrence. Discussion will be according to the three types—congenital, acquired and traumatic, with regard to cause, location, symptomatology, and treatment.

Discussion opened by H. Brunn, M. D., 380 Post Street, San Francisco; J. H. Breyer, M. D., Chamber of Commerce Building, Pasadena.

5. *The Surgical Treatment of Echinococcosis*—H. W. Mills, M. D., Chamber of Commerce Building, San Bernardino.

Paper a purely academical one. Justification of title Dévé's work on spontaneous cure by vomica of certain hydatid cysts of lung. Echinococcosis hydatidosis and echinococcosis bavaro-tyrolienne. Surgical treatment of hydatid cysts of liver, lung, kidney, spleen, brain, muscles and connective tissue, pelvis, and certain rare locations. Remarks on Finocchetto's trocar-aspirator.

Discussion opened by P. K. Gilman, M. D., 350 Post Street, San Francisco; C. C. Snyder, M. D., 44 South Marengo Avenue, Pasadena.

THIRD MEETING

Government Pavilion, Village, Wednesday, May 20,
2 p. m.

1. Election of Section Officers and Transaction of Other Section Business.

2. *Myositis Ossificans Traumatica, With Special Reference to Exostoses Following Dislocations of the Elbow* (Lantern Slides)—Emmet E. Rixford, M. D., 1795 California Street, San Francisco.

Etiology: Clinical course and treatment, especially choice of time for operative removal.

3. *Prognosis of Treatment for Congenital Hypertrophic Stenosis*—Burns S. Chaffee, M. D., Maxwell Building, Long Beach.

Differentiation between the two types of pyloric obstruction, the "hypertrophic" and the "spasmodic," has caused confusion in the treatment of the former type. Early operations were accompanied with a

high mortality, as they were not adaptable to infant subjects. Today surgical treatment is standardized, and most excellent results are obtained. Ultra-conservatism not infrequently blocks the golden opportunity of saving the lives of infants.

Discussion opened by Guy Cochran, M. D., Pacific Electric Building, Los Angeles; Alanson Weeks, M. D., 380 Post Street, San Francisco.

4. *Cancer of the Colon*—Samuel Robinson, M. D., San Marcos Building, Santa Barbara.

A plea for the earlier recognition of tumors of the large bowel. Pathology and operability. Reduction in mortality should result from closer study of symptoms and the choice of such operative methods as may be consistent with the patient's condition and the experience and skill of the surgeon.

Discussion opened by J. H. Shepherd, M. D., Twohy Building, San Jose; H. H. Sherk, M. D., 268 South Grove Street, Pasadena.

5. *The Pre-operative Preparation and Surgical Treatment of Carcinoma of the Pancreas With Common Duct Obstruction*—Leo P. Bell, M. D., Woodland.

1. Discussion of the literature, its etiology, pathology, and occurrence. 2. Discussion of the pre-operative preparation in regard to the intravenous administration of sodium chloride, transfusions, administration of calcium, together with the increased clotting and nephrosis of all secretory, glandular tissue. 3. Discussion of the operative choice and technique of cholecystogastrostomy and cholecystoduodenostomy. 4. Presentation of cases and prognosis. 5. Discussion of liver regeneration during and following the relief of the obstructive jaundice.

Discussion opened by E. C. Moore, M. D., 511 South Bonnie Brae, Los Angeles; James Percy, M. D., 1030 South Alvarado Avenue, Los Angeles.

6. *Intestinal Obstruction (Review of Ninety-three Cases)*—Edmund Butler, M. D., Butler Building, San Francisco; G. D. Delprat, M. D., San Francisco Hospital, San Francisco.

Intestinal obstruction (a) age, (b) sex, (c) duration of symptoms, (d) symptoms as presented: 1, vomiting; 2, pain; 3, distention; 4, peristalsis; 5, fever; 6, non-prot. nitrogen of blood; 7, shock; 8, leucocytosis; (e) signs of peritonitis, (f) procedure, (g) post-operative complications, (h) time in hospital, (i) mortality.

Discussion opened by Walter L. Huggins, M. D., 523 West Sixth Street, Los Angeles; Thomas O. Burger, M. D., First National Bank Building, San Diego.

INDUSTRIAL MEDICINE AND SURGERY SECTION

PHILIP H. STEPHENS, M. D., Chairman,
Pacific Electric Building, Los Angeles.

PACKARD THURBER, M. D., Secretary,
906 Black Building, Los Angeles.

FIRST MEETING

Tent, Lodge, Monday, May 18, 2 p. m.

- Chairman's Address and Secretary's Report.
- Derangement of the Ankle-joint Following Fractures of the Lower End of the Tibia and Fibula* (Lantern Slides)—Lionel D. Prince, M. D., 870 Market Street, San Francisco.

The purpose of this paper is, firstly, to emphasize the importance of absolute reduction of fractures of the tibia and fibula above the ankle-joint where the proper weight-bearing alignment is destroyed; and secondly, to emphasize the operative correction in those cases where union has been permitted to take place without regard for the restoration of the proper weight-bearing alignment. The method of

conservative reduction is given and likewise the operative technique in those cases where mal-union is present.

3. *Industrial Hernia vs. Seminal Vesiculitis*—Miley B. Wesson, M. D., 870 Market Street, San Francisco.

A large proportion of people are born with a potential hernia, and many of these acquire a seminal vesiculitis. Following a strain, there is a flare-up of the infection, which manifests itself as a vasitis. The first subjective symptom is a pain in the groin which the patient too often attempts to sell to the insurance company as an industrial hernia. The literature of traumatic hernia, as well as seminal vesiculitis, has been reviewed. Forty new cases of vasitis, many of which were diagnosed as hernia, are briefly reported.

Discussion opened by Emmet Rixford, M. D., 1795 California Street, San Francisco; H. A. Rosenkranz, M. D., N. P. Story Building, Los Angeles.

4. *The Diagnosis of Lead Poisoning in Industrial Plants*—C. O. Sappington, 354 Grand Avenue, Oakland.

1. Introduction. (a) Importance of lead in manufacturing; as toxicological hazard. (b) Recent work on lead poisoning in United States, Harvard Lead Unit, Industrial Clinic at Massachusetts General Hospital, the work of Hamilton, Wright, Shie, and others. (c) Recent experience with lead poisoning in California. 2. Important considerations bearing on the diagnosis of lead poisoning. (a) All compounds dangerous. (b) Dangerous forms; dust and fumes. (c) Ports of entry to the body. (d) Dangerous amounts of lead. (e) The cumulative effect. (f) Personal idiosyncrasy. (g) Age and sex. 3. The diagnostic standards of the United States Public Health Service. 4. Controversial diagnostic points with suggestions for changes in technique. (a) The lead line on the gums. (b) Methods of staining for stippled red cells. (c) Examination of muscle groups. (d) Tests for lead in air, urine, and feces. Medico-legal aspects. (e) The distinction between lead absorption and lead poisoning. 5. Summary.

SECOND MEETING

Tent, Lodge, Tuesday, May 19, 8 p. m.

Open Meeting With the State Committee on Industrial Medical Practice

THIRD MEETING

Tent, Lodge, Thursday, May 21; 2 p. m.

- Election of Section Officers and Transaction of Other Section Business.
- Milkman's Foot, an Industrial Injury*—Floyd Thurber, Black Building, Los Angeles.

1. Introduction. (a) Occurs particularly to milk route men. (b) Caused by repeated jumping on and off wagon. 2. Frequency. (a) Not an uncommon injury. (b) Failure of many cases to report. 3. History. (a) Important to diagnosis. 4. Examination. (a) All ligaments about foot and ankle. (b) Muscles of foot and calf. 5. Diagnosis. (a) History. (b) Examination. 6. Treatment. (a) Relief of strain. (b) Temporary support until muscles and ligaments become stronger. (c) Importance of patient continuing work with proper support of injured tissues. 7. Prognosis.

3. *Industrial Liability for Cancer*—A. R. Kilgore, M. D., 391 Sutter Street, San Francisco; Curtis E. Smith, M. D., 391 Sutter Street, San Francisco.

1. Brief consideration of relation of injury to (a) tumor origin, (b) tumor growth and metastasis. 2. Tumors likely to arise or be accelerated by a single occupational injury. 3. Tumors likely to arise from repeated mechanical or chemical injury. 4. Standardization of evidence necessary to hold injury responsible for tumor origin. 5. Evidence necessary to hold injury responsible for acceleration of tumor growth. 6. Suggested standardization of pro-

cedure in selected types of injury to avoid industrial losses from tumors.

NEUROPSYCHIATRY SECTION

GLENN E. MYERS, M. D., Chairman,
Marsh-Strong Building, Los Angeles.

JOSEPH CATTON, M. D., Secretary,
209 Post Street, San Francisco.

FIRST MEETING

Sentinel Dining-room, Village, Monday, May 18,
2 p. m.

1. Chairman's Address and Secretary's Report.
2. *Tryparsamide in Late Neurosyphilis*—J. Ross Moore, M. D., 520 West Seventh Street, Los Angeles; Irwin C. Sutton, M. D., Taft Building, Hollywood, Los Angeles.
3. *Clinical Report of Twelve Cases of Spinal Cord Tumor, With Special Reference to Early Symptomatology*—Thomas J. Orbison, M. D., 2007 Wilshire Boulevard, Los Angeles.
4. *Results of X-ray Treatment of Tumors of the Brain and the Hypophysis*—E. B. Towne, M. D., Stanford Medical School, San Francisco.
5. *Effect of Radium on General Paralysis*—Aaron J. Rosanoff, M. D., Westlake Professional Building, Los Angeles.

SECOND MEETING

Sentinel Dining-room, Village, Tuesday, May 19,
8 p. m.

1. *The Endocrine Influence in Certain Psychoses*—Edward Huntington Williams, M. D., Pacific Mutual Building, Los Angeles.
2. *Tuberculosis from the Psychiatric Approach—A Report of an Analysis of Forty Cases in and Out of Tuberculosis Hospitals*—Anita M. Muhl, M. D., Commonwealth Building, San Diego.
3. *The Psychiatrist in the University*—Eva C. Reid, M. D., 909 Hyde Street, San Francisco.
4. *The Plea for a Saner Psychology in Explanation of Psychoneuroses*—Milton B. Lennon, M. D., 380 Post Street, San Francisco.

THIRD MEETING

Sentinel Dining-room, Village, Thursday, May 21,
2 p. m.

1. Election of Section Officers and Transaction of Other Section Business.
2. *The Closure of Skull Defects*—Charles L. Tranter, M. D., 209 Post Street, San Francisco.
3. *Bladder Disturbances in Lesions of the Nervous System*—Leon Meyers, M. D., 815 South Hill Street, Los Angeles.
4. *A Clinical and Pathological Study of a Fourth Ventricle Tumor Causing Symptoms of Marked Dystonia*—Walter F. Schaller, M. D., 909 Hyde Street, San Francisco.
5. *A Case of Familial Hereditary Ataxia*—Dwight E. Shepardson, M. D., Lane Hospital, San Francisco; Howard C. Naffziger, M. D., 380 Post Street, San Francisco.

OBSTETRICS AND GYNECOLOGY SECTION

PETER O. SUNDIN, M. D., Chairman,
H. W. Hellman Building, Los Angeles.

JOHN W. SHERRICK, M. D., Secretary,
350 Twenty-ninth Street, Oakland.

FIRST MEETING

Pillsbury Pavilion, Lodge, Monday, May 18, 2 p. m.
Symposium on Eclampsia

1. Chairman's Address and Secretary's Report.

2. *Etiology of Eclampsia*—P. O. Sundin, M. D., H. W. Hellman Building, Los Angeles.
Discussion to be opened by G. C. McPheeters, 1021 Mattei Building, Fresno.

3. *Laboratory Aids in the Diagnosis and Control of Eclampsia*—H. A. Stephenson, M. D., 516 Sutter Street, San Francisco.

Eclampsia defined. The true nature of the disease is not definitely known. Clinical symptoms of the condition. Clinical findings in the disease. Known pathology. Difficulty in differential diagnosis. Brief mention of various procedures used in attempts at diagnosis. The relative value of these procedures. Treatment of eclampsia. Conclusions.

Discussion to be opened by H. M. Ross, M. D., 523 West Sixth Street, Los Angeles.

4. *Recurrent Toxemia*—Hans von Geldern, M. D., 516 Sutter Street, San Francisco.

This paper is a consideration of all of the clinic patients entering the Lane Hospital and out-patient women's clinic with a diagnosis of toxemia of pregnancy, with special reference to previous and subsequent pregnancies. Those cases with histories of recurrences are especially dealt with to bring out the serious nature of recurrences.

Discussion to be opened by F. C. Ainley, M. D., 1136 West Sixth Street, Los Angeles.

5. *The Conservative Treatment of Eclampsia*—Margaret Schulze, M. D., University of California Hospital, San Francisco.

Etiology of eclampsia as yet unknown. Old idea that immediate delivery is essential. Question whether in some cases trauma of operative delivery is not the immediate cause of death. Remarkable results of Stronganoff with his method of profound narcosis. Rotunda elimination treatment. Venesection method of Lichtenstein. Outline of treatment employed at University of California and discussions of results.

Discussion opened by E. N. Ewer, M. D., 251 Moss Avenue, Oakland.

6. *The Role of Cesarean Section in the Treatment of Eclampsia*—J. C. Irwin, M. D., Union Bank Building, Los Angeles.

Discussion opened by R. K. Smith, M. D., 391 Sutter Street, San Francisco.

SECOND MEETING

Pillsbury Pavilion, Lodge, Tuesday, May 19, 2 p. m.

Joint Meeting With Pediatricians Symposium on Birth Injuries

1. *Cranial and Intra-Cranial Injuries in the New-Born From the Standpoint of the Obstetrician*—F. M. Loomis, M. D., 350 Twenty-ninth Street, Oakland.
2. *Symptoms and Diagnosis in Infants—Clinical Significance in Later Years*—Ralph H. Kuhns, M. D., 135 Stockton Street, San Francisco.
3. *Surgical Management*—H. C. Naffziger, M. D., 380 Post Street, San Francisco.
4. *Mongolism in Twins*—Henry Dietrich, M. D., 1136 West Sixth Street, Los Angeles.

THIRD MEETING

Pillsbury Pavilion, Lodge, Thursday, May 21, 2 p. m.

1. Election of Section Officers and Transaction of Other Section Business.

Symposium on Pelvic Relaxation and Prolapse

2. *Some Points in the Anatomy and Mechanics of the Pelvic Floor*—A. W. Meyer, M. D., Stanford University.

An evaluation of the role played in pelvic support by some of the constituents of the pelvic and urogenital diaphragms, with special reference to views in current textbooks and periodical literature.

Discussion opened by C. H. Weaver, M. D., 2007 Orange Street, Los Angeles.

3. *Predisposing Factors in Pelvic Relaxation and Pro-*

lapse—John Vruwink, M. D., 523 West Sixth Street, Los Angeles.

The etiology of pelvic relaxation depends, to a large extent, upon constitutional inferiority or debility. Births, however, give rise to enlargement of the genital hiatus, subinvolution, hyperextension of the ligaments and prolapse. Birth trauma depends upon various factors, but is more frequent after certain forms of delivery. Adequate ante-partum and post-partum care are prophylactic measures for prolapse.

4. *Benign Lesions of the Cervix in Association With Pelvic Relaxation and Prolapse*—Michael Creamer, M. D., 520 West Seventh Street, Los Angeles.

Discussion opened by A. V. Pettit, M. D., 1499 Sutter Street, San Francisco.

5. *The Problem of Partial Prolapse With Cystocele and Rectocele in Young Women*—Frank Lynch, M. D., University of California Hospital, San Francisco.

Discussion opened by W. Clifford McKee, M. D., 1136 West Sixth Street, Los Angeles.

6. *The Treatment of Procidentia*—Alfred B. Spalding, M. D., Lane Hospital, San Francisco.

The study of the proper treatment for pelvic prolapse has been made from a review of the histories of some 400 patients in the Women's Clinic of Stanford University. This group includes various degrees of cystocele, rectocele, and uterine prolapse. With lantern slides, it will be attempted to demonstrate the method used at Stanford for the past eight years. This consists of dissecting the pelvic fascia and overlapping the same according to the Neel-Rawls' technique for cystocele; the removal of the uterus in all cases of prolapse and the cone amputation of the cervix with Watkins Wertheim interposition operation on patients without prolapse; the wide dissection of the posterior vaginal wall and the elevation of the rectum according to the method described by the author three years ago for rectocele. Special effort will be made to describe the method used for the control of hemorrhage in vaginal hysterectomy. Finally, some comments on the various methods used for restoring pelvic floor relaxation. In general, the results have been good. There have been the fewest returns of pelvic prolapse and cystocele. The chief difficulty with pelvic prolapse has been found with the posterior segment. The former difficulties of post-operative hemorrhage have been practically eliminated by the present technique.

Discussion opened by J. A. Sperry, 275 Post Street, San Francisco.

PATHOLOGY AND BACTERIOLOGY SECTION

NEWTON EVANS, M. D., Chairman,
Loma Linda.

ROY W. HAMMACK, M. D., Secretary,
523 West Sixth Street, Los Angeles.

FIRST MEETING

Sentinel Lobby, Village, Monday, May 18, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. *Mitotic Figures in Malignant Tumors as Affected by Time Before Fixation of Tissues*—Newton Evans, M. D., College of Medical Evangelists, Loma Linda.
3. *Rupture of the Heart Wall—Five Examples*—F. R. Nuzum, M. D., Santa Barbara Cottage Hospital, Santa Barbara; H. J. Hagen, M. D., Santa Barbara Cottage Hospital, Santa Barbara.
4. *The Pathology of Plague*—George D. Maner, M. D., 1100 Mission Road, Los Angeles; Lawrence Parsons, M. D., 1100 Mission Road, Los Angeles.
5. *Giant Cell Tumors Unconnected With Bone*—Lenore Campbell, M. D., College of Medical Evangelists, Loma Linda.

SECOND MEETING

Sentinel Lobby, Village, Tuesday, May 19, 8 p. m.

1. *The Effects of Insulin Treatment on Experimental Diabetes of Dogs*—E. F. F. Copp, M. D., Scripps Metabolic Clinic, La Jolla.
2. *Should the Schick Test be Abandoned?*—W. H. Kellogg, M. D., State Hygienic Laboratory, Berkeley.
3. *Observations on the Tuberculin Reaction*—A. M. Moody, M. D., St. Francis Hospital, San Francisco.
4. *Infectious Mononucleosis, With Report of Five Cases*—Hersel Butka, M. D., White Memorial Hospital, Los Angeles.
5. *A Statistical Study of 13,000 Wassermann Examinations Among Railway Employees*—W. T. Cummins, M. D., Southern Pacific Hospital, San Francisco.

THIRD MEETING

Sentinel Lobby, Thursday, May 21, 2 p. m.

1. Election of Section Officers and Transaction of Other Section Business.
2. *Syringomyelia and Syringobulbia*—Charles E. Nixon, M. D., 870 Market Street, San Francisco.
3. *Epithelioma of Uterus in a Rabbit*—Norman N. Epstein, M. D., University of California Hospital, San Francisco.
4. *Osteosclerotic Anemia*—W. L. Miles, M. D., University of California Hospital, San Francisco.
5. *Osteosclerotic Pseudoleukaemia*—Glanville Y. Rusk, M. D., University of California Hospital, San Francisco.

PEDIATRICS SECTION

ROBERT E. RAMSAY, M. D., Chairman,
959 East Colorado Street, Pasadena.

C. D. SWEET, M. D., Secretary,
242 Moss Avenue, Oakland.

FIRST MEETING

Pillsbury Pavilion, Lodge, Monday, May 18, 8 p. m.

1. Chairman's Address: *Social Aspects of the Free Dispensary*—Robert E. Ramsey, M. D., 959 East Colorado Street, Pasadena.

The free dispensary exists to give medical attention to deserving poor people. Many who are not poor take advantage of the situation. This is an outrage both to the givers of money and to the physicians who give their services. A study is made of patients seeking admission to a dispensary for children. Standards for admission are suggested. The necessity for social investigation is indicated. Justice to donors and physicians requires that social investigation of all applicants be made. The deserving poor do not object to visits which confirm their statements. The undeserving are discovered and excluded.

Secretary's Report.

2. *Allergy in Childhood—Its Manifestations and Recognition*—George Piness, M. D., 1136 West Sixth Street, Los Angeles.
3. *Allergy in Childhood—Its Treatment*—Albert H. Rowe, M. D., 242 Moss Avenue, Oakland.
4. *Antrum Disease in Childhood—Its Recognition and Treatment—Report of Cases*—F. M. Shook, M. D., 1904 Franklin Street, Oakland.

SECOND MEETING

Pillsbury Pavilion, Lodge, Tuesday, May 19, 2 p. m.

Joint Meeting With Obstetricians Symposium on Birth Injuries

1. *Cranial and Intra-Cranial Injuries in the New-Born From the Standpoint of the Obstetrician*—F. M. Loomis, M. D., 350 Twenty-ninth Street, Oakland.
2. *Symptoms and Diagnosis in Infants—Clinical Signifi-*

cance in Later Years—Ralph H. Kuhns, M. D., 135 Stockton Street, San Francisco.

3. *Surgical Management*—H. C. Naffziger, M. D., 380 Post Street, San Francisco.
4. *Mongolism in Twins*—Henry Dietrich, M. D., 1136 West Sixth Street, Los Angeles.

THIRD MEETING

Pillsbury Pavilion, Lodge, Wednesday, May 20, 2 p. m.

1. Election of Section Officers and Transaction of Other Section Business.
2. *The Importance of the Teaching of Nutrition in the Public Schools*—William M. Happ, M. D., 523 West Sixth Street, Los Angeles.

The prevalence of undernutrition in children of school age is well known, and the children of Los Angeles show no exception to the rule. A survey of a number of representative schools shows that over 15 per cent of the children in this city are more than 10 per cent underweight for their height and age. A much larger percentage are undernourished, who are not greatly underweight. Nutrition classes have been organized for the most markedly undernourished children in over 100 schools. In these classes, which meet daily, the children are taught the principles of proper diet, rest, health habits, etc. The results are very satisfactory, as improvement in nutrition is the rule. We feel that the school is the ideal place to teach nutrition to the children, the reasons for which, and the methods of organization of the work, are outlined in the paper.

3. *The Health Department—Its Relation to Child Welfare*—John J. Sippy, M. D., 129 South American Street, Stockton.
4. *The Significance and Treatment of Growth Deviations in Childhood*—C. L. Lowman, M. D., 2417 South Hope Street, Los Angeles.

The main points covered will be: Disturbed body posture, especially significant of antero-posterior deviations in relation to fatigue and disturbance of chest and abdominal functions; growth handicaps due to nerve loss from muscular overwork; significance of foot and leg deviations; relation to nervous states and future disability, especially in relation to back strain.

5. *Tuberculous Infection and Disease in Infancy and Childhood*—William Palmer Lucas, M. D., University of California Hospital, San Francisco.

RADIOLOGY SECTION

(Including Roentgenology and Radium Therapy)

RAY G. TAYLOR, M. D., Chairman,
302 South St. Andrews Place, Los Angeles.

ROBERT NEWELL, M. D., Secretary,
Lane Hospital, San Francisco.

FIRST MEETING

Sentinel Lobby, Village, Monday, May 18, 8 p. m.

1. Chairman's Address and Secretary's Report.
2. *X-ray and Radium Treatment of Uterine Tumors*—Frederick H. Rodenbaugh, M. D., 516 Sutter Street, San Francisco.

Classification of cases suitable for treatment. Technique and selection of suitable agent. End-results of radiation therapy on the uterus and adnexia. Economic values. Comparison with surgical and other methods of treatment.

Discussion opened by Frank W. Lynch, M. D., University of California Hospital, San Francisco; A. B. Spalding, M. D., Lane Hospital, San Francisco.

3. *General Consideration of the Treatment of Superficial Malignancies by Means of Radium and the X-ray*—Albert Soiland, M. D., 1407 South Hope Street, Los Angeles; William E. Costolow, M. D., 1407 South Hope Street, Los Angeles.

General remarks on technique. Comparison of the radiation treatment with methods of treatment used prior to the general acceptance of the radiation treatment.

4. *Treatment of Breast Cancer*—Rex Duncan, M. D., 1151 West Sixth Street, Los Angeles.

Brief discussion of the various methods with sta-

tistics. X-ray as an adjunct to surgery. Microscopical studies of the effect of x-ray in breast cancer. Clinical observations in fifty cases treated by combined radiation and surgery.

SECOND MEETING

Sentinel Lobby, Village, Tuesday, May 19, 2 p. m.

1. *X-ray Diagnosis of Inflammatory Conditions of the Thorax*—Lloyd Bryan, M. D., 135 Stockton Street, San Francisco.

Uses and limitations of the roentgen ray differentiating between (a) tuberculosis; (b) tumors; (c) inflammatory lesions. The value of lipiodol in (a) bronchiectasis; (b) abscess; (c) tumors. Lantern slide demonstration of typical lesions.

2. *The Necessity for the Close Co-operation of the Roentgenologist and the Clinician in the Diagnosis of Lung Pathology*—W. R. P. Clark, M. D., 516 Sutter Street, San Francisco.

Introductory remarks. X-ray diagnosis, clinical aspects and demonstration of cases.

3. *Technique of the X-ray Examination of Patients With Digestive Disorders—A Plea for Standardization With Reason Why*—M. P. Burnham, M. D., St. Francis Hospital; J. R. O'Neill, M. D., St. Francis Hospital, San Francisco.

History of development of examination. Statement of uses and value of fluoroscope and films, separately and combined. Routine to be followed and technique. Question of expenses. Danger of taking short-cuts. Importance of personal observation at operations of patients examined. Value of procedure both as to gastro-intestinal tract and biliary and pancreatic systems.

4. *Chronic Appendicitis*—Henry Snure, M. D., 1501 South Figueroa Street, Los Angeles. What is meant by the term "chronic appendicitis." Brief review of roentgen ray findings compared to x-ray findings. Value of various signs and technique. Case reports of clinical cases of chronic appendicitis shown by roentgen ray examination to be due to other conditions.

THIRD MEETING

Sentinel Lobby, Village, Wednesday, May 20, 2 p. m.

1. Election of Section Officers and Transaction of Other Section Business.
2. *Congenital Anomalies of Bones From Roentgen Standpoint*—W. B. Bowman, M. D., Brockman Building, Los Angeles.

Congenital anomalies are a common cause of incorrect diagnosis of bone injuries, often being mistaken for fractures. Thorough knowledge of the various anomalies and supernumerary bones is essential in correctly interpreting roentgenograms. Differentiation between anomalies and bone injuries is an important factor, particularly in industrial work.

3. *Congenital Anomaly of the Rib Cage*—H. J. Ullmann, M. D., Cottage Hospital, Santa Barbara.

Case presenting cervical ribs, no twelfth ribs, but normal number of vertebrae.

TECHNICAL SPECIALTIES SECTION

RAY LYMAN WILBUR, M. D., Chairman,
Stanford University, Palo Alto.

JOHN C. WILSON, M. D., Secretary,
1136 West Sixth Street, Los Angeles.

MEETING

Pillsbury Studio, Village, Tuesday, May 19, 8 p. m.

1. Election of Section Officers and Transaction of Other Section Business.

California Association of Physiotherapists

MISS SUSAN ROEN, President,
2422 Palm Drive, Los Angeles.

MRS. ALINE BRUMMELKAMP, Secretary,
507 Central Building, Pasadena.

Joint Meeting of Technical Specialties Section With California Association of Physiotherapists

1. President's Address and Secretary's Report.
2. *Physiotherapy in Conjunction With Glandular Ther-*

apy—Hans Lisser, M. D., 380 Post Street, San Francisco.

Discussion opened by William J. Kerr, M. D., University of California Hospital, San Francisco.

3. *Progressive Physiotherapy Treatment in Knee-joint Injuries*—Alfred Roncovieri, M. D., 870 Market Street, San Francisco.

Discussion opened by James T. Watkins, M. D., 909 Hyde Street, San Francisco; S. N. Jacobs, M. D., 209 Post Street, San Francisco.

4. *The Asthenic Child*—William P. Lucas, M. D., University of California Hospital, San Francisco.

Discussion opened by Florence Holsclaw, M. D., 380 Post Street, San Francisco.

5. *The Abuses of Physiotherapy in Industrial Accident Work*—W. C. Adams, M. D., 1904 Franklin Street, Oakland.

Discussion opened by E. I. Bartlett, M. D., 240 Stockton Street, San Francisco; E. W. Cleary, M. D., 177 Post Street, San Francisco.

6. Business Meeting.

California Association of Medical Social Workers

MISS EDNA J. SHIRPSER, President,
Children's Hospital, San Francisco.

MRS. SOPHIE H. MERSING, Secretary.
Mt. Zion Hospital, San Francisco.

MEETING

Pillsbury Studio, Village, Wednesday, May 20, 8 p. m.

1. President's Address and Secretary's Report.
2. *Problems and Progress in the Care of Drug Addicts*—Louise B. Deal, M. D., 69 Fair Oaks Street, San Francisco.

1. Formation of the Anti-Narcotic Section of the City and County Federation of Women's Clubs. 2. Appointment of the committee. 3. Drawing up of the program. 4. Educational campaign. 5. Drug addiction as a disease; (a) mechanism; (b) symptoms; (c) drug addict personally. 6. Drug addiction as regarded by the laity. 7. The accidental or innocent addiction—disease sufferers. 8. What can the physician offer? Three things—futility of all. 9. Saylor-Crowley bill No. 272. Creation of hospital for addicts.

Discussion opened by Eva C. Reid, M. D., 909 Hyde Street, San Francisco.

3. *Medical Social Service in Industry*—Margaret Paisley, Standard Oil Company, Richmond.

Discussion opened by Margaret T. Kyne, Market Street Railway, San Francisco.

4. *Principles Governing Free Medical and Hospital Service*—N. N. Wood, M. D., 1100 Mission Road, Los Angeles.

Discussion opened by Alfred C. Reed, M. D., 380 Post Street, San Francisco.

5. *Social Diagnosis*—Open discussion led by Miss N. Florence Cummings, Stanford Clinic, San Francisco.

6. *Medical Social Workers' Place in Improving Conditions of Mentally Diseased Patients*—Edward W. Twitchell, M. D., 909 Hyde Street, San Francisco.

Discussion opened by Joseph Catton, M. D., 209 Post Street, San Francisco.

7. Business Meeting.

UROLOGY SECTION

FRANK S. DILLINGHAM, M. D., Chairman,
Merchants National Bank Building, Los Angeles.

MILEY B. WESSON, M. D., Secretary,
Flood Building, San Francisco.

FIRST MEETING

Antler's Club, Village, Monday, May 18, 8 p. m.

1. Chairman's Address: *Unusual Urological Lesions*—Frank S. Dillingham, M. D., Merchants National Bank Building, Los Angeles.

Brief reports of three cases of fracture of the penis, one of priapism, one of anaphylaxis, and four

of toxins from ascarides and oxyuris causing hematuria and albuminuria.

Discussion opened by Victor G. Vecki, M. D., 516 Sutter Street, San Francisco.

2. *Some Observations on Tuberculosis of the Kidney, With a Report of Interesting and Unusual Cases*—William E. Stevens, M. D., Flood Building, San Francisco.

Difficulties in diagnosis in the absence of tubercle bacilli in the urine or in the presence of tubercle bacilli and the absence of all clinical symptoms; roentgen ray diagnosis; the differential diagnosis of renal calculi and tuberculosis; putty kidney; renal tuberculosis in children; tuberculosis of the kidney during pregnancy; treatment in the presence of bilateral involvement; prognosis under surgical and non-surgical treatment.

Discussion opened by Nathan G. Hale, M. D., Capital National Bank Building, Sacramento.

3. *Some Experiences in Kidney Surgery*—H. A. Rosenkranz, M. D., W. P. Story Building, Los Angeles.

The incision of choice; intensive use of tonics in pre and post-operative treatment; the six-day pedicle clamp; prevention of fistula following nephrectomy of tuberculous kidney; avoidance of the five principal errors in technic; when removing a calculus, the severing of aberrant vessels that are probably responsible for stasis which causes infection that results in calculi; role of the teeth in kidney pathology; drainage and antisepsis of incision. Diagnosis of rarer conditions. A peculiar masked case of chronic multiple miliary abscesses surrounding pelvis requiring nephrectomy.

Discussion opened by G. W. Hartman, 999 Sutter Street, San Francisco.

4. *Bilateral Nephrolithiasis*—A. J. Scholl, M. D., Pacific Mutual Building, Los Angeles.

Conditions which determine the side to be first treated surgically; nephrectomy and later resection of one-half of remaining kidney; studies of urea retention directly after operation, during pregnancy, and two years after operation.

Discussion opened by Louis C. Jacobs, M. D., 870 Market Street, San Francisco.

5. *Treatment of Uncomplicated Acute Gonorrhea in the Female*—Harry W. Martin, M. D., Detwiler Building, Los Angeles.

Interpretation of title; former treatments unsatisfactory, as shown by large numbers of salpingectomies; douches, tampons, suppositories, vaginal painting, sprays; vaginal and urethral instillations of acriflavine and argyrol.

Discussion opened by Victor G. Vecki, M. D., 516 Sutter Street, San Francisco.

6. *Radiographic Diagnosis of Kidney Tumors*—L. R. Reynolds, M. D., 291 Geary Street, San Francisco.

Lantern slide demonstration of pyelograms and of the pathological specimens.

Discussion opened by Frank Hinman, M. D., 380 Post Street, San Francisco.

7. *The Mechanical Factors Involved in the Production of the Symptoms of Movable Kidney*—Charles P. Mathe, M. D., Phelan Building, San Francisco.

Occurrence of movable kidney; etiology, congenital predisposition, erect posture, peculiar body form, laxness and peculiar formation of renal fasciae, trauma; pathology; complications; symptomatology; diagnosis; treatment, non-operative and operative; results.

Discussion opened by P. A. Ferrier, M. D., Citizens Savings Bank Building, Pasadena.

SECOND MEETING

Antler's Club, Village, Tuesday, May 19, 2 p. m.

1. *Rupture of the Urethra—Value of an Early Diagnosis*—Louis C. Jacobs, M. D., Flood Building, San Francisco.

Frequency of occurrence; classifications; extravasated urine resulting from trauma and an infected urethra associated with stricture. Report of two

cases; etiology; pathology; symptomatology; and treatment.

Discussion opened by A. J. Scholl, M. D., Pacific Mutual Building, Los Angeles.

2. *Operative Treatment of Rupture of the Male Urethra*—Franklin Farman, M. D., 1501 South Grand Avenue, Los Angeles.

Report of two cases of extravasation of urine following rupture of the posterior male urethra. Discussion of the immediate methods of handling such cases, prognosis and course. Description of technic and results obtained in secondary plastic repair of extensive urethral perineal fistula.

Discussion opened by A. J. Scholl, M. D., Pacific Mutual Building, Los Angeles.

3. *Effects of Prostatic Obstruction Produced Experimentally*—James R. Dillon, M. D., 516 Sutter Street, San Francisco.

Study of the pathological changes produced in the prostate, bladder, and kidneys; blood urea estimates at different periods; description of technic; conclusions. (Lantern Slides.)

Discussion opened by R. L. Rigdon, M. D., 291 Geary Street, San Francisco; E. W. Beach, M. D., Plaza Building, Sacramento.

4. *Results Obtained by Modification of Young's Perineal Prostatectomy*—Frank Hinman, M. D., 380 Post Street, San Francisco.

Description of modification: reasons for changes: (1) to secure better preservation of the external sphincter and (2) to insure more thorough and complete enucleation. Detailed comparison of 100 cases with results previously reported as having been obtained by the classical method. (Lantern Slides.)

Discussion opened by R. L. Rigdon, M. D., 291 Geary Street, San Francisco; E. W. Beach, M. D., Plaza Building, Sacramento.

5. *Suprapubic Prostatectomy*—Verne C. Hunt, M. D., Mayo Clinic, Rochester, Minnesota.

A discussion of indications for prostatectomy and conditions under which the graded operation is the one of choice; advantages of the one-stage operation; factors of safety and ultimate results.

Discussion opened by R. L. Rigdon, M. D., 291 Geary Street, San Francisco; E. W. Beach, M. D., Plaza Building, Sacramento.

6. *Complications Following Prostatectomy*—J. C. Negley, M. D., Haas Building, Los Angeles.

Immediate complications, hemorrhage, shock, acute dilatation of the heart, pneumonia, uremia, pyelitis, residual urine, incomplete enucleation, calculi, persistent sinus, dribbling, contracture of bladder neck.

Discussion opened by R. L. Rigdon, M. D., 291 Geary Street, San Francisco; E. W. Beach, M. D., Plaza Building, Sacramento.

THIRD MEETING

Antler's Club, Village, Wednesday, May 20, 2 p. m.

1. Election of Section Officers and Transaction of Other Section Business.
2. *Surgical Drainage of Prostatic Abscess*—Nathan G. Hale, M. D., Capital National Bank Building, Sacramento.

Various methods used in treatment in the past; foci of infection; symptoms; indications for operation; technic of operation; results with reference to symptoms; rectal findings, endoscopic examination and microscopical appearance of prostatic secretion. (Lantern Slides.)

Discussion opened by Franklin Farman, M. D., 1500 South Grand Avenue, Los Angeles.

3. *A Technic for the Treatment of Urethral Caruncle*—Paul A. Ferrier, M. D., Citizens Bank Building, Pasadena.

Frequency of urethral caruncle; importance as a cause of nervous symptoms; etiology; pathology; common methods of treatment and their unfavorable

results; technic of a modification of Crenshaw's method; advantages; results. Demonstration of instruments.

Discussion opened by William E. Stevens, M. D., Flood Building, San Francisco.

4. *Chyluria*—A. A. Kutzmann, M. D., University of California Hospital, San Francisco.

Brief resume of the literature; etiology; pathology; clinical picture; diagnosis and treatment. Report of a case.

Discussion opened by J. C. Negley, M. D., Haas Building, Los Angeles.

5. *Urinary Tract Involvement of Poliomyelitis*—Henry A. R. Kreutzmann, M. D., 1195 Bush Street, San Francisco.

A discussion of nerve lesions of the bladder in general; a resume of the various theories of micturition; report of a case of infantile paralysis involving the bladder.

Discussion opened by C. P. Mathe, M. D., Phelan Building, San Francisco.

6. *Autonephrectomy—Report of Animal Experimentation in an Effort to Produce Enclosed Renal Lesions*—L. P. Player, M. D., 380 Post Street, San Francisco; F. H. Redewill, M. D., University of California Hospital, San Francisco.

Review of literature. Rabbit experimentation to determine production of enclosed renal lesions with tubercle bacilli, etc., through blood and lymph channels and by direct extension along the ureters; report of an unusual case of walled-off cortical and medullary parenchyma with patent ureter and pelvis of kidney. (Lantern Slides.)

Discussion opened by James R. Dillon, M. D., 516 Sutter Street, San Francisco.

7. *A Safe and Accurate Method of Removing Small Obstructions at the Vesical Orifice Under Observation With the High Frequency Electrode*—Martin Molony, M. D., 1056 Sutter Street, San Francisco.

This method requires accuracy of diagnosis and permits the removal of the exact tissue desired. It is simple, accurate, effective, and devoid of danger.

Discussion opened by Henry A. R. Kreutzmann, M. D., 1195 Bush Street, San Francisco.

ANNUAL MEETING OF THE WESTERN BRANCH OF THE AMERICAN UROLOGICAL ASSOCIATION

CHARLES P. MATHE, M. D., President,
Phelan Building, San Francisco.

GEORGE W. HARTMAN, M. D., Secretary,
999 Sutter Street, San Francisco.

Antler's Club, Village, Wednesday, May 20, 8 p. m.

1. *Carcinoma of Urachus—Report of Case and Review of Literature*—H. W. Howard, M. D., Portland, Oregon.
2. *The Treatment of the Ureter in the Surgery of Tumors of the Bladder*—Verne C. Hunt, M. D., Mayo Clinic, Rochester, Minnesota.

A discussion of the relation of tumors of the bladder and the ureters. The ultimate results in the ureter and kidney of the various methods of treating the ureter. Indications for choice of the several procedures and comparison of the relative value of such procedures based on ultimate results.

3. *The Bloodless Removal of Stones from the Ureter*—Charles S. Vivian, Phoenix, Arizona.

Consideration of the formation of stones in the ureter. Consideration of the methods employed for removal; consideration of stones which may be expected to be expelled spontaneously; those which require bloodless methods and those which require surgical removal. Presentation of slides illustrating various conditions. Summary and conclusion.

4. Election of Officers and Business Meeting.

Utah State Medical Association

SOL G. KAHN, Salt Lake City.....President
WILLIAM L. RICH, M. D., Salt Lake.....Secretary
J. U. GIESY, Kearns Building, Salt Lake City,
Associate Editor for Utah

BOVINE MEANS BULL

In their action on the Hammond amendment, the present legislature has given the *coup d'grace* to one of the cults in Utah, namely, the Abramsites. From current press accounts of the final few moments preceding the vote, they would appear to have been as full of humor as the Abrams method of diagnosis itself. This would indicate that the house enjoyed a sort of three-ring circus, before voting against the further untrammelled freedom of the bovinites.

Speaking of bovine, we are filled with speculation. There was Jenner, and we know what he did with the dairy maids of England and the cow-pox vesicles and pustules on the patient English milk cows' teats. Big pox and small pox. Is it possible that while the cows were inoculating the dairy girls with the latter, the maids may by any chance have returned the compliment with what in Jenner's day and before was known as the French disease? Can this be the source of "bovine syphilis"? We don't know. Like Tutankamen, the thing is buried in the past, and we never knowingly saw a syphilitic cow in our life.

Yet there is that word "bovine." *De mortuis nil nisi bonum*. And yet we wonder if by any chance Abrams may himself have been a humorist—if perchance he may have realized at times how closely "bovine" and "bull" are related. In the words of Hashimuro Togo, "it is to ask."

OUR OWN DOORSTEP

Damage suits against doctors, like any other phenomena of life, taken individually or collectively, have a cause. And in this age, when the bringing of such suits has come to be so largely a favorite variety of indoor sport with a certain class of both patient and attorney, it behooves the medical world to take stock of itself, in order to learn if perhaps something of that cause may not be found within its own ranks. As a matter of fact, it is within the ranks of the profession that such cause often really lies. The fault which so oftentimes acts as an inciting spark to the explosion of such a suit against one of our own number too often lies on our own doorstep as a particularly obnoxious sort of dirt. And the reason why this is true, is a reason as old as human nature itself.

It is so easy to criticize. Criticizing is almost as easy as making mistakes. Yet criticism should be justly deserved before it is voiced. And to criticize justly one should be in possession of all major as well as all contributing facts. Here lies the rub. How many medical men, before expressing an opin-

ion as to the work of some colleague, take time to fully investigate? I don't know the answer. Anyone who does may speak. Judging by results, however, the percentage is not large. Were it larger, there would be a dwindling number of suits.

I honestly believe that the average physician does always the best he may for his patient. Only a fool would not. Yet aside from that fact as applying to the doctor's individual prestige, I honestly believe that the average doctor is inspired for and toward his patient's welfare. And what cachet have I to say he is not? We who practice the medical art know how much may contribute to a failure or result, aside from the doctor's own work or advice—things the patient fails to either confess or take into consideration when suit is brought. But certainly all of us should take such things into consideration before we criticize another man's result. Ignorance may to a degree excuse the patient, but surely—surely, ignorance of such things can be no excuse for us, because such ignorance is not ours.

Recently it has been my pleasure to land such a suit in the ash-can, so to speak. The attending physician did his work cleanly, correctly, and the work was undone by a "visiting" nurse employed by an industrial concern who undertook to do her stuff. The industrial physician was stated by the patient to have said the medical man's work had been wrong. Yet the industrial physician made a mistake. The case was an instance of allergy, pure and simple, manifested through an application made to the patient's body by the nurse. Yet suit was quite possible in this instance. And suits hurt any of us, even though a decision favorable to us is the result.

Recently, too, it was my pleasure to refuse to testify in a case being brought. Here, after investigation, I informed the attorney for the plaintiff that my testimony would be inimical to his client's interests. The final judicial decision supported this contention. The plaintiff lost.

These instances are cited merely to point the moral of sweeping our own doorstep first. It's the old story of casting stones. So many of us, if we look into our own past, will find that we equally dwell in houses of glass. It's so easy to see the mote in the eye of our neighbor, but—haven't we maybe a flag pole or two in our own optics? The chances are that we have. Somebody with a sense of humor and a trace of philosophy in his make-up recently remarked that the Christian nations would thrive better when they began to practice Christianity. Something of the same thing applies to us. Why criticize one another? Why cast slurs or aspersions on another's work? And especially why do it to a layman, who will misunderstand and broadcast his misunderstanding far and wide to the injury not only of the one whom we have decried to him, but of our profession at large? Why in the name of common sense, common decency, commercial advantage, justice, fairness, even self-defense, cast stigmata—unless provenly deserved—upon any member of the profession which we have made ours?

Utah Notes (reported by J. U. Giesy, associate editor)
—As a result of recent elections in the component socie-

ties, the following members are now officers of those societies as follows:

Box Elder County—Richard A. Pearce, president; W. LeRoy Smith, secretary-treasurer.

Cache Valley County—Eugene Worley, president; G. L. Rees, secretary-treasurer.

Carbon County—R. E. Dowd, president; J. M. Simpkin, secretary-treasurer.

Uintah County—M. Garrett O'Donnell, president; Homer E. Rich, secretary.

Utah County—J. W. Hagen, president; Arnold Robinson, secretary.

Salt Lake County—John Z. Brown, president; M. M. Critchlow secretary.

Weber County—E. M. Conroy president; R. L. Draper, secretary-treasurer.

The following speakers have accepted the invitation of the state association to the annual meeting:

Dr. Carla Hamman, Surgery, Cleveland; Dr. Ernest Sachs, Neurological Surgery, St. Louis; Dr. W. F. Braasch, Genito-Urinary Diseases, Rochester, Minn.; Dr. Carman, X-ray, Rochester, Minn.; Dr. Eusterman, Internal Medicine, Rochester, Minn.; Dr. Martin Engman, Dermatology, St. Louis; Dr. W. C. Alvarez, Internal Medicine, San Francisco; Dr. G. D. Stewart, Surgery, New York City.

This is an indication of what the program will be and what those who attend the state meeting may expect to receive. The committee on program are to be congratulated on having secured such an exceptionally desirable list of speakers. Let every member who possibly can begin now to so lay his plans that he may attend.

Senate Bill No. 9, after a somewhat uncertain gestation in the course of which it at one time seemingly died, only to be later revived, finally became a stillborn product of legislative conception in the closing hours of the legislature. The enacting clause was stricken in the house. For this the general public, whether aware of the fact at present or not, should give the lower body of the legislature their sincere thanks. Bill No. 9 was the pet measure of the chiro, which would have enabled them to treat industrial accident cases, under Commission control. While medically speaking, the enactment of such a measure would perhaps have resulted in no more than a demonstration of the effects such methods of treatment applied to traumatic injuries might be expected to produce, yet one wonders just what those results might have proved in the case of a traumatic spine, for example, as affecting the individual case. Viewed in that light, it is unlikely that the fate of Senate Bill No. 9 will cause any member of the medical profession to weep.

Salt Lake County Medical Society (reported by L. J. St. Paul, acting secretary)—The meeting held February 23 was called to order by President John Z. Brown. Members present, twenty-two; visitors, two.

W. R. Calderwood read a paper on "Causes and Methods of Prevention of Apoplexy." His data were taken from his own practice, in connection with insurance records to which he has access. He emphasized the importance of toxemia in the G. I. tract, and of stimulants, such as alcohol, coffee, and tea, as important causes.

T. F. H. Morton read a paper on the "Treatment of Climacteric Symptoms." He emphasized the importance of surgical removal of all foci of infection in the region of the cervix peritoneum and pelvic cavities, as well as glandular therapy. These papers were discussed by T. C. Gibson, Sol G. Kahn, and G. H. Pace.

The application of C. H. Hobbs was read and referred to the board of censors. Sol G. Kahn, chairman of the Committee on Public Health and Legislation, reported on the activities of the state legislature to date, so far as that related to the profession.

The regular meeting of March 9 (reported by M. M. Critchlow, secretary) was called to order by President John Z. Brown, forty-five members and one visitor being present.

The scientific program was arranged by the Ophthal-

mological Society. F. Leaver Stauffer read a paper on "Paranasal Sinus Disease in Children." He emphasized the frequency of this condition, discussed the etiological factors, anatomy of the sinus, symptoms, complications, diagnosis, and treatments. E. M. Neher read an instructive paper on "Ocular Headaches and Their Diagnosis," and described the anatomy and physiology of the eye and fifth cranial nerve. He discussed the differential diagnosis of headaches and described the treatment. W. D. Donohoe presented the subject of "General Practitioner and Specialist." He emphasized the harm that may be done to a patient by improper operations about the eye, ear, nose and throat, and discussed the proper method of moving foreign bodies from the cornea and the necessity of accurate diagnosis for eye conditions before treatment is adopted. He deprecated the fact that much unnecessary surgery of the nose and throat is done, and described what should be the limitations of the dentist's field. He stressed the clean and complete removal of tonsils only when such an operation is indicated. These papers were discussed by L. W. Snow and A. L. Brown.

President Brown suggested that the society have a committee to supervise public lectures, the function of which would be to provide speakers from the society for health talks, at the request of lay institutions, to pass upon outside speakers giving public lectures of health and to supervise weekly health talks over the radio. Discussed by F. H. Raley and W. G. Schulte. M. M. Critchlow moved that a committee to supervise public lectures consisting of three members be appointed. Discussed by T. F. H. Morton. Seconded and carried.

The application for membership of C. H. Hobbs was voted upon and he was unanimously elected to membership, thirty-five members voting.

Nevada State Medical Association

W. M. EDWARDS, M. D., Mason.....President
CLAUDE E. PIERSALL, M. D., Reno.....
Secretary-Treasurer and Associate Editor for Nevada

Washoe County Medical Society (reported by Henry Albert, secretary)—The Washoe County Medical Society met in regular session in the rooms of the Chamber of Commerce March 10, President Vinton A. Muller presiding.

The minutes of the previous meetings of February 9 and February 13, 1925, were read and approved.

C. E. Piersall read a paper on "Ultra-Violet Therapy." He discussed the diseases in which actinic rays are especially helpful and the advantages of artificial light over sunlight.

Clain Fanning Gelston of San Francisco presented a paper on "Lipoidal Injections With Radiology of the Bronchial Tree in Children." The material injected is a vegetable oil, to which a certain amount of iodine has been added. Its value in localizing pathological processes and as a guide to treatment, especially surgical, was discussed. The paper was illustrated with lantern slides, and was discussed by Robinson, Morrison, Bath, and Piersall.

V. A. Muller demonstrated a stomach tube which was used at Nevada City, Calif., in September, 1856, to empty the stomach of John Wilkes Booth after he had been on a drinking spree.

The automatic syringe was rather elaborate in its construction.

On motion, the society was instructed to negotiate with Dr. J. LaRue Robinson with regards to the purchasing of the projection lantern which he had kindly permitted the society to use during the past year. Dr. Robinson thereupon announced that he presented the lantern to the society. The president thanked Dr. Robinson on behalf of the society, and instructed the secretary to take charge of the lantern.

Attendance—Members: Albert, Barrows, Bath, Caples, DaCosta, Fuller, Morrison, Muller, Richardson, Piersall, Robinson, Servoss, Stadtherr, and West.

Medical Economics and Public Health

Nationalize! Centralize! These seem to be the slogans of individuals who do not understand what the fundamental American system is, and who would like to change our system after a foreign pattern. Why, we fought the Revolution to escape a concentration of power unwisely used. Our forefathers were determined that they would make no such mistakes in America. Power was to be wisely distributed and jealously guarded.—United States Senator Overman.

As a Prominent Attorney Sees It—The prevailing multiple standard statutes put the cart before the horse. They have been framed under the high pressure of selfish, thoroughly organized, extravagantly paid lobbies of one idea and one purpose that persistently throng legislative chambers and propagate error, seeking means for their own profit through improvident legislation, substantially unopposed by any sufficiently organized rival force devoted zealously to supplying to legislators correct information upon the serious subjects involved. The ill-prepared doctor who becomes the champion of low standards is commonly engaged in trying to perpetuate his existing means of livelihood without further preparations, and, therefore, spends his money lavishly, devotes all of his time if necessary, and fights hard to win. The skilled doctor who becomes the advocate of reasonable standards is commonly working against his own interest, impelled by an earnest desire to protect the public health and to make his profession honorable, learned, and efficient. But the issue does not involve his bread-and-butter pursuit. He, therefore, presents his information, offers his advice, and departs. His adversaries stay on the job.—H. E. Kelly, Chicago.

The nurse inspects the child, no longer to find defects, but rather to find the normal, and if not normal to find out why and seek a way to attain normality.—Elnora E. Thomson, R. N. (Pacific Coast Journal of Nursing).

"Physicians, with the same justification that urged them to sponsor health safeguards, may object to health departments arrogating to themselves the field of private practice," says the Ohio Medical Journal editorially. "Health departments were established to safeguard public health and educate the public. Health departments were not established to furnish wholesale medical service to the general public, whether it be diagnostic, treatment, or after care.

"The diagnosis, treatment, and after care of patients is the duty of the private physician. Such is the field of private practice. Encroachments upon this field by health agencies is a step in the wrong direction and one which eventually will augur to the discredit of the health department through a loss of popular support of its policies.

"When the private field of medical practice is invaded by government, free medical service is rendered. There is no more reason for this than free groceries, hardware, or a thousand other material things which life demands. Recognized exceptions are, of course, proper educational health efforts and care of the indigent and public wards."

"Public opinion is today perhaps more critical of physicians than at any time in the past, not excepting Molière's day," says David Riesman (A. M. A. Bulletin). "Even some of the leaders in medicine are saying harsh things, to my mind not quite justified, of the rank and file of our profession. Our work is being scrutinized; we are held answerable in many directions.

Choice of Physicians by the Employe—The question whether the employer or the employe shall have the

right to choose the physician has no essential relation to the theory underlying the workmen's compensation acts. The expense of treatment can be equally well charged to industry and ultimately paid by the consumer, no matter who makes the choice. Presumably, the workman who has freedom of choice will procure the best medical services available, and no one has ever yet proposed that, in the exercise of his right to choose, the workman shall be debarred from choosing any medical service the employer may provide. The employer, then, who insists that the workman shall not be given freedom of choice is in the position of contending: (1) That the workman is willing to submit himself knowingly to inferior medical treatment in order to obtain the services of a physician whom he believes is not biased in favor of the employer; (2) that the workman is too stupid to choose the best service even when it is placed before him, or (3) that the service offered by the employer is not the best, but must be forced by law on the unwilling employe. As a matter of fact, to allow injured workmen to choose between the medical service offered by an employer and the medical service obtainable elsewhere should stimulate a healthy competition for excellence of service in the plant and among competing physicians, and thus result in the maintenance of the highest possible grade of professional services in the community.—W. C. Woodward, M. D. (A. M. A. Bulletin).

Physicians on Compensation Commissions—The decisions of most commissioners or deputy commissioners who are not physicians will frequently reflect their lack of medical knowledge.

To remedy this situation, the compensation commission must have one medical member. Until such time as adequate remuneration is paid by the state for such service, this may be hard to accomplish, but it should be insisted on by the various state medical societies; and when proper medical relations are established between the employer and the employe, and with the compensation commission, inadequate legislation can of a certainty be corrected.—L. H. Childs, M. D. (A. M. A. Bulletin).

Life Insurance Without Medical Examination—Because, it is said, of improvements in health of its policyholders, the Prudential Insurance Company is now considering applications, without medical examinations, for additional ordinary insurance, on the life of any policyholder up to and including 45 years of age, on whose life an ordinary policy has been issued at standard rates with full medical examination within twelve months prior to the application for new insurance. The amount may be up to \$10,000, but must not exceed the amount of the preceding policy, except where it was for only \$1000. In that event the new policy may be for \$2000. This concession also applies to policies on the lives of women.

District of Columbia Gets Disease Control Law—After five years of legislative history the venereal disease control bill for the District of Columbia was signed by the President on February 26. In spite of the fact that the bill has been on the verge of enactment at several times in the past, it did not become law until the closing days of the last session of the Sixty-eighth Congress, although every state in the Union has had some sort of a venereal disease control measure since 1921. The fact that sentiment for the Gilbert bill persisted for so long a time in the face of repeated legislative delays goes to show that the need for such a measure was keenly felt by residents of the District.

Under the provisions of the law, the chief officer of every hospital, dispensary, sanitarium, and penal institution must report to the health department cases of venereal disease as soon as they are discovered. The judges of the juvenile and criminal courts must report any persons appearing before them who are suspected of being venereally infected. Private physicians are required to make a similar report within ten days after a case has come under their control. The District law provides that these reports be kept confidential by the health officer and his agents. According to the Division of Venereal Dis-

eases of the United States Public Health Service, all of the states now have regulations requiring such reporting of cases of venereal disease.

In common with the regulations of thirty-five states, the District act provides that prostitutes, keepers of disorderly houses and persons convicted of any sexual crime are presumed to be a source of infection and are subject to examination. The health officer is required to employ for the protection of public health all such regulatory measures as may be necessary to prevent the spread of these diseases. He is also required to use every available means to ascertain the existence of venereal disease and the source of the infection. Persons against whom there is no criminal charge, but who are reasonably suspected of being infected, may be examined by the health officer upon consent of the parties. If, however, such persons withhold consent, an examination may be ordered by the court. A violation of such an order by continued refusal is punishable as contempt of court. In forty-three of the states the health officer is given express power to quarantine persons known to be infected with venereal disease. Nine of these states go even further, allowing the officer to placard the premises under certain conditions.

Twenty-nine states have laws which prohibit the advertising of preparations for the treatment of venereal diseases in lay publications, or which prevent the sale of such medicine to a lay person except on the prescription of a licensed physician. A like clause exists in the District law. Nineteen states have found it advisable to regulate the employment of the venereally diseased, and in the District of Columbia the law prohibits persons suffering from venereal disease, in a form likely to be a source of infection to others, from being employed as barbers, masseurs, cooks, bakers or other producers or handlers of food or drink, or from working in any other occupation in which the disease might endanger the public health.

Under the new law, it is compulsory upon physicians to advise their patients as to measures which they should take to prevent the spread of these diseases. They are also required to report all of the indigent cases which may come to their notice. The board of health is under obligation to take care of such cases and to see that they are given the proper treatment according to approved standards. Practically all of the states have some way of taking care of such indigent cases.

Four Recovered Lepers Discharged From National Leprosarium—The conditions under which lepers are released from this institution are exceedingly rigid. They require special observation for a period of one year, including monthly bacteriological examinations, to show that the leprosy bacillus is absent from the tissues. Certification of cure is also required from a board of three medical officers stationed at the hospital and experienced in leprosy.

The treatment at Carville includes the use of chaulmoogra oil, special preparations of mercury used intravenously, x-ray therapy, surgery of superficial areas of involvement, hydro-therapy, and the violet ray. The results of treatment have been sufficiently encouraging at this institution to induce numerous other patients, of whom there are believed to be several hundred in the United States, to agree to their transfer. A special car fitted up for the purpose, and carrying a doctor and a nurse, was used in the transfer last week of eleven patients from Florida, and seven were brought from California. There are at present 236 leper patients at Carville.

Good Advice—Do not get too deeply absorbed, to the exclusion of all outside interests. Success in life depends as much upon the man as upon the physician. You are to be members of a polite as well as of a liberal profession, and the more you see of life outside the narrow circle of your work, the better equipped you will be for the struggle.—Osler.

Medicine Before the Bench

Findings and Comments of the Courts on Acts and Omissions of Doctors

(EDITOR'S NOTE—*The law reports contain many interesting decisions, involving the reputations and fortunes of doctors. In this column in each issue a brief summary of one or more decisions and comments of the several courts of last resort upon the cases will appear. The matter will be selected by our general counsel, Hartley F. Peart, who, with Hubert T. Morrow, attorney for Southern California, will contribute from time to time.*)

In a comparatively recent decision the plaintiff, a child of 5 years of age, brought suit against a physician claiming that he had negligently diagnosed her condition and applied improper treatment. It appeared that plaintiff had sustained a fall, by reason of which a fracture to the hip resulted. The bone of the leg near the ankle-joint was also split. A few days later it developed that plaintiff was also suffering from osteomyelitis. The defendant failed to discover the fracture to the hip, but applied tight bandages and a cast on the fractured ankle. The plaintiff alleged that defendant "unskillfully placed said limb, which was then sore, swollen, tender and inflamed, in a plaster of paris cast and negligently made the same so tight as to greatly impede and stop circulation; that because of said treatment mortification set in, and a septic condition and blood poisoning resulted, extending throughout her whole body," making subsequent operations necessary to save the plaintiff's life. A verdict was rendered by the jury in favor of the plaintiff, and upon appeal therefrom the court in affirming the judgment said:

"It is the duty of a physician or surgeon to use that reasonable care and diligence ordinarily exercised by members of the profession in similar cases under like conditions, and failure so to do constitutes negligence on his part.

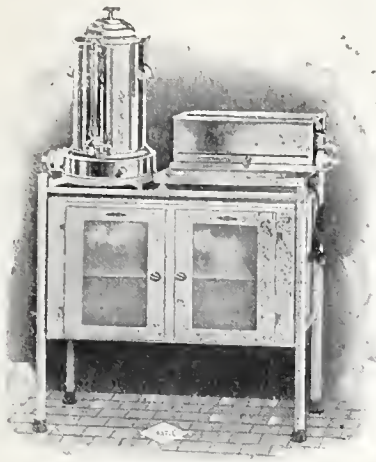
"... In other words, the implied obligation of the physician or surgeon to his patient is that no injurious consequences shall result to him from want of proper learning, skill, care, and diligence."

With respect to the contention of the defendant physician that since he was highly trained in his profession and, in fact, possessed all the necessary care and skill qualifying him to practice his profession, the verdict could not stand, the court continued:

"The question of negligence, or failure to exercise ordinary skill and care in the treatment of any particular case does not depend upon the professional skill and learning of the physician, but is to be determined from a consideration of his acts, conduct, omissions, and treatment in the particular instance. If he possessed the highest degree of skill and learning in his profession, and failed to exercise the care and diligence required by the law in treating his patient, his skill and learning could not shield him from the consequences of such negligent treatment. On the other hand, if he did not possess the skill and learning required by the legal standard, but his treatment in the particular instance was proper, he could not be held liable for the want of such skill which resulted in no injury to the patient. . . .

"We have examined the questions presented in relation to the evidence and instructions given and refused, and find no reversible error. The judgment is affirmed."

Bryan to the Contrary Notwithstanding—The moral principle inherent in evolution is that nothing can be gained in this world without an effort; the ethical principle inherent in evolution is that the best only has the right to survive; the spiritual principle in evolution is the evidence of beauty, of order, and of design in the daily myriad of miracles to which we owe our existence.—Henry Fairfield Osborn (The Forum).

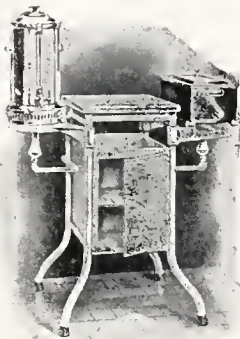


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MEDICAL STRAWS

By THE EDITOR

Experience is fallacious and judgment difficult

THERE is another problem that confronts us, and those of you who are medical editors, mentors of our profession, must seriously consider it. In the Workmen's Compensation Acts, something has been introduced that is most unfortunate, and that is *taking away from the patient the liberty of choice of his doctor*.—President-elect W. D. Haggard (A. M. A. Bulletin).

GROWTH in character depends very much on our use of leisure, our way of escape from the dusty and weary walk of ordinary life, and so we need to retain in our hours of release from the prison of the external present all that may help us to understand the real significance of life, its mystery and its beauty.—British Medical Journal.

IN ESTABLISHING and maintaining medical ideals, we must be careful to separate them entirely from various cantos or obsessions which are so ready to obstruct progress.

THE medical officer of health should be the real as well as the nominal head of his department, and he should not be subjected to interference or supervision on the part of any other officer and should deal only and directly with the local authority and its committees.

SCIENTIFIC infant-feeding and pseudo-scientific feeding are not synonymous; but some people make themselves believe so.—Nebraska Medical Journal.

“WE HAVE one United States Senator who believes Mrs. Eddy was a deity,” says J. E. Dildy (Texas Medical Journal). “The banker carries an Irish potato for rheumatism; the congressman signs the Tan-lax ad., while the legislator votes for the chiro and “totes” buckeyes for piles.

“MANY persons think that education is something that we may give a child,” says Angelo Patri (Liberty). “No power on earth can do that. Education is something that a child must take. He takes it up from the earth and transforms it into intelligence by the experiences that he gathers through his nerves and muscles—and his hands.

“THE doctors of a community can tell the people what to do in order to prevent disease, but they are powerless to enforce their advice,” says the Long Island Medical Journal.

THE New York State optometrists are advocating a law that will compel physicians to pass the optometry board before being permitted to examine for and correct errors of refraction. In their official weekly they say, “The harder you make it for the medical doctor to invade our field, the less competition you will have.”—Indiana Medical Journal.

Why Quackery?—

There is no fool whate'er the sex or grade
But has his name among wise Doctors placed
And thus through greed the Healing Arts disgraced.
—Regimen Sanitas.

EVERY physician of an inquiring mind, wherever he may be located, can readily find all about him numerous medical problems of importance which he can help to solve.—C. M. Jackson, National Research Council.

Saving Animals by Vivisection—More than 200,000 dogs in the principal cities of Japan have been vaccinated against rabies. Not one of them has since taken the disease, although the malady is common among unvaccinated animals.—Colorado Medicine.

What would the antivivis do for these poor suffering animals?

PUBLIC health lies at the foundation, the very foundation of all human welfare. Unless that is conserved and protected, there is very little use in any other activity for the promotion of public welfare.—Calvin Coolidge.

There are about 1200 women physicians in Japan.

And He Won Fame—“The lancet and purge, consisting of senna, cassia, rhubarb, and syrup of pale roses, constituted the entire therapeutic armamentarium of Guy Patin, who won fame during the seventeenth century, ‘the farce-comedy era of medicine,’” says the Medical Journal and Record.

Three hundred years later the Guy Patins are still winning notoriety and fortunes by substituting the hypodermic needle for the lancet, “publicity” for the purge, and squashed goat glands purchased at a slaughterhouse for a few cents a pound for the “syrup of pale roses.”

THE difference between an educated doctor and an uneducated one is, the educated doctor knows when he doesn't know and the other one does not.—Journal Kansas Medical Society.

CHRISTIAN SCIENCE, as defined by W. H. Mallock: “A few fragments of science imperfectly understood, obscured by a few fragments of Christianity imperfectly remembered.”

Now Look at It—“When all government, domestic and foreign, in little as in great things, shall be drawn to Washington as the center of all power, it will render powerless the checks provided of one government on another, and will become as venal and oppressive as the government from which we separated.”

“I WOULD make health contagious instead of disease,” said Robert Ingersoll, when asked how he would improve on the work of the Lord.

A lot of people and some organizations are now claiming to be the authors of this slogan. Well, Ingersoll doesn't care.

“You can prevent typhoid by boiling your drinking water, or typhus by boiling your underwear, but neither form of cleanliness is of any avail against other diseases. Public sanitation will prevent hookworm, and draining the swamps will combat malaria, but none of these methods has the slightest effect upon smallpox.”—Medical Standard.

There are no safe generalizations about disease.

“Many people, especially those who cannot think for themselves and yet are under the professional necessity of speaking for others, imagine that a *point of view* is the *scene* itself. It isn't.”—Dearborn Independent.

PRISON is the easiest place in the world to reform from a distance.—Ex-Warden Johnson, (Commonwealth Club).

“No undisciplined man ever did any sustained toiling, no undisciplined man ever made any real sacrifice,” says a writer in Red Book.

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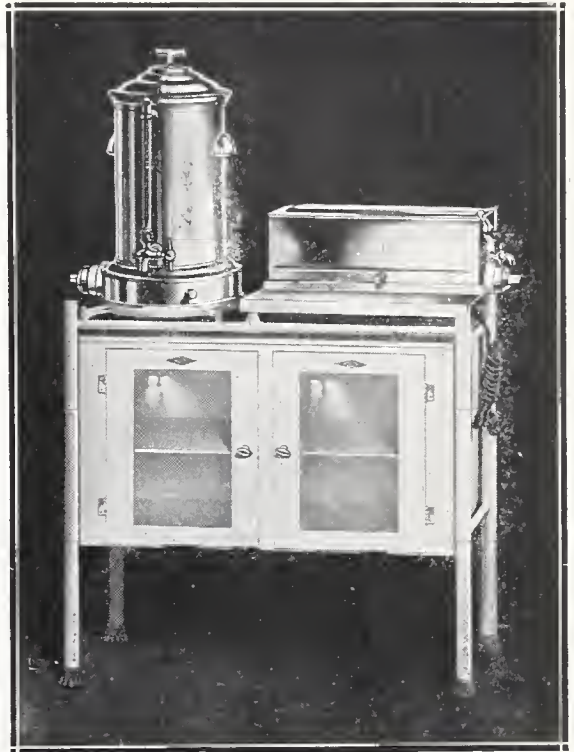
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BOOK REVIEWS

This column is conducted solely in the interests of California and Western Medicine readers. Critical comment, favorable and unfavorable, purely from the standpoint of the interests of the medical reader, will be made about books selected from the larger number acknowledged in the Books Received column. The advertising columns are open to book publishers who wish to make additional statements about their publications.

Gynecology. By William P. Graves. 3d ed. 936 pages. Illustrated. Philadelphia and London: W. B. Saunders Company. 1923.

This splendid textbook has been recently revised. Graves has added numerous new and excellent photo micrographs equally valuable to teacher and student. Tumors of the ovary have been reclassified, and include implantation tumors recently described by Sampson. The histogenesis of ovarian dermoids has been greatly clarified. Radium treatment in all of its applications has been clearly discussed. Ovarian transplantation and uterine transufflation are given in detail. Several new operative procedures, such as operations for prolapse of the urethral mucosa and for tubal sterilization have been added. In short, the book abounds with new information. It seems needless to say that Graves' Gynecology is one of the most valuable textbooks in this specialty. The book speaks for itself.

L. A. E.

Management of Diabetes. Treatment by dietary regulation and the use of insulin. By George A. Harrop. 176 pp. New York: Paul B. Hoeber. 1924. Price, \$2.

This book is a very well arranged, concise manual presenting the main features in the management of the average diabetic with diet and insulin. It is based on a series of fourteen lectures given to physicians and dieticians at the Presbyterian Hospital, New York, in the summer of 1923 during the infancy of insulin treatment.

The work presents only sufficient theory to make the practical applications well understood. General principles in diabetic metabolism are first presented, followed by chapters on the action and administration of insulin, including important descriptions and treatments of overdos-

(Continued on Page 496)

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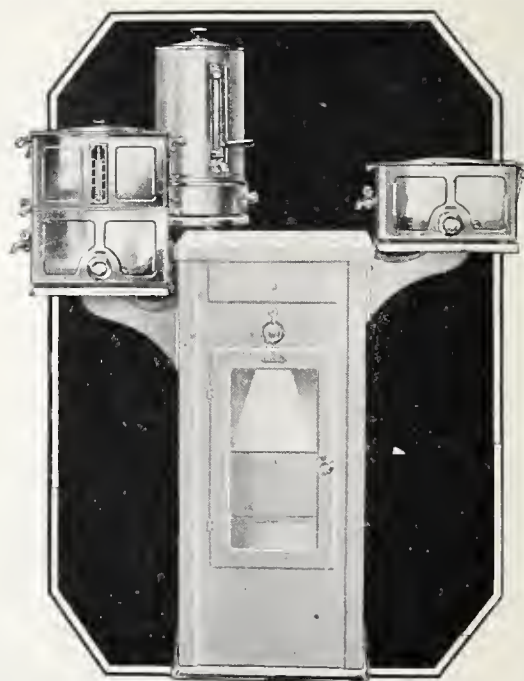
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BOOK REVIEWS

(Continued from Page 493)

age with insulin. The chapters on the dietary management and insulin regulation are brief but very clear, and give a safe outline to follow in most cases. The practice of giving insulin in three doses daily is not general, however, and the majority of cases are now handled with only two daily injections. The complications of diabetes are briefly dealt with, and sufficient laboratory technic is given for adequately following the important laboratory side. The chapters on diets and food values are the least lucid in the book, but many valuable recipes are given. The book is the clearest brief manual of diabetes for the physician we have seen. D. E. S.

Fractures and Dislocations. Immediate management, after care, and convalescent treatment, with special reference to the conservation and restoration of function. By Philip D. Wilson and William A. Cochrane. 789 pp. Illustrated. Philadelphia and London: J. B. Lippincott Company. 1925.

A new fracture book, if it is to have an excuse for being, must be a good one. Wilson and Cochrane's book is good. It is simple, straightforward, and furnishes such accessory information (on anatomy, neurology, etc.) as may be needed in practice. It is written for the general practitioner, and the general practitioner will appreciate its compendiousness, which will save him much hunting about in other books for details he will wish to know.

While everyone may not agree with all its statements—and indeed it is impossible to write a book of practice with which everyone will entirely agree—no one can go wrong who follows the methods laid down by Wilson and Cochrane.

The illustrations are good, and there is enough bibliography to enable those interested to follow a given subject further.

We know of no book on fractures so handy, so clear, and so sensible. L. E.

X-rays and X-ray Apparatus. An elementary course. By John K. Robertson. 228 pp. Illustrated. New York: The Macmillan Company. 1924.

The subject matter is presented in clear, simple language, making it easily comprehensible to those with but a slight knowledge of physics. It is an excellent compact treatise, covering the essential physical principles utilized in the field of radiology. I. S. I.

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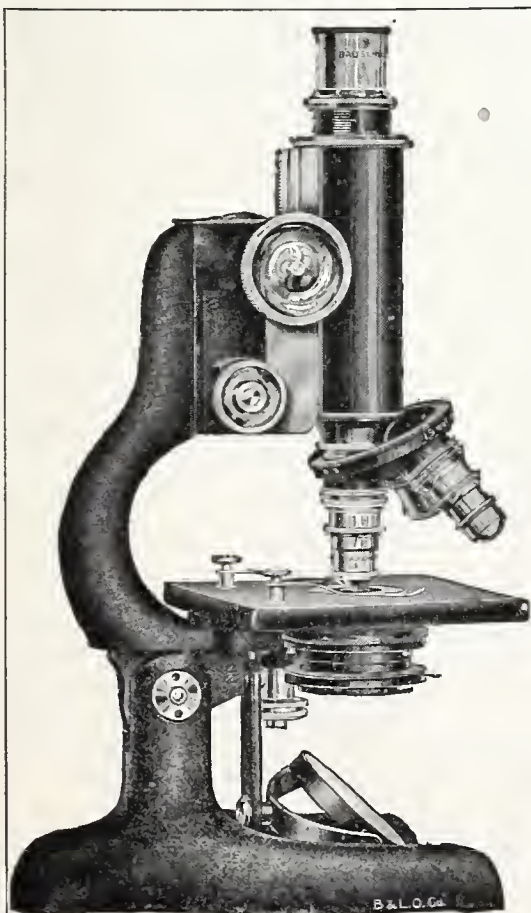
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—John J. Morton, New Haven, Conn. (Journal A. M. A.), stresses the fact that poorly fitted spectacles can be a real menace to their wearers. This is especially applicable in those beyond middle age, and the danger is considerably increased when senile changes have taken place in the skin of the irritated area. One should be mindful of this possibility and should take every precaution with the proper adjustment of eyeglasses. The places where constant abrasions are to be avoided are the bridge of the nose, the sides of the bridge near the inner canthi, the temples, and at the back of the ears. In the four cases reported by Morton, the temples were affected in three instances, and the fourth lesion occurred behind the ear. Owing to the tendency for basal cell cancer to occur most commonly on the nose, it is probable that most growths arising in irritation from spectacles will occupy this position. It would seem a priori that spectacles of the pince nez type would be especially liable to cause trouble, but no data are available to support this assumption. In view of the possibility of malignancy occurring in an irritated area, one should take the responsibility of impressing on patients the necessity of promptly attending to any maladjustment of their spectacles.

The Pathologist of 1940—Discussing the pathologist of the future, William C. McCarthy, M. D., says (Journal Lab. and Clin. Med.): "In the hands of the best clinicians we find, in a series of 60,645 patients, there were 225,785 laboratory reports (5650 metabolic basal rate determinations, 11,946 gastric analyses, 192,739 urinalyses and other laboratory procedures, 2021 electrocardiographic records, 13,964 fresh tissue examinations during operations and for purely diagnostic purposes, and 465 necropsies). These required time, material, space, and human energy. What percentage of these were of actual positive or negative value. How many of them would have been necessary in the hands of clinicians who were also well trained pathologists or pathologists who were keen observers of signs and symptoms."

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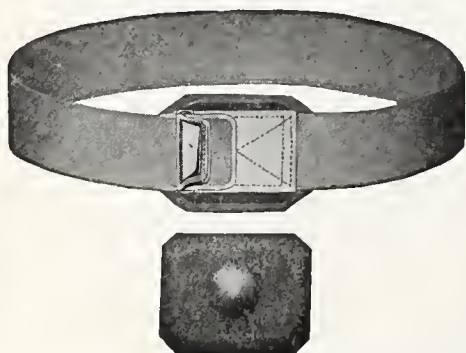
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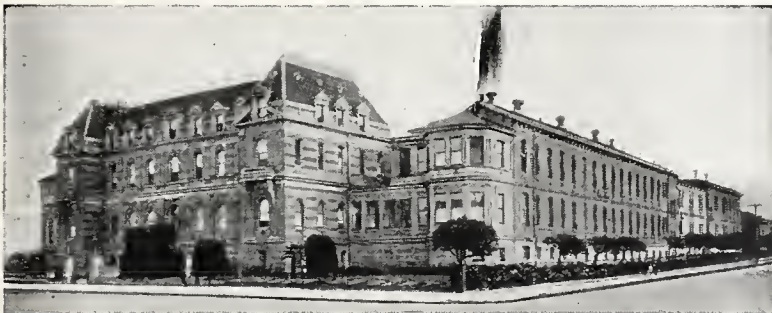
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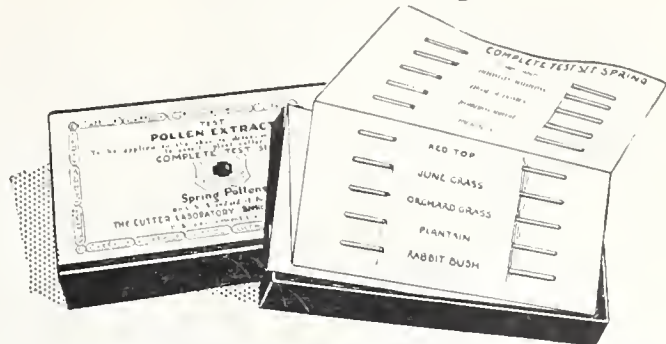
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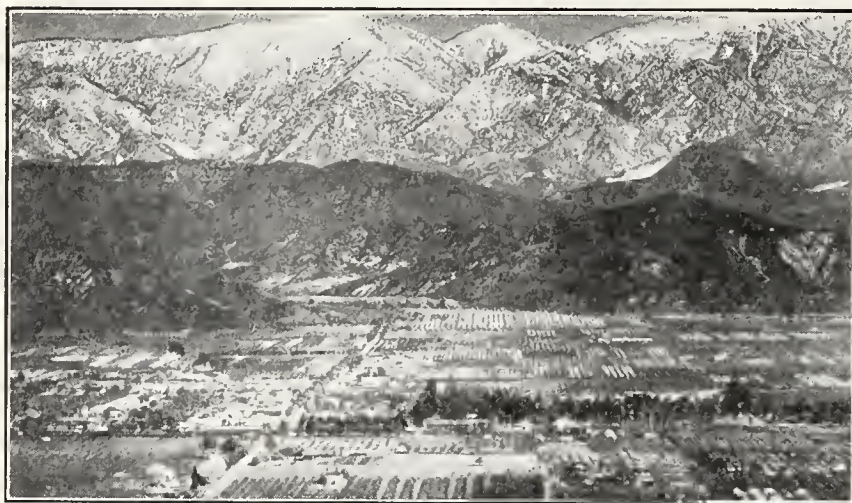
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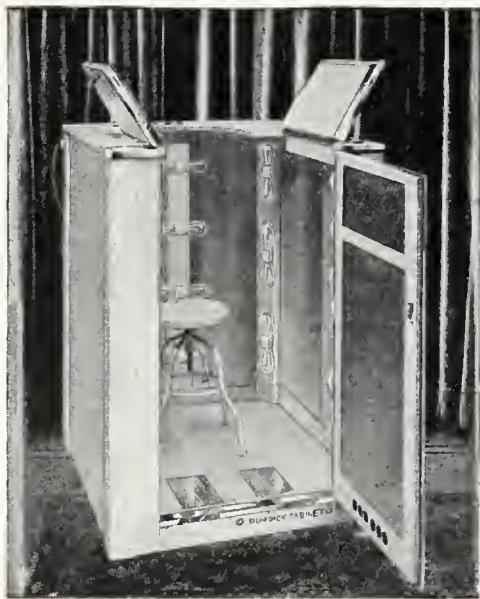
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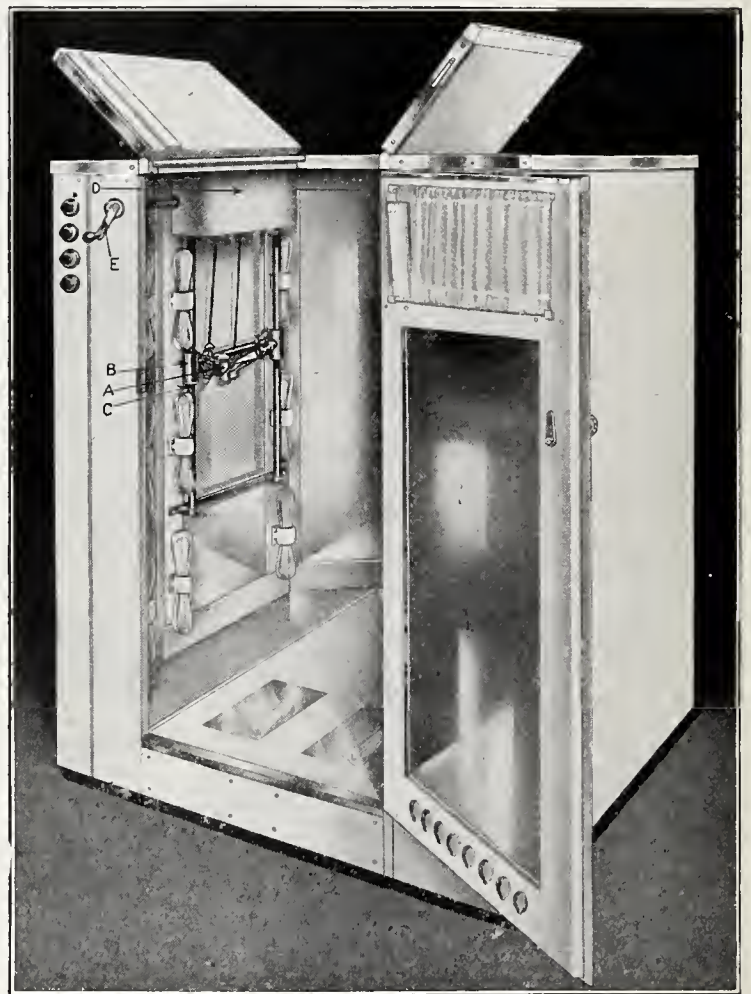
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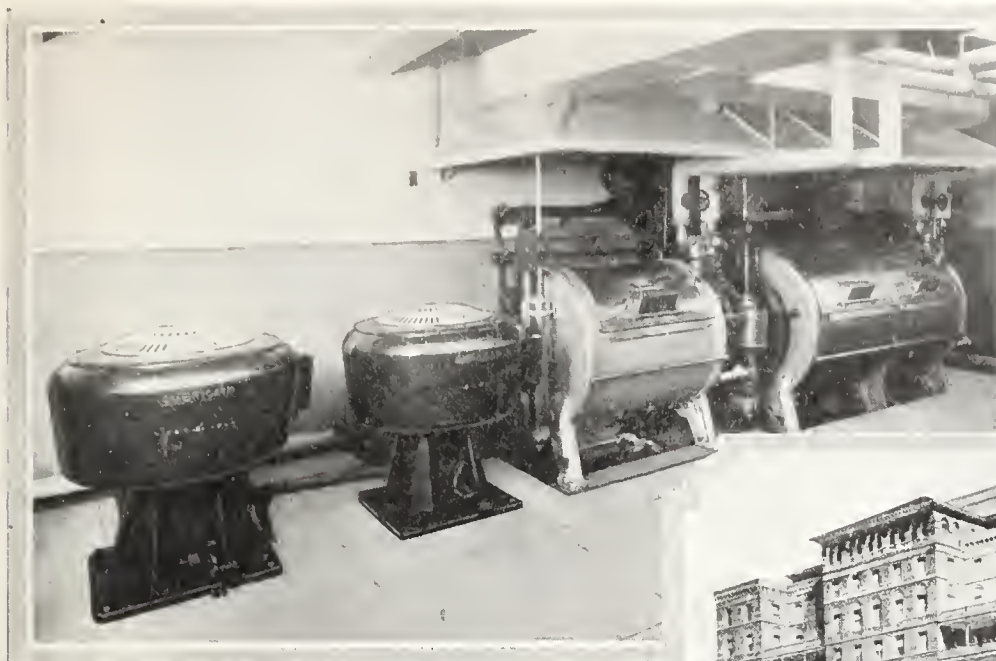
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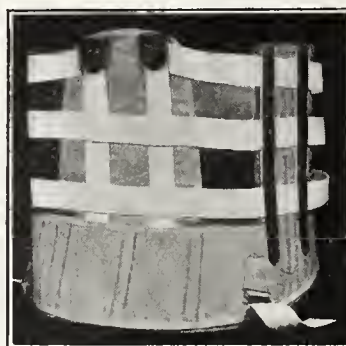
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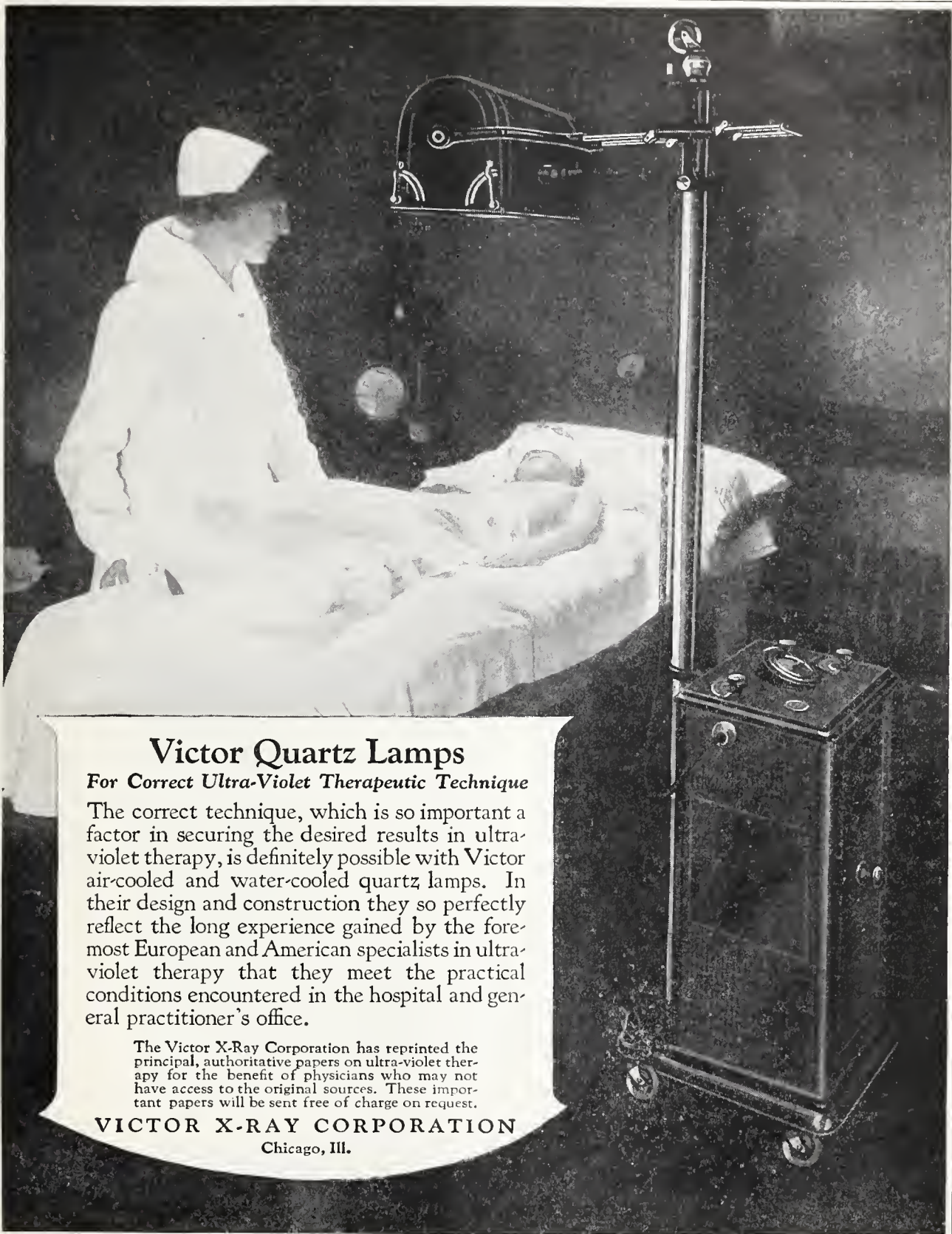
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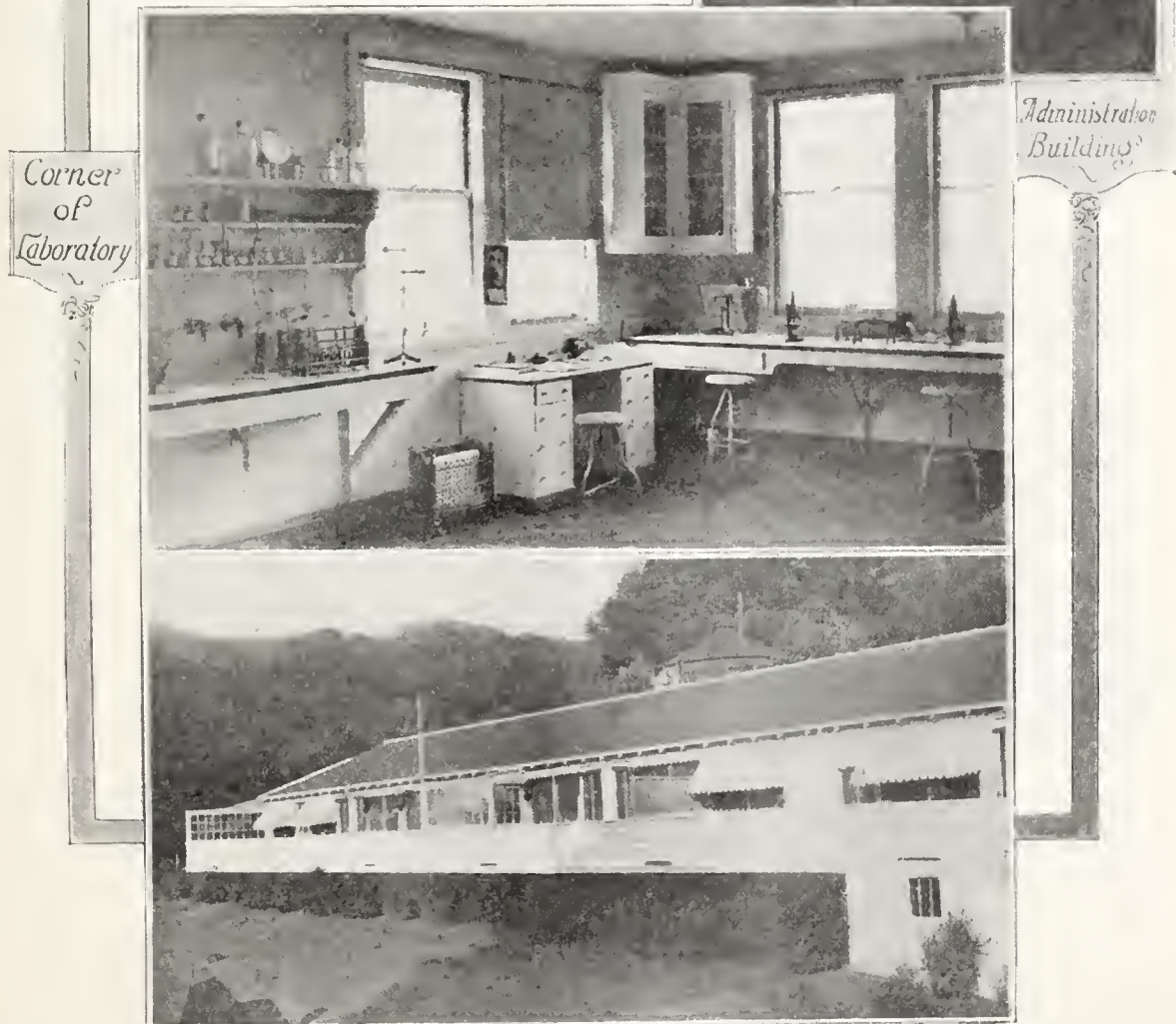
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Five Case Histories for Record. Reprinted from the New York Medical Journal and Medical Record for August 16, 1922.

Seaver, Homer Carlton. Independent Fibromyomata of the Broad Ligament. Reprinted from the American Journal of Obstetrics and Gynecology, Vol. VIII, No. 5, November, 1924.

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Renal Tuberculosis During Pregnancy. Reprint from Surgery, Gynecology and Obstetrics, December, 1924, pages 750-753.

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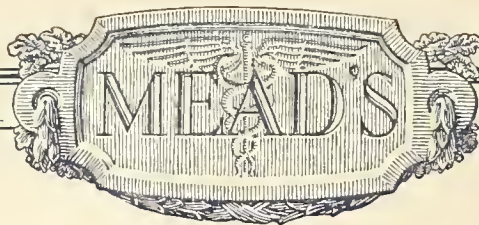
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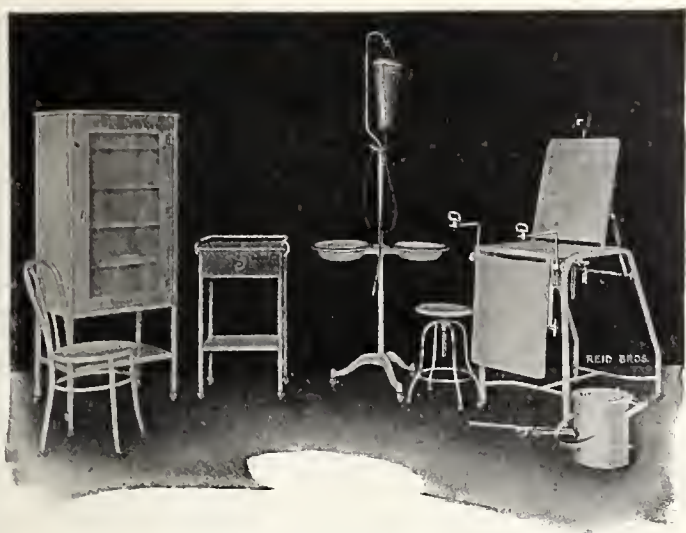


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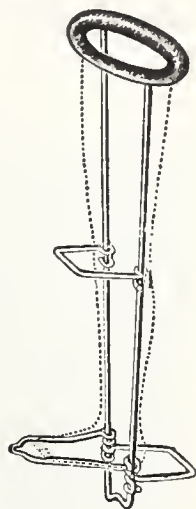
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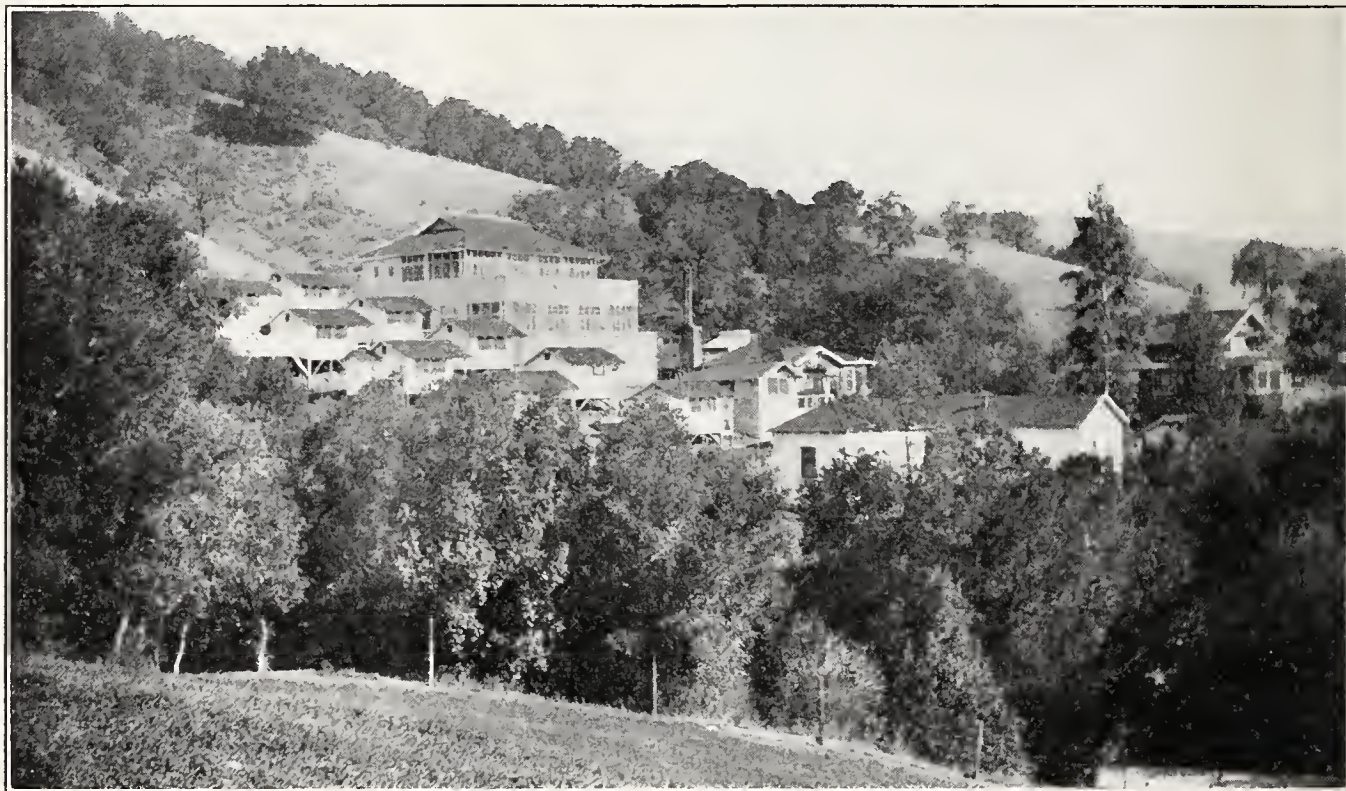
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Pulmonary Complications After Laparotomies—Anatole Kolodny, Iowa City (Journal A. M. A., March 14, 1925), points out that acute pulmonary complications after laparotomies are still encountered frequently. The clinical incidence of post-operative pneumonia is far greater after a laparotomy through the upper abdominal wall than after laparotomies when the incision has passed through the lower abdomen only. Pain in the operative wound during the first days after the operation forces the patient on whom a laparotomy through the upper abdomen was done to abandon the abdominal type of respiration. Hypodermoclysis under the pectoral muscles in such patients, with a trauma to the thorax wall sufficient to prevent an adequate deep thoracic respiration, results in an increase in frequency of the respiratory excursions, with a secondary rise infrequently of the pulse. To avoid this deleterious reaction of the hypodermoclysis in patients after laparotomy, infusion should be made in the outer aspects of the thighs.

Production of Liver Necrosis—Reuben Ottenberg and Harold A. Abramson, New York (Journal A. M. A., March 14, 1925), report on experiments undertaken primarily to determine the upper safe limits of dosage of tetrachlorphenolphthalein and tetrabromphenolphthalein. The doses needed to produce severe symptoms and liver lesions were enormously larger than those used in the tetrachlorphenolphthalein test for liver function (0.005 gm. per kilogram). While the amount of tetrabromphenolphthalein used for gall-bladder visualization (0.1 gm. per kilogram) is also safely below the toxic dose, the margin is not so large, and suggests the necessity of caution in cases in which the liver parenchyma is already damaged by disease.

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Unusual Complication Following Usual Operative Procedure for Varicose Veins—Two cases are cited by David Fisher and Edmund H. Mensing, Milwaukee (Journal A. M. A., March 7, 1925), which emphasize and strike home vividly the extreme importance of a careful investigation in so self-evident a condition as varicose veins. In one of the cases the man had been advised to have an operation for varicose veins before an ulcer developed. The physical examination was negative except for the extremities, which showed marked prominence and slight bulging of all the superficial veins, extending from both feet upward to a point about 8 cm. above Poupart's ligament. There was very little tortuosity. The leg was raised and drained of its blood, then constriction was applied to the saphenous opening, and the leg lowered. Even after ten minutes, the veins did not show any filling. This, of course, meant that the deep or perforating veins were thrombosed or varicose. In view of a history of typhoid, it was safe to assume that in this case the deep or perforating veins were thrombosed, preventing the filling of the superficial veins. Had this man been operated on, gangrene of the extremities would probably have resulted. In the second case an ill-advised operation was followed by gangrene necessitating a midhigh amputation. An entire extremity was sacrificed, not to mention the physical suffering in the interim, because of the failure in the first place to apply a very simple test to the circulation. The authors urge that in every case of varicose veins, the Trendelenburg test be applied to ascertain the condition of both the superficial and deep veins; and in case of doubt, when the collateral circulation extends above Poupart's ligament, and no intra-abdominal cause for venous obstruction exists, the deep veins should be suspected.

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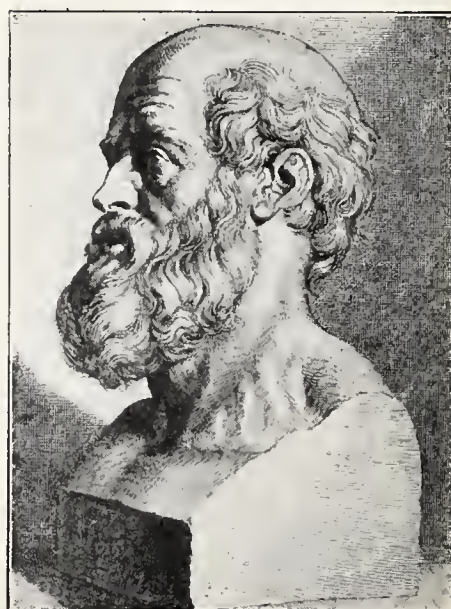
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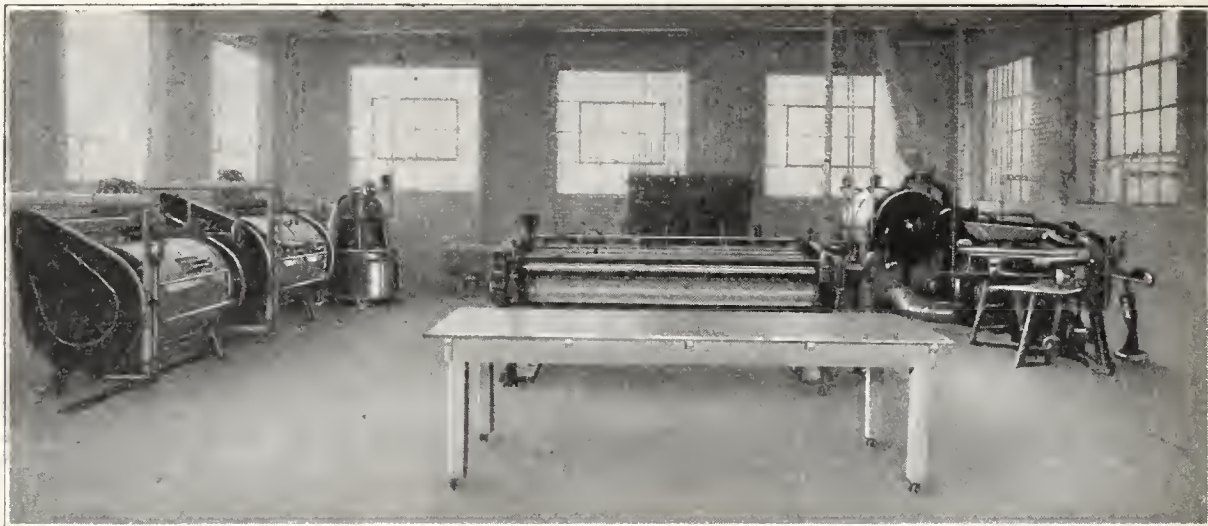
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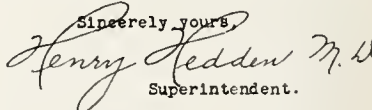
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BOOKS RECEIVED

All books received are promptly acknowledged in this column. Such acknowledgment is the only return California and Western Medicine feels obligated to render in return for the courtesy of the sender. Selected books believed to be deserving of comment will be reviewed solely in the interests of our readers. Our advertising columns are open to publishers of acceptable books for such further statements as they care to make.

Diseases and Deformities of the Foot. By John Joseph Nutt, M. D., Professor of Orthopedic Surgery, Polyclinic Medical School and Hospital; Surgeon-in-Chief, New York State Orthopedic Hospital for Children. Second edition completely revised. New York: E. B. Treat & Company, 45 East Seventeenth street. 1925.

Pathology and Bacteriology of the Eye. By E. Treacher Collins, F. R. C. S., Consulting Surgeon to the Royal London Ophthalmic Hospital and Consulting Ophthalmic Surgeon to the Charing Cross Hospital, etc., and M. Stephen Mayou, F. R. C. S., Surgeon to the Central London Ophthalmic Hospital, etc. Second edition with four colored plates and 306 figures in the text. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut street.

Recovery Record. For use in tuberculosis. By Gerald B. Webb, M. D., Consulting Physician, Cragmor, Glockner and Sunnyside Sanatoria; late Lieut.-Col. M. C. U. S. A., Senior Consultant in Tuberculosis, A. E. F., and Charles T. Ryder, M. D., Cragmor and Glockner Sanatoria; Colorado School of Tuberculosis, Colorado Springs, Colo. Second edition revised. Paul B. Hoeber, Inc., New York. 1925.

Feeding, Diet and the General Care of Children. A book for mothers and trained nurses. By Albert J. Bell, A. B., M. D., Assistant Professor of Pediatrics in the Medical Department of the University of Cincinnati; Attending Pediatrician to the Cincinnati General Hospital, the Tuberculosis Hospital and the Christ Hospital; Member of the Medical Milk Commission, and Chairman of the Divisional Council on Child Hygiene, Cincinnati, etc. Second

revised edition, illustrated. Philadelphia: F. A. Davis Company, publishers. 1924.

Clinical Medicine for Nurses. By Paul H. Ringer, A. B., M. D., Chief of Medical Service of the Asheville Mission Hospital, Asheville, N. C.; on staff of Biltmore Hospital, Biltmore, N. C. Illustrated. Second revised edition. Philadelphia: F. A. Davis Company, publishers. 1924.

A Laboratory Manual of Physiological Chemistry. By Elbert W. Rockwood, M. D., Ph. D., Professor of Chemistry and Toxicology in the University of Iowa; Author of an Introduction to Chemical Analysis for Students of Medicine, Pharmacy and Dentistry, and Paul Reed Rockwood, M. D., Fellow in Medicine, the Mayo Foundation. Fifth edition, revised and enlarged. Illustrated with four colored plates and forty-three text engravings. Philadelphia: F. A. Davis Company, publishers. 1924.

Pseudo-Appendicitis. A Study of Mechanical Syndromes of the Right Lower Quadrant Simulating Appendicitis. By Thicrry De Martel, Chirurgien des Hopitaux de Paris, and Edouard Antoine, Medecin des Hopitaux de Paris. Authorized translation from the French by James A. Evans, M. D., formerly Assistant Radiologist, Hopital St. Antoine, Paris. Preface by R. Bensaude, Medecin des Hopitaux. Illustrated with forty-one engravings. Philadelphia: F. A. Davis Company, publishers. 1925.

Clinical Therapeutics. I, Therapeutic Agents; II, Therapeutic Procedures; III, The Treatment of Symptoms; IV, The Treatment of Diseases. By Alfred Martinet, M. D., Paris, France, with the collaboration of Drs. Desfosses, G. Laurens, Leon Meunier, Lomon, Lutier, Martingay, Mougeot, Saint-Cene, Segard, and Terson. Authorized English translation from the second revised and enlarged edition by Louis T. de M. Sajous, M. D., Associate Professor of Experimental Pharmacology, School of Medicine, Temple University; Instructor in Endocrinology, Graduate Medical School, University of Pennsylvania. With 332 text engravings. Complete in two royal octavo volumes: Volume I, Therapeutic Agents and Procedures; Volume II, Treatment of Symptoms and Diseases. Philadelphia: F. A. Davis Company, publishers. 1925.

A Textbook of Human Physiology, including a section on Physiologic Apparatus. By Albert P. Brubaker, M. D., Professor of Physiology and Medical Jurisprudence in the Jefferson Medical College; formerly Professor of Physi-

(Continued on Page 559)

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BOOKS RECEIVED

(Continued from Page 556)

ology in the Pennsylvania College of Dental Surgery. Eighth edition, revised and enlarged with 367 illustrations. Philadelphia: P. Blakiston's Son & Co. 1012 Walnut street.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, U. S. A., with the collaboration of a large editorial board. Volume I. Thirty-fifth series. 1925. Philadelphia and London: J. B. Lippincott Company.

From Infancy to Childhood. The Child from Two to Six Years. By Richard M. Smith, M. D., Assistant Professor of Child Hygiene, Harvard University Associate Physician, Children's Hospital Visiting Physician, Infants' Hospital, Boston. Published by The Atlantic Monthly Press, Boston.

The Practical Medicine Series, Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of Charles L. Mix, M. D. Volume V, **Gynecology.** Edited by Thomas J. Watkins, M. D., Professor of Gynecology, Northwestern University Medical School. **Obstetrics.** Edited by Joseph B. De Lee, M. D., Professor of Obstetrics, Northwestern University Medical School, with the collaboration of J. P. Greenhill, M. D., Instructor in Obstetrics, Northwestern University Medical School. Series 1924. Chicago: The Year Book Publishers, 304 South Dearborn street.

Abt's Pediatrics. By 150 specialists. Edited by Isaac A. Abt, M. D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. Set complete in eight octavo volumes totaling 8000 pages with 1500 illustrations, and separate index volume free. Now ready, Volume VI, containing 736 pages with 127 illustrations. Philadelphia and London: W. B. Saunders Company. 1925. Cloth, \$10 per volume. Sold by subscription.

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CALIFORNIA AND WESTERN MEDICINE

VOL. XXIII

MAY, 1925

No. 5

SPECIAL ARTICLE

THE BEGINNINGS OF CALIFORNIA'S MEDICAL HISTORY

By GEORGE D. LYMAN, A. B., M. D., *San Francisco*

WE HOPE that Doctor Lyman's story of early medicine in California proves as pleasingly informative and interesting to other physicians as it has to the editors. The painstaking research and study necessary to bring this data together is apparent to any reader. The story is timely and a fitting introduction to this number of CALIFORNIA AND WESTERN MEDICINE, devoted largely to incidents in the history of medicine.

Doctor Lyman has prepared a complete bibliography for his article, and will be glad to lend it to any reader who may be interested.—THE EDITORS.

THE Medical History of California, owing to the three governments, which at different times have held sway over her, naturally falls into three divisions. History and medicine have progressed side by side, and it is difficult to give a survey of the latter without recording the events that moulded its development. On this account, California Medical History is here described under the following heads:

The Spanish Period, 1769-1822.

The Mexican Period, 1822-1848.

The American Period, 1848-

THE SPANISH PERIOD, 1769-1822

Baja, or Lower California, having been settled by the Spaniards in the sixteenth century; and missions, to proselyte and educate the Indians, having been founded first by the Jesuits and, after their expulsion in 1767, by the Franciscans; Galvez, the Royal Spanish Visitador-General, and Fray Junipero Serra, the president of the Franciscan establishments in California, decided, in 1769, to found a mission in Alta California at a place called Monterey, which Vizcaino, the Spanish navigator, had first visited and taken possession of in the name of the King of Spain in 1603. Accordingly, two expeditions, one by land headed by Portola and Fray Junipero Serra, and the other by sea, set out for Monterey, California. The sea forces were transported in two paqueboats, the San Antonio and the San Carlos. It is interesting to note here that the San Carlos, the flagship, also bore the name of the "Golden Fleece," interesting in that the Argonauts, California, and the Golden Fleece became synonymous just eighty years later.

So on January 9, 1769, Galvez, having delivered a stirring farewell oration to the future colonists, and the venerated Padre Junipero Serra having blessed the flags and administered the sacrament, the paqueboat San Carlos, the Mayflower of the Pacific, set sail from La Paz, Mexico, with Monterey as the goal, and San Diego the first rendezvous. There were sixty-two persons aboard that ship, including Commander Vicente Villa and his crew, a Franciscan Friar, Fernando Parron, Pedro Fages, a Lieutenant in the Royal Spanish Army, who later became Governor of California, Constanso, the diarist and engineer, twenty-five Catalan soldiers, a baker, two blacksmiths, a cook, a bleeder and the one who concerns us most, Pedro Prat, the surgeon. Bancroft says that he was a Frenchman, but he was a native of Barcelona, Spain, and a graduate in medicine from the University of Barcelona, where he was a surgeon of note. Holding the rank of Capitan in the Royal Spanish Army, he became the first Surgeon-General in the Royal Presidio of Monterey, and the first resident doctor in California. And so the medical history of California goes back to the cradle of the new Spanish province; the sword, the cross, and the scalpel proceeding hand in hand, and had it not been for the presence of Pedro Prat, it is probable that the projected province would have miscarried and never withstood the travail of its birth.

A few days after leaving La Paz, scurvy, then the scourge of the sea, broke out among the passengers. To add to this dilemma, through leaking casks their supply of water was exhausted, and to replenish they stopped at Cedros Island, where the spring was contaminated and the scurvy-ridden ship was ravaged by dysentery and death stalked in their midst. Later, the ship lost her way in the fog and sailed too far north. During the night of the 110th day from La Paz, she dropped anchor in San Diego Bay. The San Antonio, having sailed almost one month later than the San Carlos, was already there, and at dawn, April 29, the pilot spied the latter ship riding at anchor, but with her deck apparently as spectral as that of the "Ancient Mariner," as not a person was seen moving about. The crew of the San Antonio put off in boats and found that not a man aboard the San Carlos was able to lower one, and the crew, excepting one sailor and one cook, were dead, and many of the soldiers were in a desperate condition from dysentery and scurvy.

Dr. Prat, who had been battling with disease and death almost since his departure, with the help of

the San Antonio crew, constructed a tent-hospital, the first in California, and removed the sick and dying to the shore. But the scourge of the San Carlos was contracted by the crew of the San Antonio, and Dr. Prat, Fray Junipero Serra and two other Franciscan Padres attended, nursed and, buried the victims. Ninety soldiers, sailors, and mechanics succumbed. Only one-third of the original colony intended for Monterey survived. So tragic was this initial baptism of the California shores, that "Punta de los Muertos," or Dead Men's Point, near New Town (San Diego) derived its name from the burial of their scurvy and dysentery-stricken soldiers and sailors—all of which is reminiscent of the first winter of the Plymouth colony on the Massachusetts coast. And so it was Pedro Prat, the first surgeon in California, who nursed the remnants of the Pacific Pilgrims back to life and accompanied them to Monterey, where the second mission was founded and where he became Surgeon-General and resided at the Presidio Real, Monterey having become the capital of California. But he did not long survive. His mind had been so harassed by the harrowing experiences at San Diego that he became demented and was unable to assort and label the large supply of drugs he had brought with him. During the following year he died, and was buried in the Mission at Monterey.

Eventually there were four presidios in California—in the North, San Francisco and Monterey, and in the South, Santa Barbara and San Diego—and the twenty-one missions were divided among them; but because Monterey was the capital of the province, the Surgeon-General remained at the Royal Presidio there, and Monterey became the medical center of the province.

The following is a complete list of the Surgeon-Generals of the Spanish Army who were stationed at the Presidio of Monterey during the Spanish regime:

Pedro Prat, 1769-1771; Pedro Castran, 1773-1774; José Davila, 1774-1783; Pedro Carbajal, 1785-1787; Pablo Soler, 1791-1800; Juan de Dios Morelos, 1800-1802; Manuel Torres, 1802-1803; José Marie Benites, 1803-1807; Manuel Quixano, 1807-1824.

The only surgeon of this time connected with the Mission Dolores was José Davila, a Spaniard. Very little seems to be known of him except that he picked the site as a healthy one for the Mission. He was present with Palou, Lieutenant Moraga, etc., when the cornerstone, not only of the Mission, but of the civilization of San Francisco was laid. And there he buried his first wife, Josefa Carbajal in November, 1780. The doctor did not endear himself to Governor Neve, and as early as 1781 he favored granting the surgeon leave to quit the country, as being incompetent and captious, but in 1783 both men died and were buried in the Mission church.

In 1792, José Antonio Romeu, the fifth Spanish Governor of California, lay dying at Monterey, and history records that it was Dr. Pablo Soler who made the diagnosis and prognosticated a fatal issue. This Dr. Pablo Soler, a native of Barcelona, Spain, and a graduate of the university there, was the most

noted and probably the most skilful of the Spanish-Colonial Surgeons-General in the Californias. He arrived at Monterey as an officer in the Spanish Royal Navy about 1789, and for a while was very contented in this frontier capital, but at length he became weary of his seclusion from learned men of his class. In 1798 he wrote to the King of Spain, complaining of his sad and unhappy fate in being thus confined within the walls of a remote presidio surrounded by Gentiles and comparatively deprived of society, and begged to be relieved. At the same time he gave an account of his services to the California colony; his gratuitous attendance upon officers, missionaries, soldiers, pobladores or settlers and Indians, both Gentile and Christian, when called on; his traveling to remote ranchos, sometimes as far as forty leagues, to visit a sufferer and the difficult operations he had performed. In one case he had saved an Indian who had been gored by a bull so that his entrails protruded and dragged on the ground (and this in a time and region when anesthetics, sepsis, and sterilization were unknown). In numerous cases and during severe attacks he attended those afflicted with scurvy, chronic dysentery, and dropsy. The following entry from the old Spanish archives of the Mission San Carlos has this to say: "Dr. Don Pablo Soler is a great physician and a great surgeon. Had not his humanity prompted him to give his profession to the service of the California colony, he would have been renowned in Spain, but he gave the best years of his life for the welfare of the people, traveling many miles to minister to officers and soldiers, to settlers, rich and poor, to the missionaries, and to the Indians, to all with equal kindness. He was unable to cure Governor Romeu, but his consummate skill was none the less brilliant." About 1800 the King of Spain relieved Dr. Soler, and he was followed in quick succession by Dr. Juan de Dios Morelos, 1801-1802; Dr. Manuel Torres, 1802-1803; Dr. José Marie Benites, 1803-1807.

Although Robert Koch, the great German bacteriologist, did not discover the bacillus tuberculosis until 1882, Spain and Italy were the only countries in the earlier part of that century that believed that the great white plague was contagious and could be imparted one to another. That Dr. Juan Morelos shared this opinion cannot be doubted. In 1800 the Commandant, Hermenegildo Sal, died at Monterey of phthisis, and Bancroft is the authority for what follows: "His disease was in those days considered as contagious and, therefore, at the recommendation of the surgeon (Juan Morelos) all his clothing and bedding were burned, as was the roof of his house after the plastering had been removed from the walls." Again quoting from the same author, we find the following during the medical regime of Quixano: "On one occasion, while Governor Pablo Vicente de Sola ruled the Californias, a wealthy Spaniard died, leaving the whole of his property to the 'fondo piadoso de las Californias'; but, as he had been a consumptive, his furniture and clothing were burned, and in the excitement of the occasion his jewelry and money were lost or stolen. When the case was reported to the Viceroy of Mexico, the president of the College of San Fernando, who had

been made administrator of the estate, began suit against the authorities of the then Province of the Californias, from whom he claimed the full value of the property destroyed." These facts speak for themselves and for the Monterey surgeon in a day when neither the bacillus tuberculosis nor its etiological relationship were established.

In the year 1807 there came to Monterey Dr. Manuel Quixano, the last surgeon of the Royal Spanish Army, in which he also held the commission of Capitan. He was a native of Leon, Spain, and a graduate of the Royal Medical University of Madrid. Dr. Quixano first appears in history as a witness when, on August 10, 1809, in the hall of the Mission of San Carlos, Monterey, José Joaquín

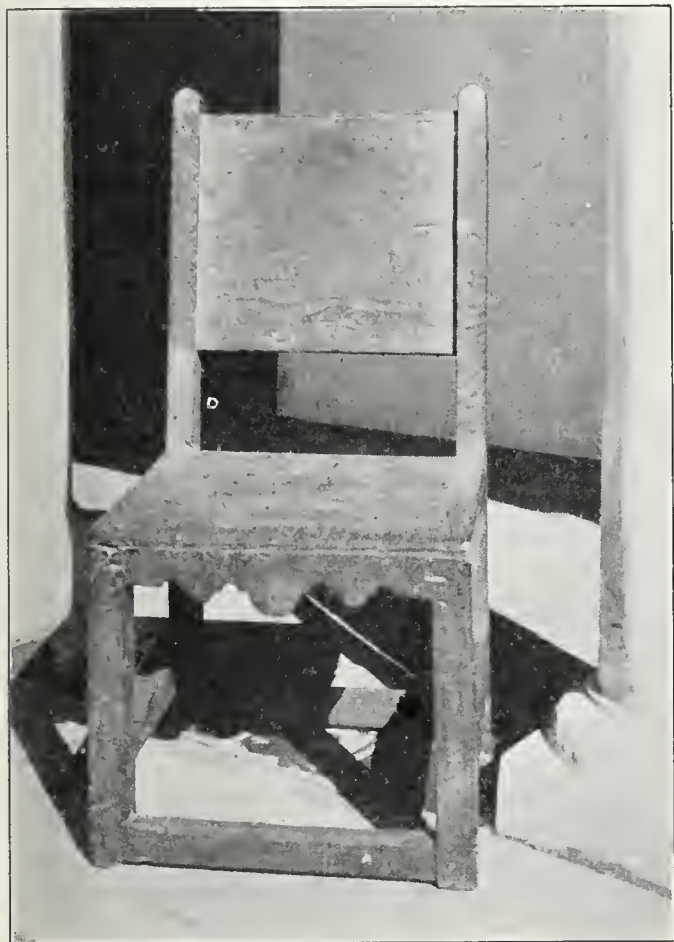
consecrated Host were clasped to his breast. He was buried as found. Two years later, an old Indian neophyte of the Mission lay dying and requested the rites of the Church, and on his deathbed confessed that the good Padre, having been summoned in the dead of night to a dying Indian, had been treacherously murdered under a tree. Later the corpse had been placed in his own bed, and the door of his cell locked on the inside. Dr. Quixano being summoned from Monterey, the poor Padre's body was exhumed from his tomb in the chapel, and an autopsy was performed, disclosing that the Fray had been murdered in a most cruel manner, the details being so revolting that they were withheld from the general records.

Under date of 1815, we find the following entry in the San Carlos records: "Dr. Quixano made a tour of medical inspection of the missions, as serious illness afflicted especially the missionaries and Indians of Southern California. In every mission he was treated with respect due to his rank, but especially due to his ability and benevolence."

Up to this period the trend of California's civilization had been upward, and Monterey may be considered the cradle of this culture, but in 1822 the missions were secularized and in 1823 the rumble of revolution made itself heard. Mexico declared herself independent of Spain and claimed California as hers. A period of decadence was ushered in. Spain withdrew her troops from the Royal Presidios, and Dr. Quixano, with the rest of the Spaniards, retaining their allegiance to the Spanish Crown, resigned. On leaving his offices and those of his predecessors in the Monterey Presidio, the Spanish Government presented him as a souvenir the office chair which had been used at consultations by himself and his predecessors. This chair, the mahogany box which contained his fine medical instruments, and the scales in which he weighed drugs are now in the possession of his great-granddaughter, Maria Antonio Field of Monterey. After relinquishing his Spanish commission, Dr. Quixano retired to private practice among the settlers on the Monterey peninsula. He died in 1825, and his residence and office are now occupied by his descendants.

For seventy-five years and more following the foundation of the Presidio Real at Monterey, the three other presidios, the twenty other missions, and the numerous pueblos were absolutely without skilled medical attendance, and a sick or injured person was dependent upon the missionaries, the "hechiceros" or Indian medicine men, or the stranger within the gates. Occasionally, as we have seen, the surgeon was summoned from Monterey, or the medical officer from some visiting man-of-war or trading-ship was pressed into service. If the stranger within the gates happened to be an American or Englishman and the emergency required it, he was immediately summoned, as "an Anglo-Saxon in those days was synonymous with an M. D."

The Indian medicine men or "hechiceros," in spite of their weird performances, undoubtedly possessed considerable ability. Our pharmacopoeia has been enriched by three valuable vegetable additions discovered and used by the California Indians. *Eriodictyon Glutinatum*, which grows profusely on our



Chair used by Dr. Manuel Quixano and his predecessors in the medical offices of the old Royal Spanish Presidio of Monterey, now in the possession of his great-granddaughter, Miss Maria Antonia Field of Monterey.

de Arillaga, the eighth Spanish Governor of California, was required to take the oath of allegiance to Fernando VII, Charles IV having abdicated the Spanish throne. At 5 o'clock in the afternoon, the Governor entered the hall and, in the presence of the Friars, Surgeon Manuel Quixano, and the army representatives, knelt before the crucifix; placed one hand upon the Holy Evangelists, and, holding up with the other the cross of his sword, swore to bear true allegiance to King Fernando VII.

To Dr. Quixano belongs the honor of having performed the first recorded autopsy in California. On October 12, 1812, Padre Andres Quintana of the Santa Cruz Mission was found dead in his cell, with the door locked on the inside. He had been ailing for some time, and when found the Holy Oils and

foothills, was used by the medicine men in afflictions of the respiratory tract. So efficacious and so valuable did it prove to the missionaries, that they called it "yerba santa" or holy plant. The second, the *rhamnus purshiana*, which grows luxuriantly in the timbered mountains of Southern California, was used extensively as a cathartic. So highly esteemed was it by the followers of the Cross, that they christened it "cascara sagrada," or sacred bark. The third, *grindelia robusta*, was used in pulmonary troubles and as external skin applications following exposure from the *rhus toxicodendron*, or poison oak. That these "medicine men" possessed considerable knowledge of anatomy and drugs and their uses is beyond question. Bustamente, in his "History of Mexico," narrates an amusing incident of one of these medicine men or "hechiceros" who was called to the City of Mexico and summoned before the College of Physicians, on the charge of being a quack. In reply to the accusation, he asked his judges to smell a certain herb, which quickly produced a severe nose bleed, and then invited them to check it. Seeing that they were unable to do so, he administered a powder which immediately had the desired effect. "These are my attainments," he exclaimed, "and this is the manner in which I cure the ailments of my patients." So adroit was the fatal Borgia-like decoction which the Indians administered to Father Pujal at San Miguel, that Surgeon Morelos, although summoned there from Monterey, was unable, in spite of an autopsy, to ascertain its nature.

The Padres possessed considerable medical knowledge and were capable of doing minor surgery and even more complicated operations, and they were really the medical Gibaltars in their establishments. Bancroft speaks of one of the Fathers, Marcelino Marquinez of Santa Cruz, as being particularly adept in medical matters. Each mission had its hospital, a single ward supplied with mats instead of beds, and each Padre had his little medical and surgical kit, one of which is still preserved among the treasures in the Mission at San Juan Bautista. A case is on record of one of the Padres amputating the arm of a disabled Indian, and doing it so cleverly that years afterward its success was attested by one of the Friars of San Buenaventura (Bard).

It is interesting to note that the two first Caesarian sections performed in California were accomplished, though unsuccessfully, by Franciscan Friars, one in San Francisco in 1805, the other in San Jose in 1825. The missionaries were required to perform that operation on all women dying undelivered during labor. Perhaps it is not amiss here to add that the first successful Caesarian was performed by that surgical genius, Elias S. Cooper, in San Francisco in 1859, and is a monument, not only to Dr. Cooper's skill, but to man's ingratitude to man, as out of it grew one of the greatest medico-legal battles that ever engaged the California courts. Cooper's name and fame have endured, while the doctors who instigated the suit have been consigned to the oblivion they deserve.

Bleeding was very much in vogue during this period, and many of the soldiers whom the Spanish Government sent to California were enrolled as phlebotomists, their salaries averaging \$450 to \$800

per annum. The lack of capable physicians led to the bleeders being consulted on all manner of cases when the lancet was applied, whether the management of the case required it or not. The great Washington is said to have been the victim of an ill-timed lancet. Bleeding became so abused in this period of our medical history that the barbers added it to their repertoire, and finally became so proficient that Governor Diego de Borica, in 1799, issued a "bando" prohibiting them from exercising that art. It is amusing to note at this period of medical history that the barber and surgeon were very closely allied. The father of Handel, the English composer, was a surgeon-barber, and the military surgeon of the period was often required to shave the regimental officer. There is no historical evidence to prove that our worthy Spanish predecessors were sprung from this school. On the contrary, they were, in several instances, graduates of renowned Spanish medical institutions.

That the Surgeon-General at Monterey was often required to visit distant missions, ranchos, and pueblos is verified by the Spanish records. In 1804, during the time Benites was surgeon at Monterey, he was required by the Mexican Viceroy to visit a number of the missions on account of the alarming mortality. This he did and forwarded an able and exhaustive report of the diseases encountered and their treatment. In 1802 a number of the Padres at the Mission San Miguel sickened and died. They were said to have been poisoned by the Indians. Dr. Morales was hastened to the scene and made the investigation which followed.

THE MEXICAN PERIOD, 1822-1848

As we have seen in the previous chapter, the medical history of California during the Spanish regime was marked by a dearth of doctors, drugs, and diseases. During the fifty odd years consumed in this period, there never was more than one doctor at one time in the whole province. According to Humboldt's estimates, California's population in 1802 was 9000, another estimate in 1822 was about 16,000, and in 1831 some 23,000; so that it was well for the one doctor sponsoring this enormous population that there was a dearth also of disease. The Spanish doctor dealt principally with scurvy, chronic dysentery, and phthisis, although Lues was probably the captain of the men of death, as it was this disease that decimated the Indians; but the Mexican physician had to contend with a totally different category of ailments. With the coming of the "gringo," an array of "winged and wan diseases" followed in his train, chief among which was smallpox, which first manifested itself in 1798. In 1834 it was particularly virulent in Sonoma. Some 12,000 Indians are said to have died there during that outbreak, and so fatal was the type, that it was impossible to dig graves for the dead, and General Vallejo had them interred in trenches, often so shallow that the corpses were barely covered with earth, where they fell an easy prey to the hungry bears and wolves. Dr. Platon Vallejo, the General's surviving son, tells a tragic story of one of the supposedly dead smallpox victims of this epidemic being entombed alive in the trenches before death had claimed him. A hungry grizzly awoke him from his lethal

sleep, and his agonized cries brought help, but not until one leg was partially devoured by the bear.

In 1825 there was an epidemic of measles, and of scarlatina shortly afterward, and in 1834 cholera reared its frightful head.

Monterey continued the capital of the Mexican province, and the following surgeons comprised the medical staff, not only of the Presidio, but of the territory:

I. Evan Perez de Leon, 1829; Manuel de Alva, 1831-1840; Manuel Crespo, 1832; Edward Bale, 1840-1843; Fautino Moro, 1844.

Manuel de Alva was a Mexican surgeon who came to California with the Governor, Figueroa, who introduced printing into California. Although the doctor was somewhat of a politician, he was devoted to his Governor; but in 1835 Figueroa died of apoplexy and, having played a prominent part in the struggle for Mexican independence, he felt that the republic would wish to pay him fitting honors when dead. So, before succumbing, he requested that Dr. Alva would embalm his remains and have them entombed in the vaults of the Mission at Santa Barbara, there to await the honors which a grateful Mexico would bestow upon him in their capital city. This the doctor did, using a great quantity of arsenic. Ten years later they raised the lid of his casket, but nothing remained of the gubernatorial remains. Mexico never sent for the ashes, and Alva blamed the arsenic: "*Vanitas Vanitatis*." Two years after Figueroa's death, Dr. Alva, with other Mexicans, revolted against Alvarado, for which he was arrested and confined at San Miguel; but escaping, he joined the Carillo faction, only to be arrested again in 1838. He was released on a promise of non-interference in politics. At first he was noted as a freethinker, but at length, because of illness, became devout, and in 1840, obtaining a Mexican passport, he disappeared from the picture.

Manuel Crespo does not appear to have been an authorized surgeon, but a Mexican phlebotomist, and Fautino Moro played a small role for a brief period only as the Mexican "official de salud militar." In 1837, there landed at Monterey a young English surgeon, Edward Turner Bale, probably the first Anglo-Saxon resident physician at Monterey. He was a man of good education, but quarrelsome. Soon after his arrival, he married Maria Ignacia Soberanes, a niece of General Vallejo. The latter appointed him in 1840-1843 surgeon of the California forces, the only Anglo-Saxon who ever occupied that position. Soon after this appointment, he rented a room from the United States Consul, Larkin, with the idea of establishing a drug store. This degenerated into a liquor shop, and the doctor came into collision with the authorities. In 1841, he became a Mexican citizen, and his wife's uncle, General Vallejo, presented him with a large tract of land in the neighborhood of Yount's "Carne Humana Rancho," in the beautiful Napa Valley. There he went on the expiration of his appointment with the California forces. Not long after his arrival at the rancho, Capitan Salvador Vallejo paid his household a visit. Salvador had been long absent at the Indian wars, and his niece, Mrs. Bale, was delighted to see her uncle, and in true Califor-

nia fashion she expressed her pleasure most warmly and affectionately. But the doctor, being extremely jealous of his handsome wife, resented the affectionate greetings bestowed and exchanged, and challenged Capitan Vallejo to a duel. The latter was the most famous swordsman of his day in California, and far outclassed the doctor, whom he whipped as if he wielded a willow stick instead of a sword, which so incensed the doctor that he attempted to shoot his antagonist. This landed him in jail and almost cost him his life. A number of foreigners, notably the Kelseys, attempted to rescue him, which caused great excitement. In 1846, the doctor went into the lumber business, and he died a wealthy man in 1849.

In spite of the Surgeon-Generals being stationed at Monterey, there were many times in their absence from the capital when the settlers or sojourners were dependent upon the visiting medical men aboard men-of-war, whalers, or trading-ships, and it is a tradition in the Field family that they often pressed into service these visiting medicos. William Heath Davis, in his "Sixty Years in California," narrates an occasion of this sort. In 1831 he visited Monterey aboard the bark Louise. While she was lying at anchor in the bay, Davis fell into the main hatch, was rendered unconscious, and fractured his arm. At the time there was no resident surgeon in Monterey, and had it not been for the presence of that distinguished Scotch doctor, as well as botanist, who has left his name forever associated with our noble fir and spruce trees, Davis could not have recounted that delightful reminiscence of Dr. David Douglass, who came to these shores aboard the Dryad from the Columbia River country. Speaking of fractures of the arm and dearth of doctors, it is interesting to recall that the Portuguese navigator, Cabrillo, who first discovered these California shores in 1542, found a nameless grave on San Miguel Island in the Santa Barbara channel, because he had fractured his arm and there was no surgeon aboard to set it properly. It was a Russian physician, as well as naturalist, who came with the Russian exploring ship Rurik in 1816, Otto Von Kotzbuie, Commander, who left his identity indelibly and perennially emblazoned on the California hillsides. Dr. Johann F. Eschscholtz gave his name as the botanical cognomen of our famed poppy, which the Spaniards had earlier appropriately hailed as the "Copa de Oro."

Alfred Robinson, who came to Santa Barbara in 1829, records in his "Life in California" that there were no doctors in that country, and every foreigner was supposed to know something of the practice of medicine. One night, shortly after his arrival, being called upon to prescribe for a woman in great abdominal pain, he suggested a few drops of laudanum, which immediately relieved the sufferer, and established his fame as a medico. To illustrate the point further, he narrates the tale of an absconding American sailor who deserted his whaling ship at a neighboring port and walked to Santa Barbara, where he set himself up as a physician. His efforts were soon crowned with success among the ignorant class, where his pretended remedies wrought marvelous cures. But his medicines could not have withstood the acid tests of the pure food laws, to say

nothing of the prohibition agents, as his nostrums reeked of "aguardiente." Santa Barbara's first physician was probably not a sheep-skin M. D., but an old trapper, a native of Maine, endowed with all the lore of the woods, and the trail, and trained in the emergency school of the frontier. These hunters possessed considerable medical skill. Kit Carson, the hero of a thousand frontier romances, at the age of 18, and equipped with only a razor and a handsaw, successfully amputated, in an amphitheater of the woods, the shattered arm of one of his comrades and seared the blood vessels with a heated iron bar. Bard says "the stump would have reflected credit upon the modern aseptic surgeon." Pegleg Smith, the "El Cojo Smith" of Bancroft, having had his leg mangled by an Indian's bullet, and being alone in the wilderness, sat himself down under a tree, and with a courage born of determination and necessity, ligated his own shattered limb with a buckskin thong taken from his hunting-coat and then courageously amputated the useless member with his hunting-knife. Of this heroic school, Isaac Sparks was a disciple, and he practiced at Santa Barbara from 1833 to 1841.

In 1836, Nicholas Augustus Den arrived in Santa Barbara aboard the *Kent*. He came from an excellent Irish family, and was a brother of "Don Ricardo." Dr. Nicholas Den had studied medicine at the University of Dublin, although he was not a graduate (Bancroft). On arriving at Santa Barbara, he acquired considerable property and launched his career as a cattleman, which was the pursuit of pastoral California, and in which he amassed a fortune. But the settlers, knowing of his medical training, frequently called upon him and he was obliged to leave his rancho to relieve their ailments and sufferings. He was particularly adept as a phlebotomist. William Streeter was another pioneer medico of Santa Barbara. He had studied in several medical offices in New York, but had never acquired a diploma. He, with Stephan Smith of Peru, is said to have brought the first steam engine to California, which they set up at Bodega.

Probably the first regular M. D. to settle there was Dr. James L. Ord, assistant surgeon of Company F, Third United States Artillery. He arrived in 1847. The first time he did not remain long, but he returned later to spend the greater part of his life. Early in his career, he married one of the handsome daughters of the de la Guerra family. Thus, allied to one of the proud old Spanish-California families, he occupied a unique position in the early annals of California. For his surgery, he had a reputation up and down the California coast, and was frequently called to distant ports, notably to Monterey, to operate. Dr. Ord was a native of Maryland, and through his veins coursed, not only the blue blood of the old South, but the bluest of England, as his father was the romantic offspring of King George IV, and Mrs. Fitzherbert, whom he, as the Prince of Wales, had married in December, 1785. (Memoirs of James Ord.)

Another interesting figure of the 50's was Ramon de la Cuesta. Neither was he an M. D., but he served some time as an interne in a hospital and, although he had no desire to practice medicine, so

successful was he in the treatment of the diseases of children, that he was continually in demand in his neighborhood. He thus becomes the pioneer pediatrician in California.

Dr. James B. Shaw, a graduate of the University of Glasgow, and of the Royal College of Surgeons of London, was a pioneer of 1850, and he became the first president of the Santa Barbara County Medical Society, and one of the distinguished physicians of that community.

Although Los Angeles was founded in 1771, when it had a population of forty-four, it was not until January, 1836, with a population of some 1250 souls, that the first physician appeared, and he proved to be one of the most interesting figures that ever entered California, which Dr. John Marsh did by way of Santa Fe. He was a native of Massachusetts and a Harvard graduate, both in letters and medicine. According to the Archives of Los Angeles, under date of February 18, 1836, one Don Juan Marchet (John Marsh) presented himself before the Ayuntamiento or Town Council and declared his intention of locating there and also that he was a physician and surgeon. Permission to practice was granted February 25, 1836, in these words: "The Illustrious Body decided to give him permission to practice medicine, as he has submitted for inspection his diploma, which was found to be correct, and also for the reason that he would be very useful to the community." As his Harvard diplomas were written in Latin, no member of the Illustrious Body of the Ayuntamiento could read them. Neither could anyone else in the Los Angeles of the period designated, so it was necessary to take them to San Gabriel for the mission Padres to translate. There they were found correct, and the doctor was granted a license to practice. So he set up his office and must have had a considerable clientele, as there was no competition. Neither was there any money in the old pueblo, and he had to take his fees in horses, cattle, and hides. This seems to have bothered the doctor considerably, as Bancroft notes his parsimony, and as it was difficult to carry such currency around; so he decided to abandon the pursuits of Aesculapius and take to the pasture and range. This he did in 1837. The same year his name appears upon Larkin's books at Monterey, and shortly afterward he acquired Noriega's Rancho of "Los Madonnos," in the shadow of Mount Diablo near the modern town of Antioch. Here he became the pioneer physician of the district and accumulated great wealth in livestock. In 1844 Dr. Pickering, connected with Wilke's United States Exploring Expedition, and an old Harvard classmate of Marsh's, visited him at the rancho and found him living in a little hut, the life of a hermit. The doctor was instrumental in bringing the first immigrants to California. This party included Bidwell, who founded Chico and the State Normal School there. However, these first immigrants do not speak of Marsh in glowing terms. Neither does Bancroft eulogize this pioneer medico; but says he was peculiar, generally disagreeable, and was notorious for his parsimony. Yet he was honest, was possessed of more than ordinary ability, and several of the Californians, notably Vallejo, speak of him in terms of warmest praise. Like many of

the pioneers, he espoused a native by whom he had several children. He was murdered in 1856 by a party of young Californians in the neighborhood of Martinez. His rancho is still known as the Marsh grant.

That the barber-surgeon played some part in the early medical history of Los Angeles, is proved by an advertisement that appeared in Commercial street, and is quoted by Newmark: "Gentlemen will be waited on and have shaving, hair-dressing, and shampooing prepared in the most luxurious manner and in the finest style of the art, while cupping, bleeding, and teeth-extracting will also be attended to."

A most interesting figure in the Los Angeles medical world in the days "before the 'gringo' came" was Dr. Richard Somerset Den. The Angelinos, who held him not only with esteem, but with affection, dubbed him "Don Ricardo," and he fits most magnificently into our ideas of the "splendid idle 40's." He was an Irishman of culture and refinement and a medical graduate of the University of Dublin, where he received a thorough training as a physician, surgeon, and obstetrician. After his graduation in 1842, he was appointed surgeon of a passenger ship bound for Australia. On his return he visited his brother Nicholas in Santa Barbara, and resigned his position. He was then 22 years old. In 1843 he was called to Los Angeles to perform several difficult surgical operations. The outcome was so successful that the leading citizens, native and foreign, petitioned him to remain in Los Angeles, and this he did, starting practice there in July, 1844. From that time on until his death in 1895, he devoted himself to his profession there, with the exception of a brief period in 1848, which he spent at the mines, and about twelve years from 1854 to 1866, which he employed in stockraising at his ranch at San Marcos. He served during the Mexican War as chief physician and surgeon of the Mexican forces, and treated, among others, the famous American Consul, Larkin. Newmark says "he was seldom seen except on horseback, in which fashion he visited his patients, and was, all in all, somewhat a man of mystery. He rode a magnificent coal-black charger, and was himself always dressed in black. He wore, too, a black felt hat; and beneath the hat there clustered a mass of wavy hair as white as snow. In addition to all this, his standing collar was so high that he was compelled to hold his head erect; and as if to offset the immaculate linen, he tied around the collar a large black silk scarf. Thus attired and seated on his richly caparisoned horse, Dr. Den appeared always dignified, and even imposing." One of his associates, Dr. Walter Lindley, recalls him as "impressive" and that his magnificent black horse was always groomed to perfection. "Dr. Den himself was invariably well groomed, being at all times dressed as though he were going to a wedding. But he never attended his own, and died at an advanced age a bachelor. He never made a visit for less than \$20." His hobby was horse-racing, and his magnificent steeds were bred for him at Santa Barbara. As a miner in 1848, his luck was indifferent, but as a physician in the mining camps, his skill was so phenomenal that he is said to have received as much as \$1000 in a day for his advice and practice.

Dr. J. T. Griffin was another well-loved physician, not only among the pioneers, but among a later generation. He was chief surgeon of the First Dragoons and came with General Kearney overland to San Diego in 1846, and from there to Los Angeles in January, 1847, where he had charge of the General Hospital. But his medical history there really begins in 1854 and terminated August 23, 1898. He was a brother-in-law of General Albert Sidney Johnston of Civil War fame. He himself was a Virginian and a graduate of the University of Pennsylvania. Lindley says "he carried a brusque and somewhat forbidding mask to cover a tender, generous heart." His fame may be measured by the fact that he was summoned to San Francisco as a consultant on the renowned James King of William case.

Of quite another ilk was William Money, a Scotchman, who arrived in Los Angeles in 1844 "as the servant of a scientific man whose methods and ideas he adopted." (Bancroft.) He practiced for a long time after his arrival, and in 1855 issued the first medical book published in California, "The California Family Medical Instructor," which contained his three physical systems, fifty plates of the human body, and a list of five thousand patients who had been under his care, of whom only four died while under his treatment. It is said that not a copy of the book exists today which happened this way—"not that the book was fatal to the reader; it had very few, but the readers were fatal to the book." They could not throw it away fast enough. But Money was torn between his love of science and his passion for religion, and Cowan records in his bibliography his second book, entitled "Reform of the New Testament Church," by William Money, bishop, deacon, doctor, and defender of the faith of Jesus Christ. This self-constituted doctor and self-anointed bishop died in 1890 at San Gabriel, and left many tomes of California early medical history and his own scientific deductions, all of which were lost.

The first doctor in San Diego was Pedro Prat, who founded the tent-hospital at Dead Man's Point. From then (1769) until the medical officers attached to our army and navy detachments between the years 1844 and 1850, that community was at the mercy of the itinerant traveler of land and sea, the medicine man, the bleeder, and the chemist.

James Ohio Pattie, a Kentucky trader, played the role of one of San Diego's greatest medical benefactors. It was in the days (1828) of Echeandia, the Mexican Governor, that Pattie and his father arrived in San Diego. The former threw them both into jail, where the father promptly died, and James Ohio would have shared the same fate had it not been for his knowledge and possession of a medical fact and its means of accomplishment. Smallpox was raging in California. Already many thousands of the Indians and Spaniards had died, and Echeandia trembled in his gubernatorial mansion. In exchange for his freedom, Pattie, who possessed some vaccine, promised to vaccinate him and everyone else in the territory; so he was liberated and began his Herculean task at San Diego with the Governor, the missionaries, and then the garrison and neophytes. From there he worked northward, even-

tually reaching San Francisco and the Russian colony at Bodega. In all, Pattie claims (Personal Narrative) that he vaccinated 22,000 persons. For vaccinating the Bodega colony, the Russians gave him \$100. For his great service to the Territory of California, Padre Juan Cabot, probably in the name of the Governor, offered him 500 cattle and 500 mules with land on which to pasture the same, providing he would embrace Catholicism and become a Mexican citizen, both of which propositions he refused. But to him, undoubtedly, belongs the honor of having vaccinated at any one time more people than any other one man, doctor or otherwise, before or since in California history.

One of the earliest San Diego practitioners was Dr. George McKinstry Jr., a Virginian, who practiced there for over twenty years. Before he settled there, he had an adventurous career, being the first sheriff of the northern district at Sutter's Fort, and was a hero of the Donner party rescue, for whom, on account of his medical knowledge, he was able to apply relief measures, but he was never able to settle down to the general routine and grind of a practitioner. There were many days when he answered the call and disappeared for a long time among the Indians.

Other pioneers were Minder, Burr, C. Hoffman, and Robert H. Gregg. Dr. Wozen Craft, who had been a member of the first convention at Monterey, was also the first physician to locate in San Bernardino, and Dr. Cepbas L. Bard, the first graduate physician to locate at Ventura, although he had several worthy predecessors among the early pioneers who possessed some knowledge of medicine, but no degree thereof, notably Dr. Pali, a Castillian, Dr. Ishbell, and Don José Cruz, a man of ability who gave his services gratuitously.

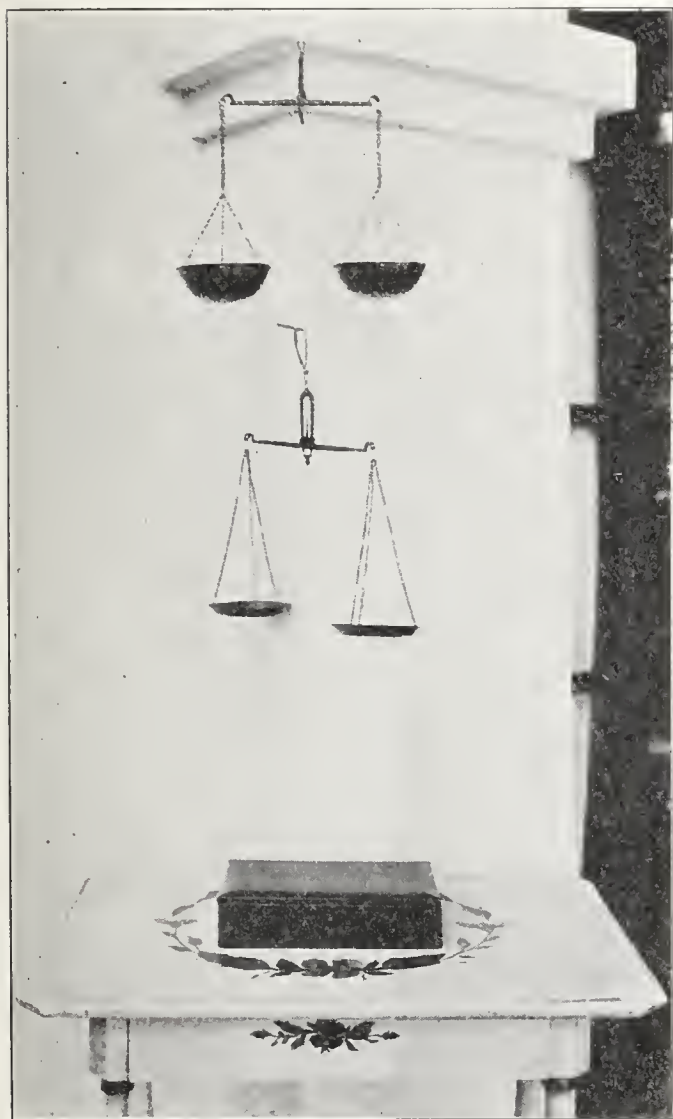
In the North, although the Mission Dolores and the Presidio date from 1776, the medical history of the peninsula did not begin until the naming of the cove which extended between Clark's Point in the northwest to Rincon Point in the southeast—Yerba Buena. It derived this name from the plant, a species of micromeria which grew luxuriantly on the hillsides flanking the cove. Yerba Buena was a great favorite among the Indians, who had proved its medical worth as a febrifuge, emmenagogue, carminative and anthelmintic, and early Spaniards added it to their pharmacopoeia. Up to 1835, only vessels came to anchor in the cove, but during that year Captain W. A. Richardson was appointed the first harbor master and he built the first house the same year at Yerba Buena. Two years later Jacob P. Leese built the second house and the first store in the village. On the first of April, 1837, he married General Vallejo's sister, and the year following Rosalie Leese, the first child born in Yerba Buena, arrived on the scene. But there is no evidence that an M. D. presided at the momentous occasion, and it is probable that a partera or midwife, or a partero or man midwife, a functionary peculiar to the native Californians, did the honors. In 1836 Nathan Spear, a native of Boston, where he had been in the drug business, formed a partnership with Leese in the store which the latter had already founded. And although the village grew but slowly,

when any of the settlers for miles around were ill, Spear was pressed into service on account of his superior knowledge regarding drugs. In 1844 there were only half a dozen houses, and a population not exceeding fifty persons at Yerba Buena. In 1846 the population numbered 200; in 1847, there were seventy-nine buildings and a population of 459, and out of this number, according to the "Annals of San Francisco," three were doctors: Dr. John Townsend, Dr. Victor Fourgeaud, and Dr. E. P. Jones.

That Dr. John Marsh was in Yerba Buena in March, 1837, is proved by a letter in his handwriting from there, and still in existence (Kress), but the first resident graduate doctor was Dr. John Townsend. He was a Virginian by birth, and with his wife, and brother-in-law, Moses Schallenger, crossed the plains in 1844, being members of the Elisha Steven's party, which was the second to make the overland journey from Missouri and the first to cross the Sierras by way of the Truckee River, which subsequently became the railroad route. Townsend's ultimate idea in coming to California was to practice medicine, but as a side issue; he and Schallenger, when they left Missouri in May, 1844, carried a big consignment of silks and satins in their covered wagon which they intended to sell to the Spanish ladies on reaching California. But it was winter before the party reached the Sierras and the first snows were falling. This filled the pseudo-merchants with dismay, as they feared their supply of silks and satins would be water-soaked. Before they reached the summit, their horses and oxen were floundering in the snowdrifts, and it was evident to the doctor that his stock would be ruined long before he reached the Sacramento and Sutter's Fort, unless he could make some provision in the Sierras to house it until spring. So he and Schallenger constructed a log house and made it as water-tight as possible, and stored the precious satins away until the spring and summer suns would make their transportation possible. Schallenger remained behind to guard the goods while Dr. Townsend and his wife pushed on through the drifting snow to Sutter's Fort. Although Schallenger's experiences that winter, alone in the bleak fastness of the Sierras, do not concern us here, suffice it to say that the story of that winter is one of the great epics of the mountains.

On reaching California, Townsend embarked on an adventurous career, serving as Sutter's aid and surgeon in the Micheltorena campaign. In 1845 he was practicing medicine for a short period at Monterey, and in 1846 he built his residence, with office combined, on his fifty-vara lot on the south side of California street, between Montgomery and Sansome streets, where the Merchants' Exchange stood for many years. Here he hung out the first medical shingle posted in Yerba Buena, and here it may be said was rocked the cradle of medical San Francisco. Townsend took a prominent part in public affairs and, being a man of education himself, he was instrumental in founding the first school which was erected on the west side of the Plaza (Portsmouth Square) in April, 1848, and of which he, Dr. Victor J. Fourgeaud, C. L. Ross, J. R. Serrini, and William Heath Davis became trustees. He also laid out as a suburban town the Potrero Nuevo on the beau-

tiful sloping banks of Mission Bay, but owing to the distance from town, it was a long time before there was a demand for lots. In 1848 he was elected Alcalde, or Mayor, of the growing city, the name of which about this time was changed to San Francisco. It was also in this year that the doctor went to the mines, but finding that life not to his liking he returned to his practice in San Francisco. Later, in 1849, he bought a ranch near San Jose, and while he and his wife were enjoying their little holding, the cholera epidemic, which had first manifested it-



Scales used for weighing drugs, and the case for fine ear and nose instruments used by Dr. Manuel Quixano, now in the possession of his great-granddaughter, Miss Maria Antonia Field of Monterey.

self in the harbor, galloped down the beautiful Santa Clara Valley, and although the doctor did everything within his power to treat his neighbors and stay the wild havoc wrought in its track, both he and his wife fell victims to the scourge. And so ended the career of the first adventurous Aesculapian of San Francisco. Bancroft says he was a man of excellent character and of genial enthusiastic temperament. In the Clyman Diary, he is described as "much attached to his own opinions, as likewise to the climate and country of California. His pleasant wife does not enter into all her husband's chimerical speculations."

The second graduate physician and surgeon to arrive in San Francisco was Dr. Victor Jean Four-

geaud, who was born in Charleston, South Carolina, April 8, 1817, and was a graduate of the Charleston Medical College. After receiving his degree there, he supplemented his training by matriculating at the University of France, where he spent about four years doing post-graduate work, and was subsequently granted a degree. Being endowed with considerable literary ability, he commenced, while in France, a history of medicine. This subject engrossed him during the rest of his life, but I can find no record of its publication. On his return to this country, he settled in St. Louis, Missouri, which was then the pioneer land of enterprise. Here he started his professional career and his efforts were crowned with success and distinction, and he became there the leading medical man of the period. Among other achievements, he founded the St. Louis Medical and Surgical Journal and became its editor, but having acquired fame and distinction so early in his career, he began, like Alexander, to long for other fields to conquer. St. Louis, at this period in the early 40's, was the frontier station of the far West and the resort of the agents and employes of the great Astor "American Fur Company." The narrative of these trappers, traders, and factors inspired his romantic and adventurous disposition with the grandeur and resources of the Pacific side of the continent. At length he could no longer endure the humdrum existence of a frontier Missouri practitioner. He had climbed to the topmost rung of the St. Louis medical ladder of that day, and having reached the top and looking ahead he saw the years stretching away in an unendurable array, but beyond the horizon there was the Pacific, there was adventure! This fired his imagination; so he climbed down the ladder he had so painstakingly erected, rung by rung, and an April night in 1847 after a first day's march, found the doctor, his wife and their little son encamped alone twenty miles from St. Louis. Six months later, October 21, 1847, we find him again, encamping this time on the banks of the Sacramento River near Sutter's Fort at a point now known as the foot of J street (Sacramento). General Sutter, with the hospitality that always distinguished him, proffered the doctor the hospitality of his fort, but the latter preferred his nomad tent. Eleven days later we find him installed at Yerba Buena, on the Bay of San Francisco, predicting it would be the great metropolis of the Western coast. Here, and in Sacramento later, he made rapid strides to fame and fortune, in both cities occupying a foremost place in the medical world and becoming editor of the pioneer San Francisco Medical Journal. The gold discovery drew him to the mines, and in Sacramento he remained until 1863, when he returned to San Francisco, where he practiced until his death in January, 1875. He was universally mourned as honorable, noble and brave, and his laudatory obituary notices affirm that from "the responsibilities of his calling he never shrank, its exposures he never feared." According to Bancroft, his offices in San Francisco in 1847-1848 were in block 20, bounded by Kearny, Clay, and Sacramento. As we have seen, he was one of the founders of the first school in San Francisco, and he made the first assay of the gold found by Marshall at Sutter's Mill (Eldredge).

To stimulate immigration, which had lagged on account of the Mexican War, he was engaged late in 1847 to write a long article on California and the advantages it offered in its climate and soil to the husbandman, stock-raiser and artisan. This he did, entitling the same "The Prospects of California," setting forth its prospects and resources. This was printed in six columns of an extra number of the California Star bearing the date of April 1, 1848. The same date a courier was dispatched with two thousand copies overland on a contract to reach Missouri in sixty days and spread the document (Hittell). The paper of April 1 mentioned the rumored gold discovery and treated it as of no importance, but on June 14 the same California Star was compelled to suspend, as all its employes, even down to the printer's devil, had struck work and gone off to the diggings, and with this throng headed toward the auriferous hills went Fourgeaud and Townsend.

Although the Annals specifically mention three doctors as residents of San Francisco in June, 1847, exclusive of those connected with Stevenson's Regiment of New York Volunteers stationed here at the time (one of whom William C. Parker practiced in San Francisco up to 1876), I have had great difficulty in distinguishing the third medico and have finally discovered him in the person of Dr. Elbert P. Jones, the editor of the California Star, the first newspaper published in San Francisco. Dr. Jones, if his title denotes medicine, was a capable jack of all trades. The educated man of this generation was not a specialist in one line of endeavor. He could do many things well; for instance, Thomas Jefferson is said to have been the master of eight professions. Bancroft says he was a man of much talent and versatility. A native of Kentucky, he practiced law in San Francisco, was the first editor of the Star, kept the Portsmouth House, was a member and secretary of the Town Council, took an active part in political wrangles and became the owner of many city lots, and gave his name to Jones street. The doctor was a most eccentric character. He wore a long velvet-lined voluminous cloak with the air of a Spanish grandee, and it was said he had acquired more nuggets and gold-dust than any other man in California. And this gold became the grand passion of his life, and one of his greatest pleasures was to spread sheets upon the floor of his bedroom and to pour his gold-dust upon them. Then pushing his naked feet through the dust, he would take it up in great handfuls and shower it upon his head and shoulders and then roll and wallow in the glittering metal, thus partaking of the enamored Danae and her illustrious paramour, Jupiter. Dr. Jones was also a disciple of Bacchus, and once when under the influence disposed of some seventy-one of his choice lots. He died in Charleston in 1851. So ends the Mexican period, an era ushered in by revolution, and out by war. In a few communities were doctors with the traditions of a medical training behind them, but most of the pueblos and villages were dependent upon men who had a smattering of medical knowledge and who were glad to do what they could to alleviate the ills of their fellow-men gratuitously. As Bard expresses it, "everyone was a self-constituted physician and the provincial adage:

'De medico, poeta y loco,
Todos tenemos un poco.'

(Of medicine, poetry and insanity, we all possess a little) was the outcome of the times." The medical men of both the Spanish and Mexican periods occupy an unique position in medical history. On account of the lack of roads and the distances to travel in this sparsely populated country, they were dependent upon the broncho and so became expert horsemen. In the Mexican period the majority of the doctors were Anglo-Saxons, and brought in contact with another race they all became expert in the Spanish tongue. Peril and adventure dogged their footsteps. Many of them died violent deaths, and hardly a doctor mentioned here but would fill the role of a hero in one of our modern novels of romance and adventure, but their labors and privations were fully appreciated, and no one stood higher in the esteem of their respective communities than did these pioneer physicians.

THE AMERICAN PERIOD, 1848-

Not only did the Treaty of Guadalupe Hidalgo terminate California's Mexican connection, but it also severed the government medical tie, and the last Surgeon-General of Spanish extraction returned to his home. During both of the preceding periods, Monterey had been the medical center of California as the seat of the Surgeon-General; especially was this true during the Spanish regime, when California could boast but one competent medical advisor at a time, but during the Mexican period, due to the increase in population, such important communities as San Diego, Los Angeles, Santa Barbara, Santa Cruz, and San Francisco began to attract their own medical advisors, as related in the preceding chapter. At the close of the Mexican War, San Francisco, which was just emerging from the village of Yerba Buena, became the maritime rival of Monterey and could boast of three doctors, but Marshall's discovery of gold during the winter of 1848, in the tail race of Sutter's Mill at Coloma, turned the trend of California's development, and she awoke from her pastoral dream to find herself at the vortex of the mining furore. Immediately the whole coast from San Francisco to Los Angeles, from the seashore to the Sierras, "resounded with the sordid cry of gold," and California emptied her male population into the "Diggings." Even the doctors—Bale of Monterey, Richard Den of Los Angeles, McKinstry of San Diego, Townsend and Fourgeaud of San Francisco, flocked to the mines, but not as physicians. They had exchanged the scalpel for the shovel. Not only was California resounding with the cry of gold, but the whole world had heard that report even as it had responded to the momentous shot of Bunker Hill. Bishop Berkeley's prophetic words became fact. If, as it had been said, "every road leads to London," in "the days of '49" the proverb was reversed and every road by land and sea was choked by the Argonauts headed toward California. The San Francisco Bay became a leafless forest, so close were the masts of the deserted sailing vessels packed together. And among these immigrants and emigrants estimated at 100,000 up to January 1, 1850, were hundreds of doctors, all bent on one thing—mining. So to understand just what type of medico swarmed about California's auriferous ravines like bees about a hive, it is necessary to conduct you to the gold mines which clus-

tered about Sacramento, the medical center of the Golden Age. "Dame Shirley," the wife of Dr. Fayette Clappe, a Massachusetts physician and surgeon who came to these shores in 1849 and opened the first medical office at Rich Bar on the Feather River, supplies us with the best medical picture of those stirring days in the mining camps. At first Dr. Clappe was the only doctor on the Bar, but in a few weeks he was one of twenty-nine, although the population did not exceed one thousand. His office was the only one on the river, and was a "beautiful architectural idea embodied in pine shingles and cotton cloth." It was ten feet long; a bench like a divan ran the whole length of the room. A rude nondescript in one corner, on which was ranged the medical library consisting of half a dozen volumes, did duty as a table. Shelves, which looked like sticks snatched hastily from the woodpile and nailed up without the least alteration, contained quite a respectable array of medicines. The white canvas window stared everybody in the face, with the interesting information painted on it in perfect grenadiers of capitals that this was "Dr. —'s office." The walls were decorated with sundry pictures from Godley's, Graham's and Sartain's magazines, among which fashion-plates with imaginary monsters sporting miraculous waists predominated. One day Dame Shirley visited her husband's office and encountered there a patient, a young Georgian who had not had the opportunity to speak to a woman for two years. So elated was he over the event, that he rushed out and invested in a bottle of champagne which Mrs. Clappe assisted the office force in drinking, acting on Willie's principle of "doing in Turkey as the Turkeys do." This bit of atmosphere is repeated, as nothing could be done in the California of that day "without the sanctifying influence of the spirit," even if it was in a doctor's office.

All the gold seekers were heirs to frightful accidents. The doctors dealt not so much with disease, although typhoid, malaria, erysipelas, and dysentery ran rampant in the mountains, as they did with surgical cases often of a terrible nature. What the mountain mining camps really required was a force of our modern ambulances and emergency surgeons. Great rocks were frequently rolling down the steep mountains and maiming the unsuspecting miner working in the river bottoms, or the unwary fell into the numerous pits of the prospectors which honey-combed the canyons. Dame Shirley records that "in the short space of twenty-four days we have had several murders, fearful accidents, bloody deaths, whippings, a hanging, an attempt at suicide, and a fatal duel." The accidents included stab and gun-shot wounds, shattered limbs and thighs, and compound fractures. This type of case taxed the ingenuity of the surgeon to the utmost and he was forced to act quickly and undertake the gravest surgical operations without counsel or time to prepare himself for the duty. Dr. E. S. Cooper, who founded the first medical college in California in 1859, in realizing the emergency equation in California surgical work, offered in the first prospectus of the Medical Department of the Pacific, a course in experimental surgery by vivisection—the class to repeat these experiments under the eye of the Pro-

fessor of Surgery, to school the hand, the nerve and the eye of the pupil in order to prepare himself for the numerous casualties and emergency cases encountered. The first surgical case upon which Dr. Clappe operated at Rich Bar was that of a Massachusetts lad, whose leg had been mangled by falling rock. The poor fellow was horrified at the idea of an amputation in the mountains and lay helpless for about six months in his bed, nursed only by the red-shirted miners. First typhoid assailed him, then erysipelas attacked the shattered limb and reduced it to a mass of disease. His intense sufferings were beyond description. Dr. Clappe felt that nothing but an amputation would save him. The other twenty-eight doctors on the Bar opposed him en masse, arguing that the patient would expire under the knife and it was cruel to subject him to further suffering, but they all agreed he would succumb unless the diseased leg were amputated. So Dr. Clappe decided to operate. Failure meant the loss of his reputation, but he waived all selfish considerations and the result was triumphant; although the patient's existence and Dr. Clappe's reputation hung in the balance for many days. Its successful outcome was no mean accomplishment in a day distinguished for its lack of every surgical appurtenance.

The life of another pioneer medical man in the Diggings, Dr. Edward Willis, is related by John Harwood and illustrates two types of doctors who flocked to the mines. Willis was an English surgeon, a graduate of Edinburgh and London, who settled at Placerville, in the days when that community consisted of "two chapels, six taverns, five stores for groceries and dry goods, a gambling-house and a printing office." All the rest of the dwellings were huts or tents, mostly tents. The doctor established himself under canvas, dividing his tent into two unequal parts with a piece of sail-cloth. The larger of these compartments he used as a dwelling, the smaller he styled grandiloquently the "Surgery," and there he spread out on rough pine shelves and an unplanned table his store of medicaments, surgical instruments and general scientific apparatus, some splints, a great jar of leeches, a microscope, a stethoscope, the implements of dentistry, a few chemical retorts and alembics, and several bottles containing preparations preserved in spirits which the doctor had purchased in San Francisco, and were intended purely for show, as the miners stood in great awe of such matters, and considered no doctor worth his salt who had not something curious wherewith to astonish them. At the entrance to this canvas abode, the doctor erected a blue sign inscribed in gold letters, "Surgery," and below, "Dr. Edward Willis, M. R. C. S., Surgery and Physic in all branches. Sets bones, draws teeth painlessly, bleeds, advice gratis." The surgery became a favorite rendezvous for the miners in tattered jerseys and picturesque black beards, and although they sought but little medical advice, they kept the atmosphere of the place blue with smoke and the earthen floor lubricated with tobacco juice. At the time the Englishman arrived there was one other doctor in Placerville. He was an American—Hullings by name and was said to be a man of learning and ability although a debauchee, but it is doubtful whether he ever saw a

regular medical college or possessed a sheepskin. He was tall and bulky, wore a black coat, a Mexican sash round his waist and velvet calzoneros of a bright green. He was generally too drunk to feel a pulse, much less to perform an operation, although the greater part of a practice at the Diggings was of an emergency type and at that surgical. Hullings resented the new doctor's arrival at Placerville, as he considered that location, by preemption, belonged to him. Dr. Cooper speaks of this same spirit manifesting itself in San Francisco at the time of his arrival in 1855. Those who came earlier felt that a previous advent and earlier residence amounted almost to superior caste and precedence, and greeted the new professional men with positive enmity and distrust. Hullings instilled this same feeling in Dr. Willis, finally announcing that the Englishman would have to leave. This he refused to do and the former arrived one day at his "surgery" and requested a sight of the Englishman's diplomas and certificates. Called on thus publicly to show his diplomas, Willis could not refuse, and Hullings had no more than received them than he tore them across the middle and then deluged their owner's face with a jet of tobacco juice. In the duel which followed, Hullings paid this insult with his life, and if they had death certificates in those days it bore the triumphant name of Edward Willis, M. R. C. S., and that was how he obtained his California practice.

James L. Tyson was another doctor of the '49 period who arrived in San Francisco, then a town of "wood and muslin," in May of the pioneer year and proceeded to the "Diggings" where he proposed practicing. He shipped for Sacramento on a sailing vessel. His passage cost him \$25, exclusive of food or stateroom, the passengers being forced to provide their own meals, and for bunks to wrap themselves in their blankets on the deck. Having arrived at Sacramento, it cost him another twenty-three-odd dollars to transport his baggage by oxen to the Dry Diggings on the south fork of the American River. There he set up his office in a tent and indulged in considerable bleeding. Although perfectly well, the miners would insist on its performance, and as the charge was an ounce of gold for each, he would gratify them and sometimes would have two or three bleedings around his tent at once. As the food supply at the mines was limited, the miners were forced to a diet of dried and salted meat. Vegetables and fruit were almost unknown. As a result, scurvy was one of the chief complaints of the mountains and was the underlying cause of most of the existing diseases, consisting of rheumatism, dysentery; and brain fever, intermittent, remittent, and continued fevers, the latter early assuming a typhoid character. As most of the gold-seekers continued to work while ill, Tyson records in his "Diary of a Physician" that he never saw so many broken-down constitutions as during his brief stay in California. He enjoyed a considerable practice at the "Dry Diggings," but was finally induced to build a hospital between the Yuba and Bear rivers on a spur of the Sierras, and there he went with his building material strapped to his saddle, which consisted of 100 yards of cotton duck which he made a special trip to the "Embarcadero" at Sacramento to procure. With the help of his cook and steward, some tall, slender pines

were felled, upon which the duck was stretched, and so the hospital was constructed, but before it was completed a poor fellow lying under the trees begged for admittance. He had been on a prospecting tour, seeking a suitable place in the deep canyon and ravines to dig, when suddenly seized with vertigo and sickness, and was now suffering from "bilious-typhoid." In the evening two others came from a neighboring canyon, suffering from dysentery, and the day following twelve Oregonians bore one of their number six miles on a litter to the hospital. These with several other cases soon filled the tent hospital and kept Tyson busy until the snows drove him back to San Francisco, where he notes: "All who had any tendency to diseases of the chest suffered during their stay in the bay city."

J. Tyrwhitt Brooks was likewise a pioneer doctor of the Bear River country. An Englishman, he came to California during the Mexican War to engage in surgery, hoping to attach himself to the Army of the U. S. A. The gold excitement drew him to the mountains, where he engaged in mining and doctoring, receiving an ounce of gold for every patient seen. Between his shovel and scalpel, he amassed considerable gold-dust and nuggets. The amount becoming so prodigious, he was fearful of carrying it about with him and finally entrusted it to a faithful courier bound for Monterey, where it could be banked. En route the courier was attacked by a famous robber of the mines, who lassoed him while riding and dragged him from the saddle, and while he lay wounded and unconscious, escaped with the doctor's hard-earned wealth—all of which is told most graphically and dramatically in "Four Months Among the Gold-Finders in California."

Sacramento was the center of all this mining activity and a great many of our pioneer doctors first hung out their shingles in that city, although they later drifted to other California points. In May, 1850, there were fifty doctors there; probably more, but that number signed the roster of the Medico-Chirurgical Association, the second medical fraternity founded in the state. Stillman felt it was the first association of its kind in the "Republic," but the one founded in Los Angeles in January of that year antedates it by four months, but I will have more to say of these first medical associations under another heading. Suffice it to say now that three of the medical officers of that pioneer society had been presidents of county societies at home. The vice-president of the same, Dr. John F. Morse, founded there in 1856 the first medical journal published in California. It is also worthy of note that one of the first hospitals in the state was built in Sacramento in 1850, and also the State Medical Society was founded there in 1856. More of these anon, but this will prove the pre-eminence of Sacramento during the Golden Age as the medical center of California.

Dr. J. W. Palmer, who was city physician in 1849, in his book, "The New and the Old," gives the best medical picture of San Francisco of this period. Most of the physicians had their offices in tents. Of drugs, quinine was the panacea for all the ills to which California flesh was heir. Palmer sold his supply at auction for \$64 an ounce. As for rents, \$100 per month for a "dog house" was not exces-

sive. When he landed, the doctor was so poor that he slept on a free sand-hill, where the fleas were so fierce that his health was undermined; but finally he got under way through a lucky "monte game," which enabled him to set up an office where he was soon making \$75 to \$100 a day. Medical fees were enormous—two ounces of gold-dust (\$32) a visit; but this was not excessive in a day when laudanum cost \$1 a drop, quinine \$1 a grain, when boots cost \$40 and blankets \$100 a pair, potatoes \$1 a pound, and \$5 for a haircut.

"Gold! Gold! Gold! Gold!
Bright and yellow, hard and cold,
To the very verge of the churchyard mould
Good or bad a thousandfold."

Of the type of medical man that came to California during this period much may be written. "Time's effacing finger" has erased the records of hundreds, but a few are still traceable in the footprints they left behind them. The majority were the pick of the land, well educated, industrious and respectable. San Francisco is yet reaping a rich medical heritage in the bequests of three of the surgical giants of this period. True, these early physicians and surgeons were carried away by the mining excitement, but it would be difficult to find a red-blooded man of this era who had not succumbed to the prodromes of the gold fever. The majority of these medicos in their own communities had been men of professional skill and renown who had left practices of magnitude and homes of ease and comfort to seek new ones here. With Hemans we might ask: "What sought they thus afar?" Why did they exchange the known for the unknown? Gold alone was not the quest of this exodus. Most of these were amassing that at home. Toland had a \$16,000 a year practice long before he exchanged the comforts of Columbia, South Carolina, for the perils of the plains. Henry Gibbon Sr. was a professor in the Philadelphia Medical College with a large clientele behind him years before he crossed the Isthmus. Elias S. Cooper had already climbed the ladder of success, founded the State Medical Society of Illinois, given medical instruction and acquired a reputation as a daring and skilful surgeon, especially in deformities of the extremities and defects of the eye, as well as a competency before he left Peoria in his background. H. M. Gray, Stephen R. Harris, and J. C. Tucker were occupying professional places of assurance and eminence in New York when the star of California first appeared above their horizon. What was it, then, that made them stop, look and listen like the wise men before them? It was adventure, and California was the greatest one of the nineteenth century. Of these pioneer doctors who risked the dangers of the ocean and the perils from savage and famine on the plains, it may be said, with the historian, that only the brave attempted it and only the strong survived, qualities that marked them in some degree as superior to their fellows. Having endured these dangers, it was only the persevering, energetic and shrewd who were able to succeed, and eventually to found the cornerstone of medical education on the Pacific Coast. What they earned from the world by genius and untiring energy, they gave back a thousand-fold in ideals and gifts to humanity. Our great hospitals and medical colleges of the Uni-

versities of Stanford and California, our medical societies, medical magazines, endowed beds, and the Lane lecture courses and medical library are all monuments to these men of heroic mould. Of this timber were Elias S. Cooper, who builded better than he knew. He was the prime originator and ardent promoter of medical education on the Pacific Coast, a graduate of the St. Louis (Missouri) Medical College. During the 50's he had the courage, daring, training and skill to resect parts of three ribs and to remove a foreign body (the breech-pin of a gun) from beneath the heart of one of his patients, to ligate the abdominal aorta, in another the primitive carotid, to open joints, to perform a successful Caesarian, to remove a large fibro-cartilaginous tumor from the uterus; to found the first medical college west of the Rockies; and to organize the California state and county medical societies; another was Hugh Huger Toland, who left a munificent practice at Columbia, South Carolina, to cross the plains, traversing the distance between Independence, Missouri, and San Francisco in seventy-six days, the shortest on record. He lived to found a great medical school—that of the University of California—to endow and bequeath it to the state, to amass a fortune which ran into the millions, to occupy a place in his medical world which few have attained since or before, and to be a benefactor to all the worth-while medical institutions of his time and state. Of such timber were J. D. B. Stillman of New York, who was a founder of the early medical institutions of Sacramento, including the first hospital and medical association, and who has left a rich medical heritage of this epoch in his book, "Seeking the Golden Fleece," and Henry Gibbons Sr., a native of Wilmington, Delaware, where his father was a prominent physician. Both father and son were graduates of the University of Pennsylvania, having received their respective degrees some twenty-seven years apart. At the outbreak of the California gold excitement he was one of the prominent physicians of Philadelphia, but he gave it all up to follow the star of Empire. When he arrived in San Francisco in August, 1850, cholera was raging and he was put in charge of the cholera hospital. From that time on until his death, he was connected with everything worth while medically, and was foremost in every measure and organization tending to the education, welfare, and improvement of the people. To him belongs the honor of having given the first course of medical lectures in California. Now they would correspond to the endowed Lane Medical lectures. He inaugurated this course during the winter of 1850-51. One was given every week for thirteen consecutive weeks. That he was not a member of the first medical society founded in San Francisco, was due to the fact that that organization antedated his arrival by two months; but of its reorganization in 1853, as we shall find, he was the first president; likewise, of the County Medical Society founded in 1856, and of the State Society founded the same year, he became the second president. Of the medical department of the University of the Pacific, he was a co-founder and member of the faculty. When that institution crumbled, he became an initial member of the faculty of the Toland

Medical College, now the Medical Department of the University of California. With the resuscitation of the Pacific Medical College, the ancestor of Cooper Medical, Dr. Gibbons became one of the pillars of this institution. His son, Henry Gibbons Jr., who had received his "Toga Virilis of medical manhood," as Dr. Lane was wont to say, from the Medical Department of the University of the Pacific, devoted a lifetime of medical usefulness as dean to all the forebears of the present Stanford University Medical School.

R. Beverley Cole, graduated at Philadelphia, arriving in San Francisco in 1852 aboard the Cherokee, was one of the most picturesque of the early prominent physicians. At the time of the historic murder of James King of William in 1856, Cole was Surgeon-General on the staff of the Grand Marshal of the Vigilance Committee and, with Dr. Nuttall, one of the two first physicians to reach the wounded man. Subsequently, Drs. Hammond, C. Bertody, H. H. Toland, and H. M. Gray had charge of the case, and Cole withdrew chagrined. As time progressed, the condition of the patient became more and more desperate, and in spite of everything his physicians and a legion of the "faculty," including Dr. J. T. Griffin, U. S. A., who was summoned post-haste from Los Angeles, could do, James King of William died, and the Vigilance Committee, which had been called into being by this crime, strung up James P. Casey, the assassin. (See R. K. Nuttall, San Francisco Chronicle, June 4, 1856.) In February, 1857, the State Medical Society convened at Sacramento, and Beverley Cole sprang his bombshell by affirming that Mr. King's injury was a flesh wound and "not at all dangerous, and that with ordinary care and judgment there would not have been the slightest danger to the life of the wounded man" (Alta California, March 5, 1857), further stating that "a sponge was left in the wound five days which he did not hesitate to denounce as a case of gross malpractice." It is hardly necessary to state that these words created an uproar among the medical gentlemen present, included being the late Mr. King's four doctors. Out of this murder grew the Edward McGowan trial at Napa, and Beverley Cole and H. H. Toland were arraigned as witnesses on opposing sides. The testimony of both was very bitter (Alta and Bulletin, June 1, 1857), and a great war among them and their professional supporters ensued. But in spite of all that occurred then, it is interesting to note that R. Beverley Cole became, when it was founded, Dean of the Toland Medical College and subsequently of the Medical Department of the University of California. The following jingle apropos of Cole's remarks on James King of William's death, appeared in the daily press of the time:

WHO KILLED COCK ROBIN?

Who killed Cock Robin?
I, says Dr. "Scammon"
With my chloroform and gammon
I killed Cock Robin.

Why was it given
In a smothering dose, by heaven?
I refuse to say
Replied Dr. Gray.

Who put in the sponge?
I, says Dr. "Lunge,"
They did me impunge
So, "bedad," I left in my sponge.

Who found the sponge in the body?
I, says (clever) little Bertody,
I found it in the body.

Who took it out?
I, says plucky Stout,
I took it out.

Who blabbed the whole
I, says Dr. Cole,
It lay on my soul
And I blabbed the whole (Medicus).

When Dr. Cooper founded the Medical Department of the University of the Pacific, he appointed Beverly Cole Professor of Obstetrics and Diseases of Women and Children (note pediatricians, the first in San Francisco), as well as dean of that institution. The State Medical Society convened in February, 1859, and Dr. Cole read a report on "Obstetrics and Diseases of Women in California," and, although the speech was delivered in the days before the radio, it was broadcast all over the United States and reverberated on California's shores; so great was the "tempest in the teapot" caused by his unguarded words. In this paper, he said in part, speaking of the pioneer women of California, removed at the most critical period of their lives from the healthful advice of their mothers, that three out of four of those ladies, both married and single, "who have reached the age of 15" are no better than they should be, and he compared them to a certain woman of Babylon as being the "victims of this dissipation and fashionable life, yielding to the solicitations of the opposite sex and finding themselves in a short time the prey to disease." (Bulletin, January 6, 1859.) Although his report was read before the medical society of the state, when "at least one hundred of the most prominent medical men were present," and was intended for scientific and medical minds only, one of the Albany (New York) papers took it up with reflections upon the morality and chastity of the women of California. Immediately all the California publications flew to the rescue and engaged in a wild denunciation of Cole. Although the doctors present at the original meeting when the paper was delivered heard nothing amiss and then made no comment, they now commenced to vilify Cole as the "Woman Traducer." Even the laity of his city and state were up in arms against him. His practice was in jeopardy, and he was persecuted far and near. Finally the medical society itself took up the cudgels and he was exonerated of any "evil intent to defame the character of the women in the state, although there can be no doubt that the language of the report in question was very loose and improper" (Bulletin, February 14, 1859), the vote of exoneration standing, "ayes" 22; "noes" 8. The feeling must have been very intense, as we note as a result of the vote such prominent physicians as these resigning: A. B. Stout, J. P. Whitney, C. Bertody, T. M. Logan, S. R. Gerry, V. F. Fourceaud, H. M. Gray, and Sharkey. And so it would appear that these pioneer medical giants who had no fear of the terrors of land or sea were likewise not afraid of one another. Cases are on

record where their tongues being inadequate, they resorted to arms.

Another important medical figure of the 1849 period was Isaac Rowell, a graduate in arts, science and medicine of Dartmouth College. At the time of the gold discovery, he was practicing in Maine. He arrived in San Francisco via the Cape in June of the pioneer year, and started his practice in which he was immediately and ultimately successful. He was one of the staunch preservers of the Commonwealth in those exciting days before the Civil War conflict. For a number of years preceding her admission into the Union as a free or slave state, California's fate hung in the balance, and probably no man of his time in California did more for Lincoln and the rights of man than Dr. Rowell. He gave up his practice temporarily and stumped the state, and this in the pre-train days. He also organized and commanded "the first California Mounted Battalion." Of the original faculty of the Medical Department of the Pacific, Rowell occupied with distinction the chair of chemistry, and for a time that of surgery, too. He was also a supervisor and health officer.

Another prominent medico of these days was Stephen R. Harris, the third Mayor of San Francisco. A graduate of the College of Physicians and Surgeons, Columbia University, New York, and for six consecutive years a New York health commissioner, he came to San Francisco in 1849 via Panama. In those days that disease-infested country, the half-way house to California was congested with crowds seeking cabin room to San Francisco. At one time six thousand were detained there several months and among them Dr. Harris. A frightful dysentery epidemic broke out and there hundreds found their graves. The doctor devoted his time and services to the stricken Argonauts and raised funds from the Masonic and Odd Fellow lodges to alleviate their wants and give the dead a decent burial. At length he reached San Francisco in June, 1849, and founded the first real drug store at the corner of Clay and Montgomery streets. He stocked it with a \$20,000 supply of medical goods, the most extensive establishment in the country. Just as fortune's smile seemed most propitious, along came the great conflagrations of May 4 and June 22, 1850; May 4 and September 17, 1851, to again test the mettle of his soul. He lost all he possessed, having replenished his supplies after each successive fire. In 1851 he became Mayor, but continued to carry on his practice.

Dr. Robert McMillan, a native of South Carolina, a graduate in arts and medicine of the University of Pennsylvania, and a Paris post-graduate, entered the Golden Gate early in 1849, one of the best trained medical men, as well as a ripe scholar, and one of the most profound students that ever sought these shores. It was from his office that H. H. Toland launched his brilliant career.

Another medical man of the '49 period who distinguished himself in his day and generation, both in New York and California, was Henry M. Gray, a graduate of the Geneva Medical College, who came to these shores in December, 1849, aboard the *Hope*, a bark owned and manned by Gray and ten of his

college mates and associates. Having arrived in San Francisco the doctor visited the mines, only to find that his place in life was among the sick, distressed, and maimed. So he returned to San Francisco, commenced practicing, and devoted his great powers, tender sympathies, and cheerful presence to alleviating suffering and illness. Although possessed of the most considerable clientele in the city, he distinguished himself by the amount of his gratuitous practice, being always ready to assuage the suffering of the poor and wretched. On board ship he found his way to the steerage to attend the helpless and afflicted. On his visit to the Yosemite in 1861, he went far out of his route to prescribe for a wounded hunter dying in his cabin among the lonely Sierras. His helping hands stretched beyond the grave. Even when he lay in the shadow of death, he gave a list of the worthy poor who had long received gratuitous practice at his hands to a professional friend and charged him with their care. In other words he raised charity to a cardinal virtue. He was an eloquent and polished speaker and he delivered the oration at the laying of the cornerstone of the Masonic Temple in San Francisco in June, 1860. The newspapers of the day laud the culture and eloquence of the speaker. He was a founder of the State Medical Society in 1856, and took a prominent part in medical meetings. As we have just observed, he was one of James King's doctors. His associates held him as one of the finest types physically and mentally of medical manhood.

There were many more doctors among the valiants of this period: A. J. Bowie, the silver-tongued orator, the founder of the Pathological Society, lived in a frame house which stood in its own garden on the corner of Stockton and Sutter streets, the lumber for which came around the Horn and its architecture smacked of the Shakespearean period. Bowie made this place a rendezvous for the intellectual element of the city. F. P. Wierzebecki, a Pole, was another of the founders of our medical institutions, he being one of the pillars of the medical societies of the county and state. He first wrote of the "California Fever," a confused type of all fever, including gold and ague, and, although ten thousand found their graves that first memorable year of the winter of '49 and the spring of '50, Wierzebecki did not lose a single case. It is interesting to note that the second edition of the book, one of the very first '49 publications in San Francisco, which he wrote: "California as it is, and as it may be, or a guide to the gold regions" which contains a chapter on "Medical Observations" upon the Californians, is now one of the most prized items in a California collection, being recently listed at \$600 in a book-lover's catalogue. Paper was not plentiful on the coast in those days, and the leaves of several of the copies were cut from wall paper. Washington Ayer was another scholarly man of this period. He lectured all the way across the Pacific, and on landing founded at Vernon, on the Sacramento River, one of the very first hospitals in California which underwent a tragic fate in the floods of that river.

Of a later vintage, but probably the greatest genius of his time, was Levi Cooper Lane, who

reached San Francisco early in the 60's to join his uncle on the staff of the first medical college. Dr. Lane was the recipient of more college degrees than has befallen any other medical man in California. From Union College, Schenectady, New York, A. B., A. M., and LL. D.; Jefferson Medical College, Pennsylvania, M. D.; London, M. R. C. S., and Berlin, Doctor of Medicine, "Summa Cum Honore." If degrees are any criterion of a man's greatness, which they aren't, his would be a worthy measure of his mettle. He was also the master of six languages, including Greek and Latin. In the latter, he composed his naval thesis, having been in the United States Navy before he came to California. He was also the author of an acknowledged surgical work on the head and neck. From the medical point of view his life was an ideal one, useful, and well spent, it being given to but few men to be as great as he was, "to be the means of helping to save human life and to diminish human suffering, to be a great doctor, a great philanthropist, and a great scholar as well as a religious and scientific man." When he died rich in years, St. Peter could worthily have said: "Well done, thou good and faithful servant—well done." He worked his way through college on twenty-five cents a week and lived to bequeath a million dollars to medical education, all of which he earned himself. It is only a few who die realizing their ambitions are satisfied, yet Dr. Lane succumbed in the seventies, having tasted the fruition of his own successful accomplishments, life's work completed and its hopes realized. Early in his manhood he had conceived the idea of fulfilling Dr. Cooper's idea regarding the founding of a medical school and a hospital for San Francisco. Although the latter lived to see his dream in part realized, he died long before it was an accomplished fact. And with his tragic and premature death his idea of a medical school seemingly vanished too, but its power survived in the ambitions of his nephew, Dr. Lane, and the latter toiled early and late to realize those dreams, and at length the time came when they materialized in the medical school which he endowed in the name of his uncle—"The Cooper Medical School"—thus proving that every truly great idea never perishes, but lives on to fulfill the destiny allotted it. Not content with this accomplishment, Dr. Lane founded the annual Lane course of lectures and the hospital and Medical Library which still bear his name, although overshadowed by another, and that is wherein the pathetic part of both Toland's and Lane's great gifts to humanity and to San Francisco lie. The identities of their progenitors are fast disappearing from the institutions which they founded. But perhaps Dr. Lane realized this eventuality, as his prophetic words delivered at the dedication of one of the medical college buildings, November 13, 1890, would seem to indicate: "Human memory has its limitations and we scarcely have a right to chide it for lessening its burden by dropping its distant links in the past; and it is probable that sharing the common fate of all things, the footsteps of coming years will obliterate the individuality of the work of which you are witnesses; yet the work itself will not perish," and in the immortal words of the martyred president, "shall not perish from the earth."

380 Post Street.

THE HISTORICAL COLLECTION OF THE LANE MEDICAL LIBRARY

By LOUISE OPHULS, Librarian

The splendid service the late Doctor Lane rendered Western Medicine in endowing Lane Medical Library, and the sane development of the nucleus under wise guidance until it now ranks with the best of medical libraries, is attractively sketched by Miss Louise Ophuls in this essay.—THE EDITORS.

THE idea of developing an historical section of the Lane Medical Library originated with Doctor A. Barkan. He had already endowed the section on ophthalmology and oto-laryngology. After bringing this section nearly to completion, so far as modern publications and periodicals are concerned, he began to collect all the historical material that might be available. During his travels in Europe he was able to find quite a few interesting volumes, but it soon became clear to him, especially when he consulted various experts on the History of Medicine, that it was a very difficult matter to restrict the historical part of the collection to one specialty. So, largely through the influence of Professor Sudhoff in Leipzig and Professor Sigerist in Zürich, he became interested in collecting material on the History of Medicine in general. He found that the authorities of Stanford University were quite willing to assist in this work, and he was also able to interest Professor Sudhoff of Leipzig sufficiently in this undertaking to have all further purchases for the historical collection made under his guidance and direction.

The largest part of the present collection was obtained in 1921, when there was an opportunity to purchase the historical library of Professor E. Seidel in Meissen. Professor Seidel had spent his life in collecting books on the History of Medicine. He was especially interested in Arabian medicine and, therefore, his collection contains a great many Turkish, Persian, and Arabian manuscripts. But in addition the rest of the History of Medicine is well represented. It was Professor Seidel's wish that his collection should be kept together and if possible well-housed in connection with some teaching institution. At Doctor Barkan's request, he wrote a short vademecum, explaining and enumerating the volumes in his historical collection. The vademecum has been translated and will be published shortly.

Since the purchase of Professor Seidel's library, many interesting old books have been added to our collection and we have endeavored to purchase all modern books on the History of Medicine, and all publications which would facilitate a study of the available material.

The following may serve to give an idea as to the extent of our collection. It is, of course, impossible to go into detail; only a few of the most important works can be mentioned.

The most unique part of the Seidel collection is without doubt that consisting of the Turkish, Persian, and Arabian manuscripts. The oldest and rarest of these manuscripts is a set of two volumes in three parts of a large compilation on general medicine. This system was written at the end of the thirteenth century and is said to have contained eighty-eight volumes, of which we own volumes 32 and 33. Professor Seidel, in his vademecum, calls these volumes "Unikum," as they are supposed to be

the only copies in existence. There is also a manuscript written in 1466 on "Remedies," which is well preserved. Most of these manuscripts are written in red and black ink. As Professor Seidel wrote and read all the Oriental languages, he made many annotations in Turkish and Persian on the margin of the books which, of course, enhances the value of the collection. Besides manuscripts on materia medica, veterinary medicine, surgery and medical dictionaries, this collection contains Turkish and Persian prayer-books, and a very beautiful illuminated Koran. Grammars, dictionaries—in short, all helps necessary for the study of Oriental languages accompany this most remarkable collection. In his vademecum, Professor Seidel gives a full and interesting account of this section of his library, giving the names of the authors and the contents of their works.

Owing to Professor Seidel's great interest in Arabian medicine, he made a special effort to have this part well represented, and we find many beautiful editions of Avicenna and Rhazes in all languages. Among them is the famous "Canon medicinae" of Avicenna in the Arabian language. Beautiful editions of Haly Abbas, "Liber totius medicinae," Lugduni, 1523; Isaac Judaeus, "De diaetis universalibus," Basileae, 1570; Albucassis, "Methodus medendi," Basileae, 1541; Avenzoar, "De medica facultate," Lugduni, 1531, and Averrhois, "De re medica," Lugduni, 1537, are among the treasures of this part of his library.

Of medical incunabula the library possesses only six. Of these the best preserved and most beautiful is a copy of the "Liber Rasis ad almansorum," Venetiis, 1497, Hain 13893, printed in gothic letters in two columns with illuminated initials. Then there is a set of two volumes of the "Canonis" by Avicenna, Hain 2214, which is well preserved and has the original binding. The other three, a "Pratica," by Serapionis, J., Venetiis, 1497; "De lumine maius," by Manlii Joh. Jac., Venetiis, 1496; "De aialibus," by Avicenna, no date, Hain 2220, have excellent paper and clear print.

The Greek authors are well represented. We have a very fine copy of the complete works of Hippocrates in Greek and Latin, the Frankfurt edition, 1595, which was edited by A. Foesius. Text and translation of this edition are, according to Choulant, the best in existence, and he also considers the annotations by Foesius very valuable. This edition was reprinted in Genoa in 1657 by Chouet, and in it are glossaries by Erotian, Galen, and Herodot. Furthermore, we find a very costly edition by Charterius, "Magni Hippocratis Coi et Claudii Galeni Pergameni, Opera," Paris, 1679, in fourteen volumes, which was begun in 1638. When Charterius died in 1654, ten volumes had been completed. The last four volumes of this edition were finished by Blondel and Lemoine in 1679 and paid for by the son-in-law of Charterius, Charles du Gard. The edition is bound in nine folios and a few of the first volumes have the original title page dated 1639. Another very interesting set of Hippocrates, "Opera omnia," Greek and Latin, and edited by van der Linden, printed in Lugduni, Batavorum, 1665, has on the flyleaf of each volume the inscription, "March, 1864. Purchased at the sale of my

dear friend Thackeray's books," W. H. Russell. It also has on each title page the embossed monogram of Mr. Thackeray. This copy is one of the valuable books which came to us from Dr. Levi Cooper Lane's personal library. We also have the well-known edition by C. G. Kühn, Lipsiae, 1825, in three volumes; the French translation by Littré, Paris, 1839, in ten volumes, and a very good German translation, with important annotations by J. F. C. Grimm, printed in Glogau, 1837. Of the single works of Hippocrates we have the Greek and Latin edition of the aphorisms edited by Opsopois, 1587, and the edition printed in Amstelodami, 1685, and edited by Theod. Janssonio. Many commentaries on Hippocrates, written by different authors, complete our Hippocratic collection.

Then there are the works of Aristoteles; Nicander's "Theriaka," edited by Gorrhaevus, Paris, 1557, and Florence, 1764; the latter edition of the poem has Greek, Latin and Italian text. The translation of Dioscoridis' work, "De re medica materia libri sex," by J. Ruellius, Lugduni, 1596, and one by P. And. Mathiolus with famous commentaries by the translator, published in Venetiis, 1565, with beautiful illustrations, in folio, and the original tooled leather binding with metal clasps; the commentaries by Amati Lusitani, Lugduni, 1558, and the Alphabetum empiricum, Tiguri, 1581, are also at hand. Of other Greek authors, such as Areteus, Soranus of Ephesus, Moschion, Xenocrates, we have very good editions. Galen also is well represented by the Latin edition in eight volumes, Basileae, 1542; the fifth edition, Venetiis apud Juntas, 1576, in eight volumes; the Greek and Latin edition by C. G. Kühn in twenty-two volumes, Leipzig, 1821-33, and many others. There are many beautiful old editions of various works by Oribasius, Basileae, 1529, and Aetius, translated by J. Cornarius, Basileae, Froben, 1542. The complete works of Aetius are also contained in the Stephani collection, "Medicinae artis principis," Paris, 1567, and also the complete works of Alexander Trallianus, translated by Guinterius. Paulus Aeginata, "Libri septem," Greek edition, Basileae, 1538, Latin translation by A. Torinus, Basileae, 1532; Psellus, "De victus ratione," Basileae, 1529; "De lapidum virtutibus," Lugduni, Batavorum, 1745, may also be consulted, and many others of the same period.

The Latin authors are also well represented. Our collection of these includes Celsus "De re medicae libri octo," Lugduni, Gryphium, 1542 and 1654; Amstelodami, 1687-1713; Batavii, 1722; Coelius Aurelius, "Tardarum passionum libri 5," first edition Basileae, H. Petrus, 1529, and the Amstelodami edition, 1709, which is considered the best; Serenus Samonicus, "De medicina praecepta saluberrima," Amstelodami, 1662, and Constantinus Africanus, "Opera," in two volumes, apud H. Petrum, Basileae, 1536.

The regimen sanitatis Salernitanum, the famous poem of the school of Salerno, was written originally in 364 verses, but was much enlarged later and some of the more recent editions contain more than 1000 lines. The origin of this poem is not known. It was written for the layman, not for the physician, is in popular style, and contains excellent hygienic rules. Many editions of this poem in all

languages, Latin, English, French and German, are in our collection; the oldest of these is the Latin edition published at Frankfurt in 1612.

The medical collections are interesting, not so much for the writings of the individual authors, as by showing the trend of medical knowledge of a certain period. The Articella collection, of which we have the 1525 edition, published by Anton du Ry of Lugduni, gives us a good idea of the writings of the ancient physicians most popular in the Middle Ages. It contains commentaries on the writings of Hippocrates, Galen, Celsus and others. It is a small volume with red and black title page, with ornamental border. The two most famous collections containing works on medicine by ancient authors, the *Collectio Aldini* and the *Collectio Stephaniana*, are both in the library. The *Collectio Aldini* was printed by the famous Aldus press in Venice in 1547 and has illuminated initials. The *Collectio Stephaniana*, Frankfurt, Fugger, 1567, is in two volumes and contains writings by Aretaeus, Rufus of Ephesus, Alexander Trallianus, Paulus Aeginata and others. Both these editions are rare, according to Choulant. We also own some old medical dictionaries; as, for instance, the *Stephani dict. medicum*, Fugger, 1564; the *Castelli lexicum medicum*, Batavii, 1792; the *Kühnii lexicon medicum*, Lipsiae, 1832, which are all valuable helps in explaining the medical terms used by the physicians of ancient times. There are also the so-called *Crassi collectio*, "*Medici antiqui graeci*," Basileae, 1581; the *Haller collectio*, "*Artis medicinae principes*," Lausanne, 1769-1774; the *Kühn collectio*, Lipsiae, 1821, and the Dietz "*Analecta*" and "*Scholia*," Lipsiae, 1833, and *Regimonti*, 1834, and many other more modern collections. "*Collectio scriptorum de febribus Venetiis*, 1576; "*Collectio chirurgica veneta*," Venetiis, 1546, apud Juntas, having the title "*Ars chirurgica*" and containing writings by Guy de Chauliac, Teodorico, Lanfranchi, etc., are some of the collections on special subjects. Vidi Vidi, who published the *Collectio chirurgica Parisina*, Paris, 1544, apud Galterium, added commentaries to the writings. The *Collectio Gynaeciorum*, edited by S. Spachius, Argentinae, 1597, and the *Collectio "De Balneis"*, Venetiis apud Juntas, 1553, are beautifully printed and preserved and are also said to be rare.

Of the works of Vesalius, the founder of modern anatomy, we have several important editions. There is a well preserved copy of the first edition 1543 of the "*De humani corporis fabrica*" in the original binding. The title page was missing, but a reprint from the original wood block has been substituted. This cut shows Vesalius standing near a table on which a female body is lying which he is about to dissect. He is surrounded by a large group of spectators. The drawings for the magnificent wood cuts throughout the book were made by Joh. Stephan von Calcar, a pupil of Titian. In the second edition, published in 1555, which Vesalius himself prepared for publication, the text is elaborated and a few wood cuts are added, also the frontispiece is slightly changed. This volume is beautifully bound in wooden covers with embossed leather back, the binding being very well preserved. At the end of the volume is the large handsome printer's mark, "Arion on the dolphin." The very beautiful edi-

tion, "*Opera omnia anatomia et chirurgica cura*" H. Boerhaave et B. S. Albini," Lugduni Batavorum, Verbeek, 1725, in which the original wood cuts have been replaced by copper engravings by Jan Vandelaer, is also in the library; also the "*Compendiosa totius anatomie delineatio, aere exarata*," per Thomas Gemimum, London, 1545, which is an early copy of Vesalian illustrations. This volume has, instead of the original title page, one with allegorical figures and in the center the English coat-of-arms. The two nude figures from the epitome are in this edition, otherwise it has the plates of the *Fabrica*. The copper plates are very clear and are said to be the first copper plates made in England. As Gemimum was an engraver, he is supposed to have designed the new title page. A reprint of the text of the epitome, with commentaries by N. Fontanus and with fewer and poorer plates, published in 1642 in Amsterdam, forms part of our Vesalian collection.

Many works of the famous physicians of the Renaissance Paracelsus, Servetus, Fallopius, Ambroise Paré, Cesalpino, Fracastoro are in our collection.

The seventeenth century physicians are represented by such famous writers as Harvey, Malpighi, Borelli, van Helmont, Thos. Willis, and Thomas Sydenham. Our collection of the publications of eighteenth century authors contains such names as Boerhaave, Albrecht von Haller, Ramazzini, Alexander Monroe, Thomas Soemmering, Albinus, Scarpa, Smellie, John and William Hunter, Leopold Auenbrugger, Morgagni, Edward Jenner, etc.

We are glad to be able to state that we have a very complete collection of the works of the famous men of the modern period.

We subscribe for most of the journals dealing with historical subjects, such as the *Annals of medical history*, *Chicago society of medical history*, the publications of the *Charaka club* in New York, the *Janus*, *Société d'Histoire de la médecine*, *Schweizerische Gesellschaft für Geschichte der Medizin*, *Archiv. Mitteilungen und Studien zur Geschichte der Medizin*, and we have complete sets of most of these.

A vast number of biographies and bibliographies are also available, also facsimile editions of some of the old classics with annotations and commentaries.

We have a large section containing books on the history of medicine in all languages. Here you will find the texts of Garrison, Baas, Haeser, Pagel, Sudhoff, Puccinotti, Daremberg, Sprengel, Neuburger—in short, all the authorities on medical history. Books dealing with special subjects are Choulant's history and biography of anatomical illustrations, in the original and also in the splendid English edition by Mortimer Frank; Leclerc, L., *Histoire de la médecine Arabe*; Fasbender, *Geschichte der Geburtshülfe*; Hirschberg, *Geschichte der Augenheilkunde*; Politzer, *Geschichte der Ohrenheilkunde*; Sudhoff, *Geschichte der Chirurgie* and *Geschichte der Syphilis*; Gurlt, *Geschichte der Chirurgie*, and many others. One of our aims is to get together all the helps to facilitate the study of the history of medicine.

As stated above it is, of course, impossible to give in such a short paper an idea of the wealth of material contained in our collection. I only wish to draw

the attention of the members of the medical profession to this department of our library, in the hope that sooner or later some of them may become interested in this fascinating subject. In conclusion I will quote from Dr. Seidel's vademecum the words with which he closes his manuscript:

Vivat, floreat, crescat in aeternum Universitas
Litterarum Pacifica! Q D M O bene vertat!

Goiter in the Intermountain Region of Utah—The larger phase of the goiter problem, and the one that may prove to be most significant in the future, George W. Middleton, Salt Lake City (Journal A. M. A.), says is the relative iodine deficiency in the various geological strata that form the catchment basins and water-sheds of the streams. If this were determined in any given section, one could at a glance estimate the probable goiter incidence and the extent of prophylactic measures necessary to meet the situation. Theoretically, all volcanic or granitic sections of country should have a relatively large percentage of goiter incidence. Whether this is the case or not remains to be proved, but in the data available in the intermountain region of Utah there is at least a marked indication in that direction. Thus, in the town of St. George, in southern Utah, with a population of more than 3000, goiter was quite unusual for more than half a century, from the time of its founding until a water system was installed and the water from Pine Valley Mountains brought in. Pine Valley Mountains are almost entirely igneous, and the volatile iodine no doubt escaped at the time of their extrusion. Since the advent of the new water supply, many people have developed goiter, and what was for a long time a comparatively immune district has now been added to the large endemic section of southern Utah. In the Virgin Valley, which is a part of this section, fully 75 per cent of the adult women have goiter. It is here, in these isolated mountain gorges, that one encounters enormous thyroid growths, which are allowed to progress unchallenged until they assume maximal dimensions. It seems to be well established by the statewide survey now in progress that towns which enjoyed considerable immunity from goiter while they used well water, and water from the surface springs, are taking on a marked increase of goiter incidence since they installed water systems, and are getting their water supply from mountain springs up near the melting snows. During the last three years Middleton has treated 333 cases of the various forms of goiter, not including hypothyroidism or the inflammatory conditions. One hundred and fifty-six thyroidectomies were performed with two fatalities, a mortality of 1.3 per cent. Seventy-three per cent of these patients were toxic, and many of them extremely toxic. One of these fatalities was due to tracheal obstruction, and one patient was so toxic that she showed no improvement after months of rest and medical treatment, and thyroidectomy was undertaken as a last resort. Middleton believes that rest in bed with abundance of fluids, and the use of compound solution of iodine in the hyperplastic cases, are the most important preparatory measures. Except in cases with broken compensation, pre-operative digitalization has been of little value. Calcium carbonate is given to prevent tetany. The condition described as hypoglycemia has been encountered five or six times. Urinalysis showed much acetone and diacetic acid. The relief from intravenous glucose was striking.

Do You Know—

That insanity, epilepsy, "nervous prostration," feeble-mindedness and criminalistic tendencies are inherited?

That virtue, intelligence, beauty, social capacity, capacity to succeed in life, capacity to make money, tendencies to become a church-goer, tendencies to become a good housekeeper or a good father or mother are all largely matters of heredity?

That most popular ideas about "prenatal influence" are complete bunk?—A. E. Wiggam.

THE HISTORY OF THE DEVELOPMENT OF WOMEN IN MEDICINE IN CALIFORNIA

By ADELAIDE BROWN, M. D., San Francisco

THE history of the development of women in medicine in California covers a period of fifty years if one begins with the professional women who continued in active practice for more than twenty-five years.

The opportunity for medical study was refused to women in California as long as the medical schools were owned privately, but as soon as the Toland Medical School was given to the University of California to become its medical department, as co-education was the policy of the University, the medical school accepted Dr. Lucy M. F. Wanzer* as its first woman student. Dr. Wanzer graduated in 1876. Very soon the College of the Pacific, later Cooper Medical College, removed its restrictions and Alice Higgins graduated in 1877 and Anabel McG. Stuart in 1878. Dr. Stuart practiced in Santa Rosa for about forty years. Thus barriers fell.

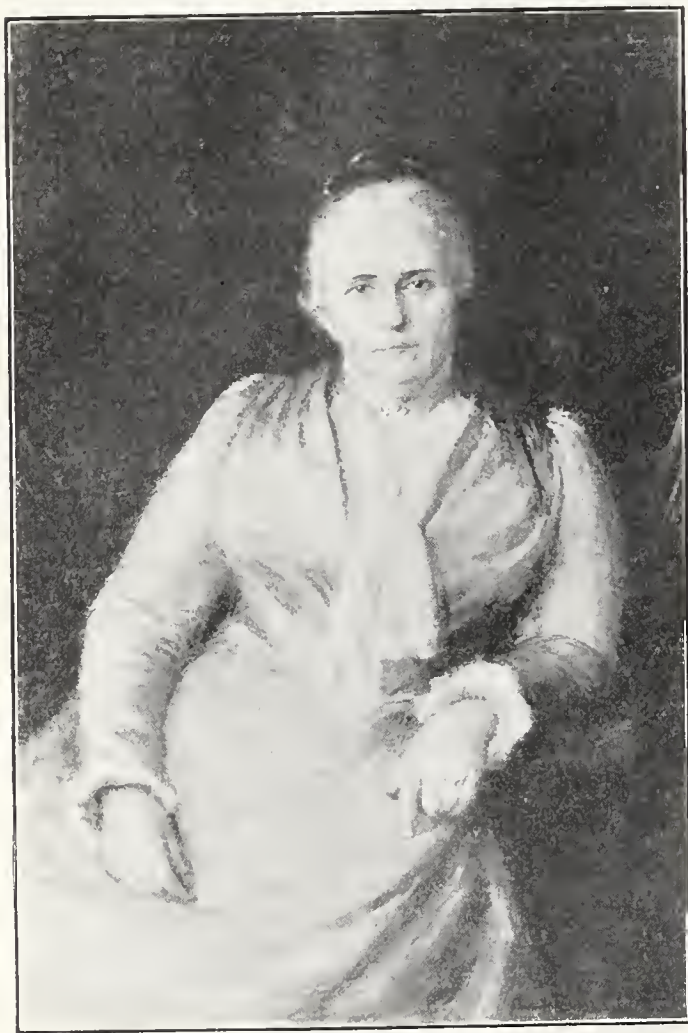
But attaining a medical education was by no means impossible to a Californian inspired to work in this line. In 1872 Charlotte Blake Brown left her home in Napa, California, and graduated at the Woman's Medical College in 1874 in Philadelphia. Dr. Brown spent her senior year as a hospital intern to gain practical training and returned to California to begin practice in San Francisco, imbued with the importance of hospital experience to both graduates and medical students.

The Pacific Dispensary for Women and Children, renamed and incorporated in 1885 as the Children's Hospital and Training School for Nurses, was founded in 1875 and was the finite expression of this ideal. Associated with Dr. Brown in the pioneer years of this work were Dr. Martha Bucknall and Dr. Sarah E. Browne. They called on seventy women to gain the names of eight for the first Board of Lady Managers. In 1880 the Training School for Nurses was established, the first on this western coast, and was again a practical expression of the deep interest in the welfare of the individual patient which was characteristic of the early women physicians.

Charlotte Amanda Blake Brown was born in Philadelphia in 1846, where her father, a Bowdoin College graduate, and later a minister, had a boys' private school. Her father came to California in 1850, where he established a boys' school in Benicia. His wife and family followed in 1851. They crossed the Isthmus carried by Indians and lived in California three years. Then the father was called to Chili as a preacher to Cornish miners and the family lived there four years. En route they were blown out of their course and visited Tahiti. These years in the Southern Hemisphere, associated with an interest through life in the work of Missions, gave Dr. Brown a remarkable international sympathy. She did medical work through her life for the Chinese women in the Missions in San Francisco and for the American Board of Foreign Missions by caring

* (A complete Life of Dr. Wanzer is given by Dr. Emma Sutro Merritt, as a contribution to this historical number.)

for returning missionaries and their families. After returning to New England she graduated, at 20, from Elmira College, New York, one of the earliest colleges to grant degrees to women. She came to Arizona with her father and mother, where her father had been ordered as chaplain with his regiment at the close of the Civil War. There she met Henry Adams Brown of Riverside, Maine, and was married in 1867. The young couple crossed the desert with a troop of soldiers at a time when Indian raids were common and ruthless and white men said to a woman, "The first bullet will be for you if we are attacked." The young couple settled in Napa, California, where after the birth of her second child she read anatomy seriously with her preceptor, Dr. Charles (?) Nichols. For their faith in her ambitions enough can not be said for the co-operation of her husband and parents. She lived not only to lay the foundation and see the structure (other than bricks and mortar) rise of a great hospital, but to give to a home and three children every opportunity a sympathetic, intelligent and far-seeing educated woman has in her power to give home and children.



Charlotte Blake Brown.

Another woman physician always rises before me as I think of the early women in medicine, the creative women physicians they were.

Elizabeth A. Follansbee was a friend of Charlotte Blake Brown's in Napa, then working as a teacher in the Napa Seminary for Girls. Dr. Follansbee was born in Dorchester, Mass., was the daughter of a prosperous sea captain and was taken to Paris for

her education. She was a woman of delicate health, great grace and charm of manner and of the most refined taste and ideals. She followed Dr. Brown to Philadelphia, though she matriculated at the Medical School of the University of California. After graduation, in 1877, she was associated with Dr. Brown in work in the Children's Hospital. Dr. Follansbee was obliged, on account of her health, to seek a warmer climate and settled in Los Angeles in the early eighties. There her personal qualities won her the friendship of the leaders in medicine and she was asked to take the Chair of Pediatrics in the Los Angeles Medical Department of the University of California, which she held until the school was closed.

Dr. Follansbee was a friendly critic of her women students and a recommendation by her of a candidate for internship in the Children's Hospital meant much more than scholarly attainment. She was a devoted friend to her patients; of herself she thought least of all. She was never rich in this world's goods, always too busy to keep books and too unselfish to send the bill if she suspected it would be difficult to meet. She was an idealist and held the torch high. Her students had the art of knowing and considering their patients thoroughly presented to them.

C. Annette Buckel, who came to California and settled in Oakland in 1877, brought to her chosen work the richest of human experience. She was born in western New York State in 1833; an orphan at 6 months, she was brought up by her grandparents. She taught, to earn the money to go to the Woman's Medical College in Philadelphia, where she graduated in 1858. She was associated with Dr. Elizabeth and Emily Blackwell in New York, the pioneer women physicians in the United States. She later went to Chicago, where she started practice. In 1863 she was commissioned by Governor Morton of Indiana to go South, to be responsible for Indiana's soldiers in hospitals along the Mississippi. She was the head of an army nursing service. It has been most interesting to read over passes signed by General Grant and General Graham, letters of instruction of which this is an example: "The appointment of female nurses by the surgeon in charge of general hospitals upon the recommendation of Miss Buckel will be confirmed by this office." Signed "I. M. Barnes, Acting Surgeon-General." This order followed in two days, a letter from Dr. Buckel suggesting "that at one general hospital, Jeffersonville, selected nurses could be trained and passed on to other hospitals, thus avoiding the annoyance given surgeons by the continued applications for situations by women stragglers and securing more valuable assistants in hospital nursing."

From army experience Dr. Buckel went to Boston, where she was associated with Dr. Marie Zakrzewska in the New England Hospital for twelve years, and then after two years' study in Paris and Vienna she came to California. Dr. Buckel was eminently a citizen of the community in which she lived. She was interested in and contributed to the scientific life of Oakland and was one of the founders of the Home Club, under whose auspices and largely through her inspiration certified milk became possible in California.

She was always interested in child nurture and at her death in 1912 she left her property to be used for a fellowship in child psychology, especially the study of the feeble-minded children. This legacy was accepted by Stanford University and has been used steadily in this field of work. Several of our state institutions have profited by the work of students who were Fellows of the C. Annette Buckel Foundation, Stanford. Dr. Buckel was always the center of an intellectual group, progressive in the highest sense of the word. Her personal experience has been broad and hers was a lovely exterior, a dignified, beautiful woman, generous, kind and able in her professional work. Her home circle often contained those she was re-educating to live, with the infinite patience this work needs.

These three women in medicine were lifelong friends and an inspiration to each other. Together they created a standard for intellectual and professional attainment that left little for the women who came after them to add.

The adoring eyes of the child focus themselves on the mother-doctor. After twenty years the adult sees in the professional career of that mother a life characterized by undaunted courage, glorious optimism before which difficulties vanish as does our fog before the sun, and a clear vision of the future for women united with a love of her kind. Medicine offered her the great opportunity for self-expression. Dr. Henry Gibbons Jr. wrote at the time of her death in 1904: "To few souls has it been given to live to see the attainment, personally and professionally, of their heart's dearest wishes."

In retrospect, these pioneer women physicians were of noble pattern. Each one brought to her work unusual qualities and experience and freely gave in her professional life.

In the next group of women physicians extending to today, I have selected those who stand out as creating new fields of activity for women and milestones, therefore, in any history of women in medicine in California.

Dr. Mary B. Ritter (Cooper Medical School, 1886) served as the first woman physician and lecturer to women students at our State University. Today the work requires the services of several women physicians and there is no college, normal or high school but retains if possible a woman physician for the care and instructing of women students.

Public health in executive and laboratory fields has had the services of California women in national and state positions.

Anesthetics as a specialty for women physicians attracted Mary E. Botsford (Medical Department, University of California, 1896), and her skill and generous patience have given the necessary training to many women as well as men who followed this line of work.

Pediatrics early attracted women physicians in California; as service to sick children, they created the Children's Hospital; as service to keep children well, the establishment of certified milk and the well baby centers attest their interest in the community. Dr. Emma Sutro Merritt, on her return from Paris in 1887, was at the head of the Department of Surgical Pediatrics in the Children's Hospital, where she continued until extensive business responsibilities compelled her to resign her medical work.

Surgery has been a field where success has been attained by a considerable number of women. The opportunity to operate was given at the Children's Hospital and early, the light hand, the detailed after-care, the careful consideration of the environment and life-strain of the patient and the sustained after-interest in the convalescent made for successful results at the hands of women surgeons.

Competition is closer and perhaps the burden of proof heavier in this particular field, but the reputation and success attained by Dr. Charlotte Blake Brown and Dr. Florence Saltonstall Ward in San Francisco and by Dr. Rose Bullard in Los Angeles show that they had progressed far, from the days when a leading surgeon said to the pioneer woman surgeon: "Perhaps you will be *allowed* to operate on poor patients, but you had better send your pay patients to me."

Obstetrics has always been a field where all women physicians have given steady service. In the new development of the hospitalization of obstetrical cases in San Francisco, the Alexander Maternity of the Children's Hospital was the pioneer in the field. The donor, Mrs. Charles B. Alexander, desired to offer to self-supporting families of moderate means the nursing care and protection of a hospital at reasonable rates. This house service has developed both leadership in the consultants responsible for it and has given excellent educational experience to the interns who conduct all normal house cases.

Dr. Edna Field (Cooper Medical College, 1883) developed this work.

Prenatal care, breast-feeding and post-natal examinations were cornerstones of this obstetrical service always. A careful analysis of indications based on a study of each case antedated all operative obstetrics.

Thus, the development of women in medicine in California centers about the development of their medical center at the Children's Hospital. Opportunity was thus early given them to meet and to learn to meet responsibility in medicine. The interns were always women. For many years the Children's Hospital gave the only opportunity in the West for an internship for women. Then, as competitive examination won appointments, women students came into their own, and here in California in recent years rank attained as students has placed women as interns in the University of California and Stanford hospitals; while the Children's Hospital has drawn from other institutions stretching from the universities of Edinburgh, Liverpool, Johns Hopkins, to Oregon and British Columbia. Ten or twelve interns annually take the rotating service and go out to medical work throughout the United States and in the mission fields of India, China, and Persia.

The spirit of shouldering responsibility was paramount in the women of the first forty years in medicine; each one was in the position, practically, of the country doctor who simply had to make good for every case. Each woman felt not only the urge to care for her patient well, but to score for women in medicine.

In the last decade women physicians have taken positions in the California medical schools of various

teaching ranks. Quality and sincerity in work and an endowment as a teacher are requirements. Obstetrics, gynecology, pediatrics, and neuro-psychiatry are the fields of teaching covered.

Two groups of women physicians deserve special words. The group who have added to the profession of wife and mother, an active life in the medical profession. It is no doubt a taxing combination and means a mentality that can evaluate and choose, and also an atmosphere at home, sympathetic to the effort. But that it *can* be done, the homes, children, and professional success of many women physicians in California go to prove.

The second group contains the devoted followers of general practice, the family doctors who follow the lives of the family groups from birth through childhood, adolescence, and maturity, and start out a new generation in turn. In this group most of the women physicians of the first four decades in California have functioned. As rural and urban physicians with a personal understanding and interest in the individual problems of their patients, they may in the future fill the demand as yet unanswered for the general practitioner.

No history of the development of women in medicine in California would be just or complete without a word of recognition and appreciation of the steady, helpful co-operation and sympathy given individually and collectively to women physicians by our brothers in the profession. At the time when women first applied and were excluded by the San Francisco County Medical Society and caricatured as "Carrie Nations" in the News Letter of that week, Dr. Samuel Morse, rising from a sick-bed, proposed, and Dr. Henry Gibbons Sr. endorsed, their names. Such men were heroes.

That year the women were admitted to the State Society, and the San Francisco County Society later admitted Dr. Lucy M. F. Wanzer, and thus the ice was broken.

The names of Dr. Samuel F. Morse, Dr. Henry Gibbons Sr., Dr. Henry Gibbons Jr., Dr. Levi C. Lane, Dr. Geo. Chismore, Dr. Chas. E. Blake, Dr. L. L. Dorr, Dr. Douglass Montgomery, Dr. Harry M. Sherman, Dr. John F. Morse, and Dr. C. A. Von Hoffman stand out as helpful friends of women in medicine at a time when it took courage to announce such a position. As consultants and members of the staff of the Children's Hospital, they gave support and endorsement to the work of women.

To the second fifty years of women in medicine in California is given the privilege of "carrying on." The profession has made marvelous advances; a college degree is today a prerequisite to the study of medicine with a very specific preliminary requirement as well. An internship is included in California before the degree Doctor of Medicine is granted.

The younger group begin where we leave off, but pioneer women physicians have set a marvelous standard in creative work and, in the spirit of service to suffering humanity, not easily surpassed. The early women physicians not only blazed a trail, but, well equipped educationally and in life experience, they made it a goodly highway easier of transit for every woman who follows, for their attainments.

909 Hyde Street.

SOME CORRESPONDENCE RELATING TO THE INTRODUCTION OF VACCINATION INTO AMERICA

By WALTER C. ALVAREZ, M. D., *San Francisco*

SEVERAL years ago while rummaging in an old book store in New York I picked up, off of a pile of rubbish being swept up for the furnace, an old correspondence-box which had attracted my attention. On opening it, what was my delight to find a letter from Jenner dealing with one of the first shipments of vaccine to Benjamin Waterhouse in America; two long letters from Waterhouse in regard to this vaccine; a letter from Dr. Holyoke; lecture cards from three professors at Harvard Medical School in 1798-1801, and the diary and notes of a young medical student by the name of Matthias Spalding. This young man had been a student in Waterhouse's office and at Harvard, and had then gone to England for post-graduate study. Unfortunately for us, he was not much of a diarist and his entries too often are short and perfunctory and of the "Got up, washed and went to bed" variety. The one incident of the day which seems always to have interested him, judging by the fact that he seldom omitted reference to it, was—his dinner! Such as it is, however, it gives us interesting glimpses of the life of a medical student in the London of that time.

He arrived on May 18, 1801, and observed that "It was a noisy and disagreeable place." After a walk around the city, he could see that "The people looked and acted pretty much like other folks—all appeared to love money." The next day he "Dined with old Mr. Bainbridge and toasted the King, Queen and Royal family, Mr. Gray, George Long and Earl St. Vensen; had tea at 8 o'clock; then rose from the table and staggered home." Later he apparently did not feel so proud of this exploit, because we find "staggered" crossed out and "went" written above it!

On May 30 we find this *medical* student attending lectures on bleaching silk, on agriculture, the physiology of plants, astronomy, etc. On June 9 he writes: "Attended Mr. Garnett's lecture on the physiology of plants, but during the lecture attended more to the physiognomy of animals, for directly opposite me was a most beautiful young lady. She had an enchanting smile—her eyes sparkled like fire and I, or my eyes, could not help catching the flame. I was attentively engaged, but lost my lecture." Apparently his affections had not yet been put in cold storage, where Dr. Osler believed those of the medical student should be.

A good bit of medical psychology is found in his notes on a visit to the inoculating hospital in London. He says: "When inoculated, Woodville gave these children 5 gr. of Rhei and ordered 5 gr. more to be taken in about a week, *principally to quiet the parents.*" (*Italics mine.*) "He seldom tells the patient whether it be smallpox or cowpox, as many of them still have some prejudices respecting the matter."

After he had had a good look at the sights of London he made his pilgrimage to Cheltenham, where Jenner had him to dinner several times and

took him with him on his rounds to the poorhouse where patients were treated and vaccinated. Later he dined with Jenner a number of times in London. Unfortunately, he gives us none of his impressions concerning the great discoverer of vaccination, and the entries in the diary are all too brief.

In October, five months after his arrival, Spalding decided that he would settle down to work. He paid £20/0/0 for the privilege of being a "Surgeon's pupil," and for £11/10/0 more he did dressings under Mr. Cline. Sir Astley Cooper's courses in surgery cost him £6/6/0. His careful notes on these lectures show the remarkable absence of specialism in those days. Mr. Cline on one day removed a stone from the bladder and on the next, a cataract from the eye. The man who gave the course in midwifery lectured also on physiology. Spalding studied obstetrics, anatomy, surgery, chemistry, medicine and a little dentistry. His tuition for the year amounted to £77/0/0—a large sum in those days. Under the heading of amusements, he lists "Went to Bethlehem (since corrupted to Bedlam) near Moorfields to see the mad people." This cost him £0/3/6. Apparently there was a charge of £0/2/6 for every confinement he was allowed to attend.

In the correspondence-box, together with the numerous lecture cards, there was a large, neatly written manuscript report of Astley Cooper's lectures which cost him £1/12/0. Apparently, even in those days needy students made money by selling their notes to their less industrious fellows. Cooper begins his lectures with the statement that "Formerly a surgeon was only thought to require a lion's heart, an eagle's eye and a lady's hand, but he is now allowed to have some *brains*."

A carefully kept cash account gives us a number of interesting sidelights. All doctors in those days carried a gold-headed cane and his, we find, cost £1/6/0. A "thermometier" cost £0/13/0, an inoculating lancet £0/1/6, etc. Surgical instruments were £20/0/0. At one time he was ill for sixteen days and his doctor's bill, including that for medicines, was £15/15/0. Apparently no allowance was made for his being a post-graduate student. Either he was somewhat of a dandy or else he laid in a goodly supply of "cloathes," because he paid his tailor £68/11/0 in a year and a half.

Before turning to a description of the letters found in the box it may be of interest to know that Matthias Spalding settled in Amherst, New Hampshire, where he became a successful practitioner. He had a good deal to do with popularizing the practice of vaccination in America, and in 1817 he was given an honorary degree of M. D. by Dartmouth College. There is a biographical sketch of Matthias on page 125 of "The Spalding Memorial" (Chicago Medical Publishing Association, 1897). He is mentioned approvingly by Oliver Wendell Holmes on page 108 of his "Prize Dissertation on Intermittent Fever" (Boston, 1838).

Having now been introduced to the original owner of the documents we can proceed to a discussion of the three most interesting letters. The two from Waterhouse are valuable because they show so clearly the difficulties which he encountered in keeping a proper supply of vaccine matter on hand in those days when it had to be obtained either on

threads or from the pustules on the arms of the vaccinated. At times he even had to pay people to let him vaccinate their children so that he could keep the virus going. He was one of the organizers of Harvard Medical School and one of the most interesting characters in American medicine. The best biography of him which I have found is by W. M. Welch in the proceedings of the Philadelphia Medical Society (1885, vii, 172). He obtained much of his data from an article by Martin in the North Carolina Medical Journal for January, 1881. Perhaps the best insight into the character of the man can be obtained by reading his tracts on vaccination, letters from him published in Baron's Life of Jenner (London, 1888, vol. I, pp. 439, 473 and 593), and letters published in the biography of Lyman Spalding. Lyman belonged to another branch of the same Spalding family and was a resident pupil in Waterhouse's home a few years before Matthias was there.

We learn from these sources that after several unsuccessful attempts to obtain active virus from England, Waterhouse at last got some and vaccinated his children. His troubles then began. He was soon deluged with demands for virus and for information. From letters in the volume on Lyman Spalding we learn that he had difficulty in his efforts to make the thing pay. Many of those to whom he gave the virus neglected his instructions; got it contaminated with smallpox and other things and discredited the practice. Others tried to belittle him and to take all credit for themselves. As always, many denied the efficacy of the new treatment in spite of the very convincing experiments which were carried out in Europe and America. It should be noted, however, that the more intelligent physicians and laymen almost immediately accepted these proofs and helped in the dissemination of the practice. As Waterhouse wrote to Jenner (Baron, vol. I, p. 473): "The characters in America most distinguished for wisdom and goodness are firm believers in your doctrine. They are not, however, overforward in assisting me against this new irruption of the Goths—. At present they leave me too much alone and it is probable will only come openly to my assistance when I do not want them. Had I not a kind of Apostolic zeal, I should at times feel a little discouraged. The natives of America are skilled in bush-fighting."

The jealousy and opposition of his medical brethren; the distrust that the layman feels for an innovating physician (never for an innovating quack); his own preoccupation with a large correspondence and his research on vaccination soon left him without patients and in actual want. Dabbling in politics added to the number of his enemies, and in 1812 he was forced to resign his position at Harvard. In many ways he undoubtedly was one of the big men in American medicine, but he seems to have been rather pugnacious and tactless, and many of his troubles were probably brought upon him by himself. According to Baron (vol. I, p. 442) the idea of obtaining virus from vaccinated cows was original with him.

Following are the two letters which were both directed to Spalding in London:

Dear Sir:—
"Cambridge, Oct. 20th, 1801.
I rec'd your letter by the Galen together with the

spectacles, glass, etc., and was very well pleased with them, and hereby return you my thanks for executing your commission so much to my entire satisfaction.

I was gratified at hearing of the polite attention of Dr. Lettson to you, and I rejoice as often as I call to mind the fortunate incidents that have combined to place you in the high road of improvement you are now in. You will learn more in one week in London, than in America during twenty.

Your second letter was from Cheltenham, where altho it carries you from the lectures must nevertheless be improving to you. A prudent man can draw instruction from every place. The conversation of learned, polished and agreeable men is more valuable than books. They are the '*living manners*' and are always useful. Air, earth and the congregation of men are the pages for a young physician to study, and as there is scarce any book out of which something useful may not be drawn, so there is no situation from which something may not be learnt. I presume you will spend the winter in London, if so, you can attend the anatomical and chemical lectures to advantage. I was pleased to hear that you had conversed with the man I so much admire, I mean Jenner. Present my best regards to him and tell him that although I sought his life with eagerness, and failed in the attempt,¹ I have nevertheless (instigated by the same spirit) been a little consoled in *hanging him up, in effigy*, in my parlour.

Aspinwall,² whose candor and liberality was all affection, has shown his teeth this summer and has injured the new inoculation by inoculating those *whom he knew had never gone fairly through the disease*, and advertising the result in the newspapers. It was just his harvest time, it staggered several who were balancing between the S. pox and kine pox, and occasioned perhaps 20 or 30 to go into his hospital. He gives out that the K. pox will preserve from infection for a few months *but no longer*. Lest this insidious conduct should make a gap in our inoculation, and lest that should break the continuity of the matter, I have to request you earnestly to send me some more vaccine matter by the Galen and the Minerva, or any, or every opportunity. No one in this quarter is now inoculating but myself, and I fear lest being thus alone I should be divested of the virus. Of all modes, I prefer that on cotton thread, well and repeatedly soaked in the 8th day virus. Mr. Wachsal sometimes sends it from cases on the 10th, 12th and 13th days, but I am doubtful of all taken after the efflorescence has formed. I pin my faith on Jenner and his rules. He is *my* polar star. He is the only unconfused writer I have yet met with on the Variola vaccinae.

The circle of your friends is, I believe, as entire as when you left us. Our season has been fine, and it is not unhealthy. The malignant fever (probably yellow fever, WCA) has again appeared at N. York and in Maryland, but milder and later in the season. Did you see Dr. Haygarth at Bath? If so, did you get introduced to him personally?

Capt. Barrow paid half of his note. J. Bartlett, the whole of his. Scales, nothing. Mrs. Waterhouse is obliged to pester you with a little frivolous commission. To procure for her at what is called a Turnbridge-ware house, or Turner's shop in London four setts of *Butter stamps* with rims, to them. They are for the purpose of making the round stamps of butter for the breakfast table, being such as Major Brattle used to have at his table. Each sett may cost a shilling or eighteen pence. She wishes to have the four setts of four different sizes. As to the figure of the stamps, be sure to get the *prettiest*. This turned work is made at Tunbridge and sold in every street in London. Mrs. W. and the children desire their best regards; so do my mother and sister; and so do Mr. and Mrs. Mellen, and the young ladies. Did you ever hear Mr. Mawman say anything of a manuscript he is about publishing of mine? Has Dr. Lettson published his Eulogy on the Cow-pox? Anything you wish to send

will be taken good care of by Capt. Hinkley of the Galen or Capt. Barber of the Minerva. The stamps may be sent by either; but if you wish to send a single letter, or indeed a packet, you have only to get some acquaintance to transmit it to Liverpool, where there is almost always a ship up for Boston. Not a week but that you may send that way. I will send a few of my pamphlets to Dr. Jenner by the Galen or Minerva. They sail in ten days.

BENJAMIN WATERHOUSE."

"Cambridge, April 15, 1802.

Dear Sir:

I received your letter of Feb. 2nd with great satisfaction, and lest you should not receive from your relations any letter, I thought you would not '*begrudge*' a shilling to have a letter via Liverpool, if it announced the continued welfare of your friends and relations. I saw Mr. Packard lately and also Gen'l Bridge, and have had several kind enquiries after you from Deacon Morris.

You mentioned having sent me some vaccine matter by the Galen, but I could find no letter or packet on board her. She brought me no letter from any of my London correspondents, which was rather a disappointment. By the Minerva I received one from Dr. Jenner, and have in return sent him an account³ of the diffusion of the blessings of his discovery among the tribes of Indians by the immediate agency of President Jefferson.

A grand embassy of warriors were at Washington last winter when the President explained to them the precious donation which the great spirit had lately made the enlightened white man. He then caused all the warriors to be inoculated for the Kine pox and when they departed had the *matter*, with an abstract of the directions I had given to him, put into the hands of the interpreter, and told them that they would not only be secured by it from the S. pox, but that it would finally extirpate that disease from the earth. I have sent the anecdote to Dr. Jenner, and which I hope will reach Mr. Ring. I am inexpressibly disappointed in not receiving a continuation of his treatise. I wish to see it before I publish mine.

The measles are diffused through the whole country and I fear that we shall all lose our vaccine matter by it, because, some are under it, some just got over it and others expecting of it. On that account I have to request my friends in London to favor us with some of the virus by the different ships. I am indeed very apprehensive that we shall lose the matter from that cause. I hope Mr. R. will not name Aspinwall in terms that may hurt his feelings. I have many apologies to make for him. There are hundreds worse than he is in the opposition. His hospital is his own property and he will lose 1500 guineas a year by it.

Mrs. W. thanks you very cordially for the butter stamps. You have done so well in it that she is encouraged to employ you again. She wishes for three or four of 4 inches diameter, that is 2 circular ones—and 2 oval ones, or as she expresses it stamps that will hold a $\frac{1}{4}$ lb. of butter. Those you have sent are very pretty and much admired. Are there any stamped with the spread eagle of America? Make a minute of these little expenses for me in your pocket book. The children desire their love to you. John made him a long lash whip the other day and I overheard him say in the intervals of snapping it, 'I will write down the day of the month and hour when I snap'd it, and ask Mr. Spalding if he did not hear it crack all the way to London!' Daniel says you must send him a young elephant, Benjamin wants one of the lions out of the tower, or if you can't easily get one of them you may send him, he says, a crocodile.

Adieu, your friend,

BENJAMIN WATERHOUSE.

P. S.—Geo. Stroud has a majority of votes over Gerry of *ten thousand*. I am glad to hear by you that Mr. Mawman is about putting my manuscript to press. By this opportunity I have sent a letter or dissertation on Natl. History, or rather a *sketch of my course of lectures* to be inserted in that volume. I would thank you on receipt of this to say as much to Mr. M. without saying that I desired you to, for I have addressed the letter to Dr. Lettson who may thro hurry of business omit to

¹ This playful passage is explained in a letter from Waterhouse to Jenner, to be found in the former's tract on vaccination published in 1810, p. 52. He wanted material for a short sketch of Jenner's life.

² Aspinwall ran a smallpox inoculation hospital in Boston, and naturally faced ruin if vaccination should prevail. In the next letter we see how charitable Waterhouse was towards him in the matter. Jenner had exactly similar difficulties with Woodville, the head of the smallpox hospital in London.

³ An almost identical account of this event is to be found in a letter Waterhouse wrote Jenner, April 8, 1802 (Baron, 1888, 1, p. 593).

attend to it. It is additions, etc., to what I wrote four years ago.

If you understand me, my meaning is this, I wish you to mention to Mr. M. in a casual way that you find by a letter from me that I have sent an additional letter for that work in which case he will enquire for it of Dr. L., should Dr. L. through hurry, have neglected it."

The following letter from Jenner to Spalding explains itself. As I have said before, it deals with one of the earliest shipments of vaccine to America:

"Dear Sir:

From the time I rec'd your communication relative to the sailing of the ship to America, to the present hour, I have met with such incessant interruptions that I c'd not get my parcel ready for Dr. Waterhouse till now.

I have written a long letter, or rather a long incongruous scrawl—the Dr. perhaps little knows the harassing kind of life I lead here—I wish you w'd in some measure explain it to him that it may prove an apology for my incoherent letter. I have sent some Vac. matter to the Dr. Perhaps you made the request for yourself. If so, pray let me know it.

Yours very faithfully,

E. JENNER.

Tuesday night."

The pressure under which Jenner carried on his correspondence is well shown in another letter of his to Waterhouse, which is published in the latter's "Information, etc." (Cambridge, 1810, p. 52). There he says: "And now, my good doctor, I would fain proceed further and double my epistolary account with you; but our friend Spalding tells me that if I do not make haste, the ship intended to convey this will be gone. I have not said half I wish to say—but I am at this moment fifty letters behind-hand with my correspondence—a distressing idea." If only he could have had a stenographer and a typewriter!

We know from Baron (p. 386) that this correspondence between Waterhouse and Jenner was kept up with increasing interest and attachment until nearly the close of Jenner's life. Such friendships between scientific workers who have never met are beautiful and, I believe, represent humanity at its best.

177 Post Street.

Why Worry?—"Worry," says Herman N. Bundesen, "is a waste of time and energy, accomplishes nothing, and gets nowhere. Worry creates a surly temper and an habitual grouch. It puts a damper upon ambition and is a wet blanket upon happiness. It's a 'joy-killer.' Worry gives a jaundiced look on things, disturbs mental balance, and lowers resistance to disease. The life of the worrier is just what he makes it—an unbalanced existence. The remedy for worry is cheerfulness, and this is to be found in planning good things for the future, living more contentedly in the present and not at all in the past, having more faith in God, talking less, listening more, keeping occupied, and cultivating optimism. Look at the doughnut, not the hole."

Reorganization Meeting of the State Medical Society of California, October 19, 1870—It was for such purposes this society was formed: To bring the members into harmonious unity of action; to cause mind to bear on mind; to work out the problem of climatic influences on the physical condition of man; to investigate the nature and causes of endemics and epidemics; to determine the best methods of holding life and health in integrity, and to remedy the evils incident to existence—these I conceive to be its prominent aims. (From Address of Welcome delivered by Thomas M. Logan.)

SOME HISTORICAL INCIDENTS IN THE DEVELOPMENT OF THE OPERATION FOR CATARACT

By HANS BARKAN, *San Francisco*

IN OUR attempt to describe and bring forth the relation to each other of the main developments of the operation for cataract, we find that we are asked to include a period of two thousand and more years. The development of the operation to its present very nearly perfect state was dependent upon the natural development of knowledge during the course of this period, partly upon the development of certain specialized forms of learning, and partly upon emancipation from prejudice and bigotry.

The literature on the subject is immense, though comparatively little is extant in the *original* Latin or Greek. These writings disappeared long before the time of the Arabians. With the pillage and sacking of cities and the destruction of their libraries, many of the original descriptions of the operation vanished, and it is mainly through the translations into the Arabian that we are still able to obtain very nearly first-hand knowledge of what the ideas of the Romans and Greeks were.

In our appreciation of operating methods and of general knowledge appertaining to cataract among the Greeks and Romans, we must not forget that translations into the Arabian were not always accurate and were often not from the original Latin, but from various forms of degenerate and colloquial Latin. Furthermore, that the Arabians interpolated their own conceptions of what the original Roman or Greek surgeon may have meant, and that often an Arabian word meaning one thing may have had in the Latin original one of several meanings, and vice versa, so that the translations which we possess of the Arabian manuscripts, English, French or German, give in many cases a different meaning from that which the original Latin or Greek description meant to convey.

A case in point is the question as to whether the Greeks and Romans ever suspected the true nature of cataract. What did they mean by the removal of a cataract? Was not to them any obstruction to sight that was visible within the anterior chamber or within the pupil a cataract? Did they not include hypopion and secondary pupillary membrane? We wonder whether some of the very earliest accounts of the actual removal of the lens from the eye do not refer to an incision into the cornea for removal of a hypopion.

Galen says: "The cataract is brought to another location where it disturbs less, but a few have attempted to empty it entirely." The original of this work is lost, as is the work of Antyllos, which Razi has preserved for us in Arabian and in which it is stated, "I have split the lower part of the pupil and have led the cataract outward. This is possible with the thin cataract, but with the thick it is not possible because the egg jelly moisture would flow out with the cataract."

Hirshberg, who has gone most carefully over the Arabian text, with which language he was familiar, doubts that the leading out or pulling out of the cataract is the sense of the word, but that it is more

apt to be one meaning "pasting it down," and would therefore refer to some method of couching.

We are not in a position to state what may not have been done occasionally and what may not have been done in times long before there exist any records. Celsus, a contemporary of Christ, gave the earliest description of cataract operation, viz., that of couching. Three centuries before the dawn of the Christian era there is historical mention of ophthalmic surgeons in Alexandria, and Galen states that some of these surgeons devoted themselves exclusively to operating on cataracts. Celsus speaks of the writings of a famous Alexandrian surgeon named Philoxenes, who lived 270 B. C.

We have proof, then, of some form of cataract extraction as long as two thousand years ago. That, except for occasional isolated instances, the operation in the main remained the same for many centuries is scarcely to be wondered at. It remained the same in principle in the hands of the Greeks, the Romans and Arabians, and later in those of the surgeons of the Dark Ages of Central Europe.

The knowledge of anatomy of the eye was a most rudimentary one through all this period. No surgeon had any real conception of the nature of cataract, or that the crystalline lens was displaced by the operation. It was held to be an effusion from either the posterior or the anterior liquids of the eye. The rough drawings of ocular anatomy show an entirely erroneous idea of these chambers and of their sizes; the humoral pathology of the time led naturally to the conception of effusion.

So matters stood until Brisseau's discovery of the real nature of cataract, and of Daviel's delivery of the lens through a corneal section, not two hundred years ago. From that time on to the present, the great advances in surgery of cataract have occurred—advances associated with the names of Daviel, Brisseau, Heister, Mery, Maitre-Jean, Morgagni, James Ware, Wenzel, von Graefe, Beer, Wecker, Schweiggert, Arlt, La Faye (the originator of the intra-capsular operation), Richter, Mackenzie, Rosas, des Marres, Pagenstecher, Knapp, Smith, Barraquer and many others.

The technical development of the operation since the days of Daviel has been great; the eminently satisfactory results of today, however, not attainable until cocaine and asepsis had made possible the painless and cleanly performance of the technical improvements.

Let us in the main interest you in three great periods. The first, that of the Arabian methods and schooling; the second, that of the operation as carried on during the Dark Ages in Central Europe; and the next, the epoch-making work of Daviel.

Civilization following the period of "the glory that was Greece and the grandeur that was Rome" had its throne in the East. Bagdad was not only the political capital of a far-reaching empire, but the focus also of all scientific endeavors. There were read with enthusiasm Aristotle and Plato; there the scientific world gathered and there mathematics, and astronomy based on Euclid, were called into life.

Based on Hippocrates and Galen, medicine was advanced and an endeavor made to investigate the secrets of nature. The treasures of the Arabian world in contrast to the poverty of Christian Europe

of the Middle Ages is hard to imagine. The geographer Jaqut in 1200 A. D. found in a small Arabian city twelve libraries, each of 12,000 volumes. Bagdad, a short time before its destruction by the Mongolians, contained not less than thirty-six libraries; the library of its ruler in the ninth century contained 80,000 volumes; that in Cairo, 2,000,000 volumes; that in Cordova, 600,000 volumes. Arabic was the world language. In this language, then, we find the translations of Greek and Roman medicine, and a number of their own medical works, the most famous one perhaps being that of Razi, which kept



Jacques Daviel

its place throughout the Middle Ages and into the seventeenth century, being used as the foundation-stone of many of the university lectures in medicine, in Central Europe.

Abul-Hasan, Ali B. Al-Abbas and Ibn Sina are famous names, the latter more familiar to us as the Avicenna of the Latin translations of the Middle Ages. In their writings are to be found many trenchant observations; many of the drugs used today were familiar to them, and their ophthalmological knowledge especially was saner and freer from absurd and filthy methods of treatment than that of their successors.

The Arabians as far as cataract was concerned, did not, however, in spite of their incisive power of observation and deduction, go further than crude methods of relieving blindness. The couching of cataract by means of various shaped needles was the standard method of procedure. Some of their ideas regarding the circumstances favorable for the operation and the method of performing it are interesting.

So says the Persian, Abu Ruh Muh: "Should

someone ask you how one couch the cataract, and how many varieties of doing this there are, so answer, 'One operates the cataract in three methods: first, with a little knife or a needle; second, with a solid lance, and third with a hollow needle.'

Antyllos and Paulos describe it somewhat as follows: "In performing the operation put the patient in the shadow opposite to the sun ball; his head be held tightly; he look toward his nose without deviating from this position. Now let the surgeon put his instrument as far away on the temporal side of the cornea as is the distance between that and the pupil. Let the surgeon take the tail of the needle and press it into the eye so that a mark is left, and taking this spot let him shove inward and forward the needle. Wind a thread about the needle so that it do not penetrate too deeply. Is now the needle in the eye; bring your mouth close to the eye and blow upon the same so that the pupil remain undisturbed. Now press downward, and press the cataract toward the lower part of the eye. Should the cataract be a difficult one and return into place, break it up toward the sides where it seems to you easily disposed of until the patient sees immediately. If this has succeeded, draw out the needle and lay upon the eye egg albumen with rose oil for three days. Lay the patient then upon his back, rub some white salve on his eyes, for they must hurt him. Should only one eye be operated upon, the other one, however, must be bandaged with it. So let him lie and sleep upon his back in a dark room, and be visited frequently and regularly that one knows exactly his condition. Let him beware of singing, talking and coughing. Do not change his bandage for three days if there be no necessity."

The demands upon the operator were: "The cataract operator be of good vision, of a clear, penetrating gaze, of sharp sight, possessed of knowledge of the interior of the eye and of the optics of sight. Let not his hand tremble; let him step toward the eye with courage; let him be fearless when pressing in the needle, and free of dizziness. Let him not be ravenous for operations, and let him choose the best times."

To be ambidextrous was demanded on the part of all the Arabian authors. We know today how valuable an attribute of the cataract surgeon this is. The influence of the seasons and of the time of day were held to be of great importance. A sunny day between autumn and spring was preferred. Says Hippocrates, as quoted by the Arabians: "Let the surgeon wait for twenty days after the mid-point of summer, autumn, winter and spring, during which time the patient should be regular in his diet, and freely move his bowels." Says Ali Ben Isa: "Let the day be one of the northerly sun, not of the southern one. Let him sit opposite to the sun on a cloudless day, and not a day when the sun is not north." Evidently he means a clear, sunny day in time interval between spring and autumn.

The most courageous and best of the cataract operators of the Arabians, Ammar, however, values the time of the year and the state of the weather so little that he does not even mention it.

As regards position, says Ali Ben Isa: "Let the patient sit upon a soft pillow and tie his knees together and against his breast, and also his hands one

against the other and against his thighs. You, however, sit upon a stool so that you are somewhat higher than the patient's head. Bandage the eye that you are not operating."

Says Ammar: "Sit the patient before you, but you so sit so that the head of the patient is opposite your breast. Then command the patient to fold his hands about his knees. If the cataract be double-sided, bandage the left eye." In order to be positive that the cataract rise not again (the dread of the operator), Ammar commands the patient "to cough, to snort, to grind one row of teeth upon the other," all this with the needle still in the eye in order to make sure that the cataract will not rise afterwards. The after-care was done with great precision. On the fourth day the patient was allowed to sit up, but had to be very careful until the seventh. He must avoid chewing and drink little water. He must lie in a dark room as if dead. Ammar changed his bandage every day. On the fourteenth day the patient could take a bath, and after that do as he pleased.

Salah Ad Din adds the following useful precautions: "One should avoid screaming and threshing of wheat in the neighborhood and evil smells and things which cause sneezing. Let his couch be free of fleas and from everything that might disquiet him; nourish him with dates and sour cream; wash his eyes with woman's milk and lay upon them the yellow of egg and oil."

Perhaps we have gone far enough in presenting this picture of the Arabian cataract conception. We see, in striking contrast to the charlatan and degraded practitioner of the Dark Ages of Europe, a group of really eminent, thoughtful and sincere men who had the insight to obey some natural causes, and had an amount of sympathy for their patient's welfare and precautions for his recovery that illustrate the noble and humane sides of the Arabian character.

The couching methods of their time are still carried on today in perhaps even a cruder way by the couchers of India.

The interesting volume of R. H. Elliott on the Indian operation of couching for cataract describes the present day methods: "Their methods are dirty, septic to a degree. Their surgical equipment is carried in a bag or in a box which would be considered dirty alongside of a tool chest or work basket of any English artisan. The filth alike of their clothes, their hands and their person staggers description from a surgeon's point of view." Some of their tricks are quite similar to those employed by the cataract operator of the Dark Ages of Central Europe. The Indian charlatan of today has tricks that even his predecessor of the Dark Ages was not aware of."

Elliott relates the following: "The operator and his assistant took the patient alone into a darkened room; a candle was lighted and kept carefully behind the victim's back by one of the rascals, while the other in front asked if he could see the flame. A sham operation was then performed and the process was again repeated, but this time in front. Naturally the blind man could now see the light and, on being assured that the change was due to what had been done, his gratitude was likely to rise to the production of the necessary fee. If it did so,

the impostor speedily made off. It seems hard to believe that even the Dark Ages were dark enough for so transparent a trick to be tried often in one town." "In India today the patient and operator sit facing each other in a good light. Both squat on their hams in accordance with the immemorial custom of the East. The patient is frequently, if not usually, told that no operation is to be performed; that it is merely a question of putting medicine into the eye. He is requested to look downward, and the coucher raises the upper lid with one hand, whilst in the other he conceals a needle or a sharp thorn; it is said that the needle-like thorn of the babul tree is usually selected for the purpose. In the majority of cases at least it would appear that no form of local anesthesia is attempted. The needle or thorn is thrust suddenly through the cornea and on through pupil or iris into or on to the periphery of the lens. The next movement, which appears to follow the first so rapidly as practically to merge into it, is that of depression or reclinatation. In nearly every case the operator tests his patient's vision immediately after the operation by holding up fingers, colored cloths, necklaces or other common objects for triumphant identification. The eye is bandaged for at least twenty-four hours. By the end of that time the operator has frequently placed a safe distance between himself and his patients of the day before, and is seeking fresh dupes in another village."

I have brought out these points of the present-day couching operation in India in order to come back to the couchers of the Dark Ages. They traveled with their needle concealed in their broad-brimmed hats or sleeves, and many of them were preceded by a "ballyhoo" artist who, for the week previous to the arrival of the famous doctor, sang his praises in the community about to be visited. Small stages were erected in the center of the mediaeval town square upon which entertainment and sleight-of-hand tricks were performed. Occasionally the charlatan's advance agent consisted of accomplices who praised from the public platform the great man about to come, and declared that they had been blind, and lo! they could now behold the eye of a needle.

The blind came from near and far on the day of the surgical carnival, for not only cataracts but every other blind were relieved of their difficulties. It is true that the operator, as does his modern Indian cousin, did not seek a permanent residence in the town of his activities; but bandaging his patients' eyes for seven days with strict injunctions not to remove the bandage before the time, and being possessed probably of as lively heels as he was of nimble wits, laid a safe distance between himself and his victims.

It is among gentry of this ilk that the famous Dr. Eysenbarth of the sixteenth century belonged, of whom the verse is still sung in Germany:

Ich bin der Doctor Eysenbarth,
Curier die leut nach meiner Art,
Kann machen das die Blinden gehen,
Und das die Lahmen wieder sehen.

Far from the position of dignity which the ophthalmologist among the Arabians enjoys, the ophthalmologist of the Middle Ages sinks to the level of the clever clown and is not held in any esteem by the decent men of his times. They kept whatever

secrets of success they may have possessed either to themselves or offered it for large sums to those who would spend sufficient time as their assistants. They continued the operation in about the form that had existed for hundreds of years, though there were exceptions to which I will come.

Richard Banister in 1622, translating in the main the work of Guillemeau, offers the following poetic views which incline one to believe that he was perhaps not related to the average quack of his times. To comfort the patient he says:

"Like cloudy vapors
See the eyes o'ercast,
Yet vanquished as the dew
By the sun at last."

And again:

"Our practiced, careful skill, with observation,
Will teach the mystery of the operation;
To end this work, that perfect it may stand,
God guide with perfect skill, our eye, our heart, our hand."

And once more, the fit time for couching the cataract:

"Couch cataracts upon a day so fair
That neither wind nor clouds disturb the air;
When spring with simples fills the earth's rich lap,
Or autumn makes the tree put off his cap,
The moon is full, or in conjunction sly,
Or tracing Aries or in Gemini."

The Englishman Banister is the counterpart of the German Bartisch in his superstition, professional narrowness, and envy of his competitors; also in the cleverness of his manual work, in his honesty, in the faithfulness of his presentation and his gift for poetry. Bartisch, whose activities were in the middle of the sixteenth century, has written a book of ophthalmology which gives him the position in ophthalmology of those times that the shoemaker Hans Sachs of Nuremberg held in poetry, or the shoemaker Jacob Bolme in philosophy. At the age of 13 he was apprenticed to a barber and a surgeon; in the year 1588 he was court ophthalmologist, not, however, before the city of Freiberg in Saxony had found it necessary to proclaim that "the eye doctors George Bartisch and Simon Hoffman shall stay at the saddlers' corner in the neighborhood of the market; the other noise-makers, however, shall remain in the middle of the square."

Be this as it may, he was an honest man, and his book, a copy of which is in Lane Medical Library of Stanford University, is well worth study and of great interest. His book is one of the very first complete presentations, *well illustrated*, of ocular surgery.

In this state of chaos, superstition, and lack of knowledge of what a cataract really was, we leave the Dark Ages to find that, as in all other branches of science, knowledge of the fundamentals was necessary before any progress could be made.

The first who demonstrated that the anatomic position of a cataract was in the lens was the famous anatomist of Jena, Werner Rolfinck, who established this fact in 1656. With more generosity than is sometimes found in modern days, he expressly states that he has only confirmed the teaching of Quarre, the Parisian physician and surgeon; and on two occasions has demonstrated the lens to be the seat of

cataract through the anatomical examination of the dissected eye of the dead.

Before him Plempius, in 1632, had spoken of this theoretical possibility, as had the Arabian Arculanus in 1420. As in all development of really proven facts which from this time on occur in rapid strides, the question of priority arises. Men before the days of Rolfinck, Quarre, Brisseau and Daviel had mentioned theoretical possibilities, or had even occasionally stated that they had done this or that; but it is only with these men that the facts were firmly founded, and to them belongs the credit.

Others, such as Borel and Gassendi, maintained that cataract was the opaque lens, but they could not

with this fact established, the first start toward a rational conception of cataract surgery was begun. It is interesting as pointing the way in which discoveries of such magnitude sometimes originate to see in what fashion Brisseau was led to his discovery. Says he:

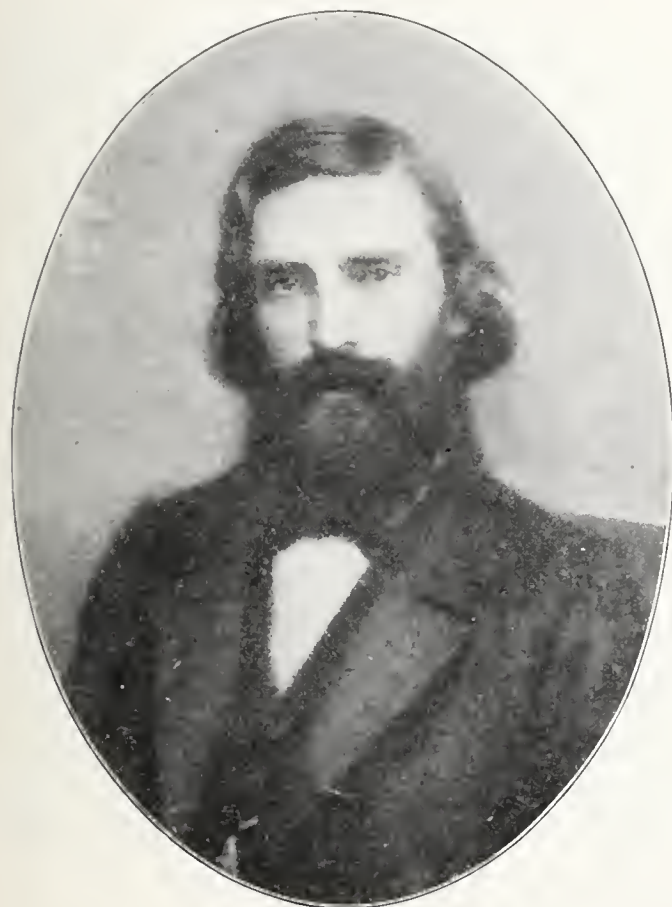
"Nothing was further from my mind than the examination regarding the character of a cataract. I happened to hear that a thief who, in order to disguise his business, had been giving himself out as an *oculist*! was to be executed, and I wished to obtain the cataract needles in his possession which happened to be missing from my instrument case. In obtaining these I was reminded of some doubts which I had entertained previously in regard to the character of a cataract. I made several trials on the eyes of animals and found that I could not advance my needle according to directions from behind forward into the water of the chamber without boring through the lens. This, according to previous ideas, must have destroyed vision, for the current belief was that the crystalline lens was an object absolutely necessary for vision. I awaited my opportunity, which came in the form of a soldier who, possessed of a cataract, died in a hospital. After his death I performed the operation upon his eye. I then dissected his eye and found the lens opaque and hard and pillowed in the vitreous where I had sunk it, and so came to the conviction that the genuine cataract is in no case a skin or effusion produced by the fluids of the eye, but is a hardening and opaqueness of the crystalline lens."

Boerhaave, Morgagni, and Valsalva all supported Brisseau, and the acceptance of the real structure of cataract was soon firmly established. In our day we can scarcely appreciate the psychology of those times, the pertinacity with which the scientific world clung to the revered teachings of Hippocrates, Galen, and Celsus. As little as new ideas in theology met with favor, did scientific truths that were in opposition to the gospel of the old scientific testaments. The establishment of a truth of this sort formed the greatest milestone in the development of the cataract operation of today.

It is noteworthy that in France particularly these new adventurers in the scientific reconstruction of surgery and anatomy flourished, and that only in a later period, after the fall of France as the leading world power, did the German school of great progress in surgical development take place.

As the undisputed leader in the surgical development of the cataract operation of today, we find Jacques Daviel. Daviel had been immediately preceded by operators of great experience and brilliance, such as Charles Saint-Yves, who in thirty years yearly performed eighty to one hundred couchings; the surgeon d'Aigaillon of Orleans, who in thirty years was supposed to have had two thousand successes in the operation of couching; Master Antoine, and the Englishman Woolhouse, who in 1717, after practicing for twenty years in Paris, boasted of several thousand cataract operations.

We find with Daviel's time the foundation of the charity hospital in Berlin in 1724, and in 1732, the Academy of Surgery founded in Paris, whose fate it was to hear Daviel and to judge of his claims as



Mr. A. von Graefe

make a breach into the wall of Galen. It required a more violent attack and a more passionate battle to destroy these old teachings, and this hero and victor was the young French physician, Michael Brisseau.

Brisseau maintained in many theses, in correspondence and in popular discussion, that a cataract was nothing but the opaque lens, and the matter was so thoroughly aired and discussed that from then on it was taken as an accepted fact.

Maitre-Jan shares perhaps with Brisseau the credit. He noticed in 1682, in depressing a cataract which appeared in the anterior chamber, that it was not a thin skin or effusion, but a round, thick, white body. He opened the eye of a cataract patient after death and found that the cataract was opaque lens. He performed an examination of the eye that he had operated on after the death of a patient from pneumonia and found the same to be true.

The presentation that he and Brisseau made before the Parisian Academy settled that matter, and

to his new operation. Here, too, the first course of instruction in diseases of the eye and their treatment, held under the auspices of a recognized institution, was given by de la Martiniere, and finally, the foundation of the College of Surgeons in London in 1745.

Two thousand years nearly had passed since the first record of cataract operation. With Daviel we come to a period in which, following knowledge of its anatomic position, ways and methods have been contrived within the last two hundred years whereby we have proceeded to a radical expression or extraction of the lens. Two thousand years of couching became history.

Preceding Daviel, this possibility had been mentioned by Steven Blankaart, but it was left to Saint-Yves and Petit to remove a dislocated lens which, after couching, had dropped into the anterior chamber. They inserted a needle into the cataract and removed it by a short incision through the lower portion of the cornea.

The famous Baron Taylor boasted that he had, in 1737, removed in England, by means of a corneal incision, various cataracts which were behind the iris, but he was disbelieved by several of his contemporaries, and Hope, his countryman, declared, in 1752, that he had seen Taylor operate for six months in Edinburgh and depress several hundred cataracts, but had not seen him remove one from the inside of the eye a single time.

Taylor was undoubtedly a genius; a man as vain and boastful as he was able, and as fluent a liar as he was an operator. His greed for praise and money, and yet the undoubted genius of the man, made him at the time one of the figures of ophthalmology.

The more we read of the predecessors of Daviel the more we come to the conviction that in him is found the first figure both upright, clear-sighted, energetic, brave, persistent and scientific, and that he well deserves to have us feel that he is present in spirit at every cataract extraction, a house god in the home of the ophthalmologist.

He was the son of people of humble station in life, industrious and loyal to their king and to their church. He was born at the close of a century that had been made memorable, not only for what the grand monarch of the age, Louis XIV, with his grand cardinals, had achieved in conquest, in authority, in social display, in religious supremacy, but for what had been accomplished in the advancement of literature, art and science. Painting, sculpture and architecture were in bloom, institutions of learning founded and encouraged, science promoted.

His early life remains in great obscurity. In 1730, at the age of 20, he was attached to the army as student surgeon and served in the army hospitals. When the plague broke out in southern France he was commissioned to go to the relief of the plague-stricken population. In the midst of the plague he married, and on the fifteenth day after his marriage Daviel and his young wife departed for Marseilles, where he again devoted himself completely to the care of the plague-stricken.

Due to his work there he was admitted to the Corporation of Master Surgeons without examination, and was later one of the surgeons at the City Hospital. There had never been official teaching of

anatomy and surgery in the hospitals, and Daviel worked and sacrificed in order that this be made possible. He was given unusual privileges in regard to cadavers and became an enthusiastic student and teacher of anatomy.

It was at this period that he performed his first operation for cataract, using the method of depression which was the only one then known. He immediately became intensely interested in the surgery of the eye, acquiring much skill as a surgeon-oculist, and soon became so skilful that, after having been called to several large cities to operate upon cataract, he came to the great medical center of Paris at the age of 53 in 1746.

Daviel brought depression to a more exact point by devising new instruments and by continuing to make experiments daily on the eyes of cadavers. He was first led to be enthusiastic about the possibility of removing the lens from the eye by having failed to depress a cataract. Failing, he decided to open the lower part of the cornea, and the exact manner he does not describe. After making the opening he held it apart by lifting the corneal flap with small forceps and, introducing a needle into the posterior chamber of the eye, the lens was brought out, followed by a small portion of vitreous body. The eye regained its natural form and saw well. The result was so successful that it gave him, as he says in a letter, "great ideas in regard to the extraction of cataract."

Finally he performed his first predetermined, pre-arranged extraction. The case was that of a woman whose name, age and condition he does not give. He opened the cornea with a small knife, then enlarged the incision with small curved scissors. He then passed a small spatula to the upper part of the cataract and "detached" it, and with the instrument drew it out in small pieces. The pupil appeared clear; there was not the slightest accident, and in fifteen days the patient was well.

Further successes gave him more and more assurance, and finally, in 1750, he had had sufficient experience to cause him to resolve not to operate except by extraction.

The operation which he had invented and now made public consisted in incising the lower part of the cornea and extracting at its junction with the sclera. He first made an opening into the anterior chamber at the extreme lower margin of the cornea with a triangular-shaped knife and then after withdrawing this he enlarged the incision on both sides with a narrow, blunt-pointed double-edged knife as far as he could easily, and finally, when the cornea became too much relaxed to continue the incision, he completed it to the extent desired with delicate scissors which were so curved on the flattened end as to correspond to the curve of the cornea-scleral line. These, of course, were made right and left, the blade introduced into the anterior chamber being blunt-pointed. Having completed the incision, he lifted up the corneal flap with a small spatula and incised the anterior capsule of the lens with a sharp-edged needle. After doing this he carried the spatula between the lens and the iris and delivered the cataract by pressure from above.

Various modifications in the shape of triangular flaps of the cornea were tried by him. In a letter

addressed to the *Journal des Savants* in 1756 he said: "I think no one doubts the excellence of so good a method, for out of 354 persons that I have operated on, 305 were perfectly successful."

Again, in a letter of 1756, he stated that he had, during the preceding sixteen months, extracted eighty cataracts, with only one failure. Even granting that the standard of success was not as high in regard to vision and other desirable factors as today, we must regard these statistics as astonishing. He continued his beneficent work for years, and was called to all parts of Europe to operate.

It was his fortune to be recognized during his lifetime, and to be elected to membership in nearly all

in all its prime essentials. Such an operation is still used by most of us.

It would carry us too far and come too close to modern days and our immediate knowledge of modern surgery to enter into any description of the historical aspects of the times since Daviel. The great von Graefe stands alone in his genial experiments with the size and location of the incision, and with his never-failing efforts to obviate the difficulties of the healing of the wound which originally led him to perform iredelectomy, believing that this obviated infections and trauma to the tissues in the expression of the cataract. His description of his reasons for iredelectomy in cataract extraction and his method are well worth reading in the original, appearing in the *Archives of Ophthalmology* in the year 1859.

The names of many great men—Beer, Jager, Arlt, Sichel, des Marres, de Wecker, Scarpa, Potts, and Langenbeck—fall between the periods of Daviel and von Graefe. Some of them had improved methods or improved instruments; others, such as Potts and Langenbeck, actually strove to turn back the hands of the clock and advocated passionately recination and kerato-nyxis.

To the Austrian school of Beer, Jager, Rosas, and Arlt belongs finally the great credit of having formally established the extraction of the cataract in opposition to the reversal to antiquated methods which threatened to nullify Daviel's efforts.

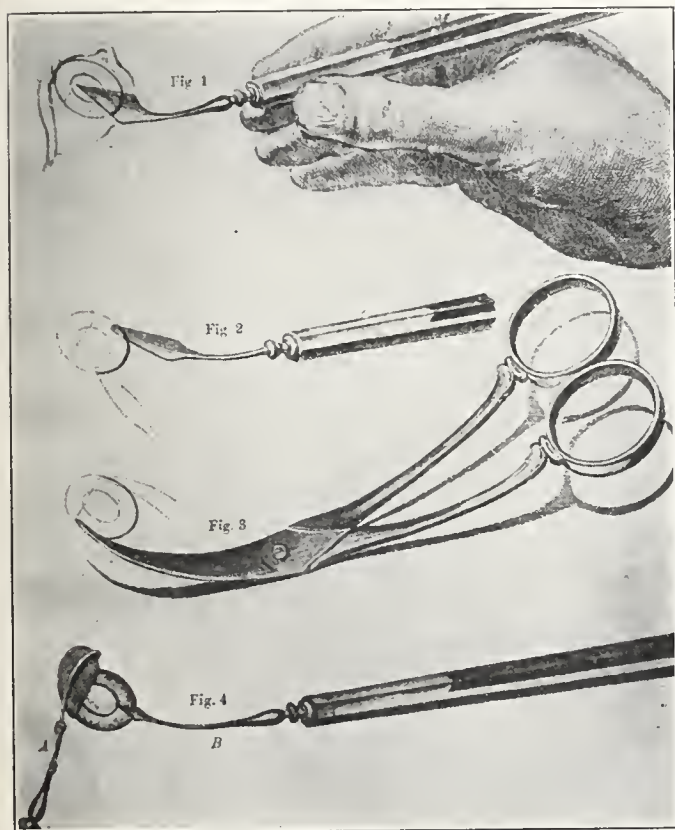
The extractions of today are well known to us all. The extraction in capsule by Smith's method, or by Barraquer's; the lifting out of the lens by appropriately shaped forceps; the various modifications of conjunctival flaps and safety sutures—all these will in time form a historical study for the generation of ophthalmologists hundreds, perhaps thousands, of years from now.

Perhaps, if summed up, the high lights in the operation of cataract might be said to be the work and methods of the Arabians; the work of Brisseau and Daviel; the work of the Viennese school, and the work of von Graefe.

It was Anatole France who, on being reproached by a friend that his library contained only the works of the ancients, and that he paid scant courtesy to his colleagues by not including theirs, said:

"I know what *they* think. What I want to know is what those *before* me thought, and I would like to know what those after me will think."

516 Sutter Street.



Cataract operation of the 17th Century

the scientific bodies and academies of Europe. His death occurred in Geneva, probably due to cancer of the larynx. His grave there is surmounted by a monument erected to his honor by Swiss oculists.

His operation has been changed, in regard to the location of the incision, and has been changed in regard to the use of a single knife instead of the multiplicity of instruments. The problems dealing with the complications of extraction have been met and worked out during the 172 years since his time. The names and work of the many eminent men since that day form the concluding chapter toward the perfection of the operation.

The operation has been the subject of the closest attention and study, and has encountered an infinite number of modifications. And yet today, substituting for Daviel's knife and scissors the modified knife of Tenon of 1757, as represented in the von Graefe knife, making the incision upward, not downward, adding in appropriate cases the iredelectomy of von Graefe, we have still the classic operation of Daviel

Prevention as the Primary Duty of Physicians was Old Then as Now—It has become the imperative duty of every physician to be a preacher of the gospel of life and health, if he has any exalted appreciation of the aims and ends of his calling; and inasmuch as in the science of health there are more exact demonstrative truths than in the science of disease, so that duty demands, as it richly deserves, an unbounded share of our professional energy. As teachers in this nobler work of *prevention rather than cure*, we must not only show mankind what the laws of nature are, but how important is a strict adherence to them; in other words, we must, by every means in our power, by example as well as by precept, strive to advance them in the scale of intelligent beings. (From President T. M. Logan's Address at the First Annual Meeting of the Medical Society of the State of California, October 11, 1871.)

THE CALIFORNIA PANDEMIC OF 1833

By EDWARD W. TWITCHELL, M. D., *San Francisco*

THE population of California in the early part of the last century has been variously estimated. It consisted of the dwellers in and about the chain of missions and presidios extending northward from San Diego, a Russian colony or two north of San Francisco Bay, and scattered pioneer holdings here and there, forming the civilized element, and a great number of Indian tribes spread out over the whole country from the coast to the Sierras. The numbers in the missions were pretty exactly known, but of the great population beyond the missions only estimates could be made, and these were naturally only approximations.

When La Pérouse, the great French navigator, left Brest in 1785 with his two frigates on the voyage that ended so disastrously, he went first toward the North Pacific, reaching this coast in 1786. He estimated the total population as 50,000, of which 10,000 were neophytes attached to the missions. Vancouver, in 1793, thought there were 20,000 neophytes and eight to ten times as many in the tribes. An apparently official census of the missions only in 1795 showed 12,216 in the missions. A similar census in 1805 showed 22,637. The Mexican census of 1831 estimated 27,000 Indians in the state, but this was so far from the estimate of other observers that it should not be considered.

Hittel, whose estimate is among the lowest, says that 50,000 Indians were probably the limit. Most observers who really traveled through the interior of the state agree that the Indian population was very numerous.

Colonel Warner, speaking of a trip made through the central valleys in 1832, says: "On no part of the continent over which I had been or have since traveled was so numerous an Indian population as in the villages of the Sacramento and San Joaquin Rivers."

According to Bancroft, the Indians north of San Francisco were more numerous and warlike than the others. This refers apparently to the coast counties.

C. Hart Merriam, in a recent paper on the Indian population of California, places it at 260,000 at the time of discovery, reduced to 210,000 by 1834, and again to 100,000 by 1849. In 1920 it was 17,360 by Federal census. The greatest number in any one county is 1958 in Riverside, due to the presence there of an Indian school. Humboldt, with 1829, has the largest number living under what are approximately natural conditions. The recent estimate of Merriam's is very close to that of Vancouver in 1793.

There was good reason for a large population, as de Mofras says in 1841, "*Le Rio del Sacramento coule dans la plus magnifique plaine que l'on puisse imaginer . . . le seul animal à craindre est l'ours gris.*" Vol. I, p. 454. The rivers were full of salmon and other fish. Life was easy and there were means of support for a great number of people. But what a people! Vancouver says: "If we except the inhabitants of Terra del Fuego and Van Dieman's land, they are certainly a race of the most miser-

able beings I ever saw." At another place he gives a very moving description of the filth in a hut which he inspected near Monterey. Hittel says he calls them "horrid," but I failed to find this.

You no doubt recall Mark Twain's reference to "those degraded savages who roast their dead relatives and then mix the human grease and ashes of bones with tar, and 'gaum' it thick all over their heads and ears and go caterwauling about the hills and call it mourning." You may think that Mark was laying it on a bit thick, but Bancroft backs him up in this statement and says, moreover, that during the frantic orgies a participant would reach into the fire, seize and eat a piece of the half-burned flesh.

It is not to be wondered at that such a people, when the white man brought his contributions of whisky and assorted diseases, fell easy victims. We hear that in Monterey in 1786 *El Mal Galico*, as the Spaniards patriotically called syphilis, was rampant, and the deaths were three times as numerous as the births by reason of it. Stillbirths were especially meant.

Smallpox did its share as well as the great pox, but the mission Indians were pretty well vaccinated. De Mofras says that the colonists, as well as the Indians of the missions who were vaccinated were exempt from intermittent fevers and smallpox. In Wilkes' narrative, 1841, the statement is made that "the ravages of the smallpox two years prior to our visit completed the destruction of these establishments, for it swept off half of the Indians."

All this, however, is mild compared to what happened in the period beginning about 1829 and ending abruptly in 1833. There appear to have been two fairly well-marked visitations, the date of the first rather difficult to fix, but the second almost certainly 1833.

Colonel Philip L. Edwards, whose diary is in the Bancroft collection, writes under date of August 20, 1837: "The intermittent fever sometimes fearfully prevails. Mr. Young (a trapper, whose name is familiar to all students of early California history) informs me that, with a trapping party, he passed one summer here without having one man sick, but that on a trip to the Columbia three years ago with Mr. K. every one of the company, himself excepted, had the fever. We have in our party two or three cases. On every hand we see revolting signs of the fearful ravages. About four years ago it prevailed with such mortality, that the few survivors of the village sometimes fled from their homes, leaving the village literally strewn with the dead and the dying. Mr. Young says he saw hundreds lying dead in one village forsaken by the few survivors, and birds preying upon the uncovered carcasses. The disease seems to have prevailed from the bay of San Francisco to the Columbia in those fatal times. Previous to 1829 it was unknown in the Columbia. Its greatest mortality seems to have been from fifty to one hundred miles interior."

While Colonel Edwards had to accept Mr. Young's tale of what he saw four years before, at least he was an eye-witness of the deserted villages. But there is confirmation from Colonel Warner, who made the statement concerning the thickness of

the Indian population in the valley in 1832: "On our return late in the summer of 1833, we found the valleys depopulated. From the head of the Sacramento to the great bend and slough of the San Joaquin, we did not see more than six or eight live Indians. The disease appeared, as far as I could judge, to be a most acute and violent type of remittent fever."

De Mofras says that in 1834 "a disease resembling cholera broke out and 12,000 Indians died in Tulare, and 8000 in the Sacramento Valley, on the breaking out of a contagious fever." He ascribed the fearful mortality to presence of syphilis generally among the Indians.

The date given by Warner, who came down the valley in the year of the plague, and who had gone up the valley in the year before, finding a numerous healthy population, is probably the correct one, 1833. Colonel Edwards, in 1837, saw the marks of devastation, but got his date from Mr. Young, who said it was four years ago. De Mofras, in 1841, may have been inaccurately informed when he was told that 1834 was the date, though the disease may not have reached Tulare until a year later than the upper valley disaster.

In any event, the reason is plain why the teeming valleys of 1800 had so sparse a population in 1849. What tuberculosis did thereafter does not concern us for the moment. What was the disease that wiped out the Indian tribes? Warner calls it a malignant remittent fever. Edwards, an intermittent fever. De Mofras heard it was a disease resembling cholera visited upon a syphilized people. The fever of which Mr. Young's party suffered was not a fatal one. His party was down, but not out. In Colonel Edward's party one or two were down, but they apparently did not die. The disease which attacked the Indians killed.

Malaria is not to be thought of. It is never so fatal and never comes in such waves. Even races without any acquired immunity do not suffer in such degree. When a Swede gets malaria he is no sicker than a Greek, who ought to have an acquired immunity if any European has. Smallpox would have been recognized by Mr. Young, most likely. Pustules would show on the darkest and dirtiest of diggers. Cholera is not impossible; we have heard those who came across the plains tell of the trail of cholera in 1850. It might easily enough have swept through a valley with a common water supply and the dirtiest tribes on the continent.

Typhus is another possibility and, having in mind what happened to the Fijians in 1876, measles could be thought of. The chance of getting at the truth is small. There were few eye-witnesses, and they were not physicians. The epidemics were not repeated, so far as known, after 1833, and with the great rush of Argonauts in 1849, the Indian was quickly driven to remoter regions, where he has died off in a less spectacular fashion. But this great scourge of the 30's converted a thickly settled country into almost a wilderness. Had the white man not continued coming in greater and greater numbers, the land would have been repopulated in a generation or two, but the discovery of gold brought conditions which this race, no matter how prolific,

could not withstand. Alcohol, syphilis, and tuberculosis finished the work begun by the mysterious pestilence of 1833.

909 Hyde Street.

DEMOCEDES OF CROTONA

By WILLIAM FITCH CHENEY, M. D., *San Francisco*

SOMEWHEN, as H. G. Wells would say, about 600 B. C., in the city of Crotona, a man was born named Democedes, destined to become one of the most famous physicians of his time. He came upon the scene over a hundred years before Hippocrates, the so-called Father of Medicine, and might have filled this place in history himself had more complete records been kept of his attainments and teachings. Crotona was a Greek colony on the southeastern coast of Italy, in what we now call "the toe of the boot." It was a city of power and wealth, and during the century in which Democedes lived was the seat of a medical school considered the best in Greece. We are told by Herodotus that the father of Democedes was a man of savage temper who treated his son so cruelly that he left his home and went to live in Aegina, an island off the coast of Greece. Whether Democedes acquired his medical education at the school in Crotona or elsewhere we are not informed; but "he set up in business," as Herodotus says, in Aegina, and "succeeded the first year in surpassing all the best skilled physicians of the place, notwithstanding that he was without instruments and had with him none of the appliances needful for the practice of his art." His success gave him such a reputation that in his second year in Aegina the government hired his services at the price of one talent a year. This has been estimated about 243 English pounds or approximately 1200 American dollars—in other words, about \$100 a month. In the third year, so great had become his fame, that the government of Athens took him away from Aegina by offering him a salary of 100 minae, about \$2000 a year. Finally, after another year, he was offered and accepted a still more lucrative position with Polycrates, the tyrant of Samos, at an annual salary of two talents. The fact that this ruler, appreciative of ability, persuaded the famous physician to leave Athens and come to Samos, is recounted to his credit; but it proved a bad move for Democedes.

Polycrates was as prominent in the politics of his time as Democedes was in medicine. He rose rapidly from the condition of a private citizen to be the chief power in his country and one of the greatest sovereigns of his age; though like many other despots, of modern as well as ancient times, he had no scruples about the methods he employed to advance his interests. Finally he conceived the ambition to rule not only Samos, but all the islands of the Aegean Archipelago; and this design proved his undoing. There was a wily Persian named Oroetes, who served as governor of Sardis under King Cambyses. When this man learned of the desire of Polycrates, he pretended to be his friend and offered to aid him, inviting him to come to the mainland and talk it over. By his soothsayers, his family, and his friends, Polycrates was urged not to accept

this invitation; but he made light of all their counsel and sailed away to meet Oroetes at the place appointed, the city of Magnesia, on the Maeander River. This would not have been a matter of so much concern, had he not taken with him many of his friends, and among them his own special physician Democedes. No sooner had Polycrates reached Magnesia than he was murdered and his dead body hung upon a cross; and so ended all his schemes. All his followers, including Democedes, were made slaves; and thus the famous physician, sought after by rulers and paid large fees for his professional services, lost for the time not only his reputation and his perquisites, but likewise his liberty and even his identity. It is a satisfaction to know that not long afterwards Oroetes was properly rewarded for his treachery; but that, as Kipling says, is another story.

How long Democedes remained a slave is not clear; but the murder of Polycrates occurred during the reign of Cambyses, and we do not hear of the physician again until Darius became king. Then there came one day a dramatic ending to his obscurity and his chains. For Darius, as he leaped from his horse, sprained his foot. The Egyptian physicians he had at his court, whom he considered the best skilled in the world, could not give him relief. On the contrary, the report is that they twisted the foot so clumsily and used such violence that they only made the suffering worse; so that for seven days and seven nights the king could get no rest or sleep. On the eighth day someone recalled that Democedes, formerly the physician of Polycrates, was now in bonds at Sardis. Darius commanded that this man should be brought at once to him in the royal palace at Susa. He was found among the slaves, uncared for by anyone, and he came clothed in rags and clanking his fetters. But Democedes was wary. He feared that if he demonstrated his skill on Darius and proved his ability, he would be kept in Persia all his life and lose all chance of ever again beholding Greece, his native land. So when Darius asked him if he knew medicine, he answered "No." By this time, however, the king had recalled the physician's name and reputation, and felt assured he was not speaking the truth. Therefore, he ordered his attendants to bring the pricking-irons, with which they were wont to put out the eyes of those who dared to thwart the king's will. Under this threat, Democedes admitted he knew a little about medicine, but he was still diffident. As Herodotus puts it, "He said that he had no thorough knowledge of medicine, he had but lived some time with a physician and in this way had gained a slight smattering of the art." This was enough, however, to satisfy Darius, who placed himself accordingly under the Greek physician's care. Democedes at once employed the remedies customary among his people for such injuries as that of his royal patient, exchanging the violent treatment of the Egyptians for milder means. Very soon he was able to give Darius relief so that he could sleep; and in a few days restored to him the complete use of his foot, after he had quite lost hope that he would ever walk again. The king was so pleased that he told the eunuchs to take Democedes to see his wives and tell them this was the man who had saved his life. Then

each of the wives dipped with a saucer into a chest of gold and gave so bountifully to Democedes, in payment for his services, that a slave who followed him and picked up the coins he dropped, gathered up for himself a great heap of gold.

After this the rags and fetters were exchanged for fine raiment and luxury. The physician came once more into the state to which he was accustomed. He dwelt in a large house in Susa near the king, feasted daily at the royal table, and lacked for nothing he desired; excepting liberty to return to his own country. It is related explicitly that he was magnanimous enough to save the lives of the Egyptian physicians who had failed to cure the king; for Darius, indignant over their clumsiness and the suffering they had caused him, had ordered them all to be impaled alive on sharp stakes. Not only was Democedes able to prevent this, but we are told that after the cure of Darius there was no one who stood so high as the physician in the favor of the king.

But with all this he still was not satisfied, for love of country exceeded his love of place, of power and of money, and he longed to return to Greece. It happened a little while later that an opportunity presented itself, of which he was quick to take advantage. Queen Atossa, the wife of Darius, had an abscess form on her breast. So long as this was of no great size, she hid it through shame and mentioned it to no one. But when it grew larger and more painful she sent at last for Democedes and showed it to him. By this time he was in a position to demand a reward for his services, and told the Queen he could make her well, provided that if he cured her she would urge Darius to make war on Greece and take along the physician as a guide. The abscess was soon healed, and Atossa then kept her part of the agreement by urging her husband to invade Greece and bring her home some of the Athenian and Corinthian and Lacedemonian maids as slaves to serve her, suggesting also that he take along Democedes, who could tell him better than any one else in the world what he wanted to know about Greece. Darius promised to do as she wished, but thought it best to send first some Persians to spy out the land, in company with the man she recommended, to bring back a full report.

So it happened that fifteen Persians of note were selected to take Democedes as their guide and explore the coasts of Greece; but Darius was evidently suspicious, for he instructed them particularly to bring the physician back with them and not to allow him to escape. In the further effort to prevent this, he appealed to Democedes himself, allowing him to take along all the valuables he possessed, as presents to his father and brothers, and promising him on his return a far more abundant store. And finally the king gave him, as a reward in advance for his services as guide, a merchant ship loaded with all manner of precious things, to accompany him on his voyage. So in ships fitted out at Sidon, in Phoenicia, they sailed away to Greece. Arrived in sight of land, they kept along the shore and examined it, taking notes of all they saw, in this way exploring the greater portion of the coasts. At last they arrived at Tarentum, a Greek colony in Southeastern Italy, not far from Crotona. Here the king of the

Tarentines was a friend of Democedes. Out of kindness to him, to permit his escape, he imprisoned all the Persians as spies and took all the rudders off their ships. Democedes then lost no time in getting away to Crotona, his native city, about 150 miles from Tarentum. After this had been accomplished safely, the king discovered that the Persians were not spies after all, and so released them, at the same time restoring the rudders to their ships.

It is easy to understand that what troubled the Persians most about all this was the fact of Democedes' escape, for they remembered the commandment of Darius not to permit this to happen. As soon as they could get away, therefore, they sailed in pursuit of him. They found him in Crotona, in the market place, and attempted to arrest him; but his friends rallied to his defense, beat the Persians with their walking-sticks and drove them off, in spite of their protests and threats. The people of Crotona also seized and retained the treasure ship that Darius had presented to his physician. This seems to have convinced the Persians that they had better not try to make any further explorations of Greece; for with their guide taken away and their property stolen they thought before worse happened it would be well to get back home. As a parting message to Darius, Democedes sent word of his approaching marriage to the daughter of Milo, the famous athlete. This man was in high repute with Darius for his gigantic strength and his ability as a wrestler, and was probably respected more by the king for this than he would have been for intellectual attainments. So this message was to prove to Darius what a man of mark Democedes was in his own country. Thus the story ends, as regards the famous physician, who continued to live happily and prosperously thereafter in the city of his birth. The Persians, however, had many troubles on their way back. They were shipwrecked on the coast of Iapygia and made slaves by the inhabitants, and remained in this city a long time before at last they were ransomed. They found their way home ultimately and reported to Darius, who seems to have forgiven them after all for not bringing his physician with them. At any rate, if he did impale them alive on stakes, no one cared enough about it to record it in history.

210 Post Street.

CAN YOU HELP?

"The History of the Medical Profession of Southern California"

A volume by the above name was printed under the editorship of the late Dr. Walter Lindley and Dr. George H. Kress, back in 1910. Dr. George D. Lyman, 380 Post street, San Francisco, desires to purchase a copy of this for the Stanford University library.

The California State Medical Association, through the secretary, Dr. Emma Pope, is very anxious to have a copy of the same volume for its files.

The Barlow Medical Library, 741 North Broadway, is also anxious to have a copy of this volume for its files.

Anyone in possession of this book, who is willing to either sell the copy to the Stanford library or to donate a copy to our State Medical Association or to the Barlow Medical Library, would do a favor by writing to the above.

CALIFORNIA'S MEDICAL PRACTICE ACTS

By F. F. GUNDRUM, M. D., Sacramento

Doctor Gundrum here tells an ugly and discouraging story of facts that explain many things. Every physician should read and ponder this essay.—THE EDITORS.

THE material herein contained came from the minutes of the Medical Society of the State of California, the records in the office of the Secretary of State and in the State Library, and from the Statutes of the State of California.

The status of the physician—social, economic, and scientific—has varied widely during the past. Depending upon his usefulness to the community, and his opportunity to learn, he has been necromancer, slave, valet, gentleman, scientist. Throughout the ages, also, there have been multitudes of quacks who undertook to heal the sick without the bother of previously learning what there might be available to know concerning the art. These have been either sincere fanatics or mere crooks making a living through the exploitation of the sick. In great measure, perhaps, on account of the presence of unskilled and irresponsible practitioners, there has ever been a more or less vigorous effort to regulate the practice of the healing art. This regulation has been done by physicians themselves through painstaking teaching of medical apprentices by preceptors, of students by medical schools, and through the establishment of "Ethical Codes," such as the ancient oath of Hippocrates and modern similar, if sometimes unwritten, rules. This sort of regulation has been fairly successful. The better men and the better schools have splendid records of conscientious unsurpassed human service. Regulation has also been done, not always to the betterment of medical practice, by others. Earliest and most powerful of all was "public opinion." With a more conventionalized and formal social fabric, more definite supervision appeared. So ancient a document as Hamurabi's Code contains some regulatory sections (i. e., fixes fees). In Colonial America, doctors were relatively few. The apprentice-preceptor system of studying medicine was in vogue, and the then medical practitioners had control in large measure of the number and quality of practitioners to follow them. Later, medical schools grew up, largely owned, operated and controlled by medical men. These thrived, flourished, and many went sadly to seed, putting out very poorly trained men to the dissatisfaction of the profession and public alike. In casting about to find some remedy for this evil, some of our fathers hit upon the idea of having laws passed and licenses issued to all who were worthy. This placed the affairs of medicine into the hands of the states, that is to say, the legislatures, the governors, and, in certain states and of late years, the electors. The course of this regulation in California it is my purpose here briefly to outline. We may, for the sake of convenience, divide the progress of affairs into several distinct phases.

BEFORE 1876—FIRST PHASE—THE STATE TAKES NO OFFICIAL PART IN REGULATING MEDICAL PRACTICE

Before 1876 there was no legal restriction upon the practice of the healing art, and he who was thus

ambitious hung up his diploma, if he had one, in his office and his sign on the door. The sole criteria of success were therapeutic efficiency. This was stimulating and evolutionary. The ultimate control, however, was largely in the hands of the medical fraternity who had been preceptors of these and instructors in their schools. A goodly sprinkling of ill-educated gentlemen undertook the practice of medicine, to the disgust of those other better trained practitioners who saw the unnecessary disabilities, deformities, and deaths due to unskillful handling. Accordingly, there was considerable discussion as to a proper means of limiting the right to practice to those men only who had been sufficiently educated. At the third annual meeting of the California State Medical Society held in April, 1873, J. F. Morris of San Francisco introduced a resolution "that the State Medical Society, desiring to see some system adopted by which a high liberal standard of medical ideals and graduates may be secured, has heard with great pleasure that the State University contemplates an independent Board of Medical Examiners," etc. This motion failed, and at the fourth annual meeting in April, 1874, H. Gibbons, Sr., introduced a resolution "that it is desirable there should be a uniform system for examination of the degree of M. D. apart from institutions of teaching so that diplomas shall be awarded to all competent candidates, and the profession and society at large maybe protected against degrees awarded unworthy and incompetent persons," etc. This motion provided for the appointment of a committee of five, who reported on the following year at the fifth annual meeting, April, 1875. T. M. Logan of Sacramento, then secretary of the State Board of Health, who was chairman of the committee, read the resolution "that it is the duty of and we recommend to the legislature of the State of California to pass a law," etc. This was amended by H. Gibbons, Sr., back to the motion of the preceding year. The amendment was carried and this committee was appointed: Morse, Shurtlegg, Logan, Gibbons, Heuston.

LAW OF 1876

The legislature, at any rate, proceeded to the passage of an "act to regulate the practice of medicine in the state of California," known as Senate Bill 549, introduced by C. W. Bush of Los Angeles, and passed without roll-call, although five members asked to have their names recorded as voting in the negative. Assembly vote: Ayes, 45; noes, 18. This introduced the

SECOND PHASE—CONTROL LEFT IN MEDICAL HANDS, BUT LEGALIZED AND CERTIFICATED UNDER CERTAIN CONDITIONS BY THE STATE

The act provided for the appointment of a board of medical examiners of seven members by each State Medical Society, incorporated and in active existence on the tenth day of March, 1876. These were two—the Medical Society of the State of California, incorporated 1870, and the Eclectic Medical Society, incorporated 1874. Every person practicing medicine was required to present his diploma to the Board of Examiners for verification as to its genu-

ineness. If the board decided that the diploma was genuine, certificate to practice was to be granted. In case a practitioner had no diploma, he was compelled to submit himself for examination to the Board of Examiners. Should he appear to them to be sufficiently well qualified to practice, a certificate was issued without diploma. This privilege of examination for non-diploma holders expired December 1, 1876. The boards were enjoined to notify county clerks, who must keep a record of licensed practitioners within their counties. The fees received by the boards were turned over to the medical society appointing them. The procedure to be had for verification, refusal, or revocation of license, together with penalty for illegal practice, was provided for. Revocation could be had for "unprofessional and dishonorable conduct," details not entered into.

AMENDMENT OF 1878

The law of 1876 was amended in 1878 so as to include the Homeopathic Medical Society, incorporated 1877. Thus there were three licensing boards, each appointed by and responsible to one of the three then existent State Medical Societies. This amendment required an affidavit executed by each applicant presenting his diploma, to the effect that the medical institution granting the same was at the said time a legally incorporated institution actually and in good faith engaged in the business of medical education, etc. It discouraged itinerant practitioners by a fee of \$100 a month, but did not alter the control of medical practice. "Unprofessional conduct" could be decided by expert witnesses. These three boards continued in operation for twenty-three years.

LAW OF 1901—THIRD PHASE—THREE BOARDS ARE FUSED, REQUIREMENTS RAISED SOMEWHAT, EXAMINATION DEMANDED—THE DOCTORS STILL APPOINT THE MEMBERS

In 1901 the state legislature passed a bill introduced by D. W. Hasson of Buena Park, Orange County. The vote in the Assembly was: Ayes, 60; noes, 2. Senate: Ayes, 22; noes, 5. This bill became a law under a constitutional provision without the Governor's approval on the 27th of February, 1901.

There was established a conjoint board consisting of five members elected by the Medical Society of the State of California, two by the Homeopathic Medical Society, and two by the Eclectic Medical Society, nine in all. Six affirmative votes were required for any act or resolution. This provision forced the adherents of the different so-called "schools of practice" into some sort of accord, no business being possible else. The requirements for the applicant were somewhat increased. He must now submit:

1. Testimonials of good moral character.
2. A diploma issued by a regularly chartered medical school conforming with the then standards of the Association of the American Medical Colleges.
3. Affidavit stating that he was legal possessor of the same diploma.
4. To personal examination by the board, at least

part in writing. Certificate issues by the District of Columbia or any state or territory of the United States whose standard was equal to that of California could be accepted and registered. The procedure of revocation of license was set forth, together with the compulsory filing of certificates with the county clerk. Unprofessional conduct (seven items) was defined, also illegal practice.

LAW OF 1907—FOURTH PHASE—GOVERNOR APPOINTS FROM ELECTED MEMBERS OF MEDICAL SOCIETIES

In 1907 the Senate Bill 238, introduced by H. S. G. McCartney of Los Angeles, passed without a dissenting vote in either Senate or Assembly, was approved March 14, 1907, by the Governor and superseded the law of 1901.

This act removed the regulation of medical practice still further, but not entirely, from the doctors. It provided that the Governor should appoint a board of medical examiners consisting of eleven members, five members from a list of ten presented by the Medical Society of the State of California, two from a list of four presented by the Eclectic Society, two from a list of four presented by the Homeopathic Society, and two from a list of four presented by the Osteopathic Association, which had in the meantime been incorporated (January, 1901). No person in any way connected with a teaching institution was eligible to this board, and the vote of seven members was necessary to carry any motion or resolution or issue any certificate. Three certificates were authorized:

1. Medicine and surgery.
2. Osteopathy.
3. Any other mode or system.

Each applicant was required to produce his diploma from a school whose qualifications were those of the Association of American Colleges of even date, testimonials of good moral character, affidavit attesting ownership of the diploma, and to undergo a written examination, the subjects for which were specified. The recording, revocation, unprofessional conduct (seven items) penalties for violation were also provided.

"SPECIAL" AMENDMENT No. 1

The act of 1907 was specially amended in 1909. This amendment introduced by Senator Savage, and carried unanimously by both houses, set forth in detail who may practice medicine in the state of California, namely: All licentiates under all previous acts, and also "any person who holds an unrevoked certificate issued by the Board of Examiners of the Association of Naturopaths of California." The scholastic, medical, moral, or other prerequisites to the acquiring of this certificate are not stated.

"SPECIAL" AMENDMENT No. 2

The act of 1907 was specially amended again in 1911, instructing the Board of Medical Examiners to issue a license "to any person who has practiced his special branch of medicine for a period of not less than thirty-five years, fifteen years of which shall have been in the state of California upon affidavit that he has successfully and effectively prac-

ticed the special branch of medicine and surgery for the number of years herein mentioned," etc. All other persons must take an examination, the subjects and marks of which are set forth. Penalties for purchasing or altering diplomas were provided for.

LAW OF 1913—FIFTH PHASE—STATE SOCIETIES NO LONGER RECOGNIZED

Senate Bill 813, introduced by J. L. Avey of Redlands, passed the Senate, ayes 21, noes 18; Assembly, ayes 46, noes 0, and was approved June 2, 1913. In the terms of this bill, the legislature took no further cognizance of the state medical organizations, but provided for a board of ten members, appointed by the Governor, all citizens of the state, no restrictions as to form of license held; however, persons connected with medical teaching institutions were not eligible. Seven votes were necessary to carry any motion. The board was authorized to issue three certificates:

1. Physicians and surgeons.
2. Drugless.

3. Reciprocity certificates (a new departure in California, and ordered issued upon license in other states whose laws are equal in requirements of those of California of even date). The requirements exacted from the applicants for licensure were increased by a high school diploma to be succeeded (after January 1, 1919) by one year of college work in science before entering medical school. The bill contained a long and detailed statement of the number of hours' instruction in each subject for both physician and surgeons and drugless certificates. Thus relieving (by legislative mandate) college faculties from the strain of deciding upon curricula. The subjects for examination were set forth. A provision for raising the drugless certificate to physicians and surgeons by subsequent examination was inserted. There is also in this act another innovation, namely, the oral examination by a committee of the board of practitioners licensed in other states before August 1, 1901. This provision took care of the elderly practitioner long out of school who, though possibly a highly competent physician, had considerable difficulty with the written examination, particularly in pre-medical and pure scientific subjects. Suspension, revocation, recording procedures, and an official directory were provided for, and "unprofessional conduct," now eleven items, defined.

AMENDMENTS OF 1915—BOARD AUTHORIZED TO SELL DIRECTORIES—CHIROPODISTS LICENSED UNDER THE BOARD

The act was amended in 1915 to rearrange the meeting places and give the board authority to sell official directory of licensed practitioners which the board had been compelled to compile under the 1913 act. These amendments also defined chiropody and provided for the issuance by the board of certificates to chiropodists, with the usual proviso that for ninety days after the passage of the act all chiropodists who have practiced one year may register without examination; stated further the requirements for chiropodists, as well as reduced the numbers of hours of instruction for the other certificates. The

requirements preliminary to the examination for drugless certificates were reduced to a one-year course and three years of actual practice in the state of California. Six years of practice and one thousand hours instruction now entitle an applicant to a drugless certificate. The entering into contracts of reciprocity with other states was permitted (another innovation). The varieties of unprofessional conduct were increased to twelve.

AMENDMENT OF 1917—SIXTH PHASE—DOCTORS
NOW PAY A YEARLY LICENSE FEE—MID-
WIVES LICENSED UNDER THE BOARD

This act was again amended in 1917, a very long amendment introducing another innovation, namely, the yearly collection of a two-dollar license fee from all licentiates under the preceding laws. The penalty for overlooking this two-dollar tax for sixty days is only the forfeiture of the license. The act also defined the practice of midwifery, and authorized the board to issue certificates to midwives; set forth again the educational qualifications for applicants desiring either physicians and surgeons, drugless, chiropodists and midwifery certificates; detailed the number of hours necessary, the type of examination and the subjects; authorized the board to issue a midwife certificate upon one-year practice and good moral character; allowed holders of osteopathic certificates to be given an oral examination in order to raise a certificate from drugless to physician and surgeon. This provision seems in large measure to nullify the salutary effect of the additional requirements for a physician and surgeon certificate. If any license granted before March 4, 1907, had been refused acceptance in California because of insufficiency of state standards of licensing, the applicant might receive an oral examination. We find further addition to "unprofessional conduct," which amounts now to eighteen items. Somewhat astonishing is the variety of things for which a midwife's certificate might be revoked. Apparently, one of these might lose her license if she forgot her nail-brush, or if the scissors she used for cutting the cord had points.

AMENDMENTS OF 1919—SEVENTH PHASE—BOARD
OF EXAMINERS' DECISION AS TO QUALIFICA-
TIONS OF ANY MEDICAL SCHOOL NULLIFIED

This much-amended act of 1913 was re-amended in 1919 to allow a student in a regular chartered medical school to treat the sick and afflicted without compensation, etc. Again, in 1919 to provide that, if any school be disapproved by the board, such school could commence an action in the Superior Court; the court to have full power to investigate, and its action take precedence over that of the board. This law left little control of medical education and practice to medical men.

INITIATIVE MEASURES OF 1923

At the general election in 1923 initiative measures, fathered by the osteopathic and chiropractic practitioners, were carried, establishing separate boards of examiners for these astute gentlemen who

at least have gotten away from the biennial wrangle at the legislature.

SUMMARY AND CONCLUSIONS

Thus, during the past fifty years the control of California's medical affairs has drifted steadily from the hands of practitioners of the healing art into the hands of others (mainly lawyers). The chief reason assigned for all this legislative activity has been "limiting the right to practice the healing art to those only who have adequate education to make them safe advisors." Musgrave, in a recent number of CALIFORNIA AND WESTERN MEDICINE, estimates that there are now operating about one "doctor" of some sort to each 100 of population; about 31,000 altogether. Of these, only 8000 (a little more than one-quarter) hold physicians and surgeons (that is unlimited) licenses, and possibly 19,000 no license at all.

Those of our fathers who put their trust in a licensing system to preserve the ideals of medical men, namely, a well-educated profession, were, the event has proved, most misguided. The method does not produce such a result. It is not likely that legislation of any sort will be any more successful. The age-old test of therapeutic efficiency will, however, still be with us to test the merits of medical ideas. Fifty years ago the best doctors did the most work. They do now. Intelligent students will nearly always go to the best medical schools attainable, and laymen (most of them) will employ the most able available medical advisors.

Capital National Bank Building.

"LET ME LIVE OUT MY YEARS

"Let me live out my years in the heat of blood!
Let me die drunken with the dreamer's wine!
Let me not see this soul-house built of mud
Go toppling to the dust—a vacant shrine!

"Let me go quickly like a candle-light
Snuffed out just at the heyday of its glow!
Give me high-noon—and let it then be night!
Thus would I go.

"And grant me, when I face the grisley thing,
One haughty cry to pierce the gray Perhaps!
Let me be as a tune-swept fiddlestring
That hears the Master Melody—and snaps!"

—JOHN G. NIEHARDT.

The South and North of California Have in Common the First Medical Pioneer and Booster—The first nordic practitioner who arrived in the little pueblo, "Nuestra Senora la Reina de Los Angeles," was John March (Don Juan Marchet), who arrived from Massachusetts in 1836. His fees consisted of horses, cattle, and hides. In 1837 he established himself on the Rancho Los Medanos near Monte Diablo, Yerba Buena, now San Francisco. A letter of Doctor Marsh was published in 1840 in Missouri, and thus he became instrumental in the organization of the first immigrant train to cross the plains to California. It is gratifying to know that the South and the North of California have in common the first medical pioneer and booster. Let us preserve now and forever the same spirit of unity in our medical progress and in the growing prosperity of our great state.—William Wenzlick, M. D.

Old Lady—I believe in post-mortems. It is awful not to know what you have died of.

ADDRESS DELIVERED BY DR. EMMA L. MERRITT AT A BANQUET GIVEN BY WOMEN PHYSICIANS, OCTOBER 11, 1924, IN HONOR OF THE EIGHTY-THIRD BIRTHDAY OF DR. LUCY MARIA FIELD WANZER.

Women in medicine have come into their own in California to a degree probably not equaled elsewhere. There cannot be, of course, a sex line in the practice of medicine, and all fair-minded persons have long since recognized that fact. That it is a fact in practice, at least in California, was well demonstrated when the American Medical Association was our guest. For that great convention the women physicians themselves requested to serve on mixed committees rather than have separate committees.

It is interesting and significant in medical progress that more than three score women physicians recently gathered at the banquet table to eulogize Doctor Lucy Maria Field Wanzer, one of the pioneer women physicians. It was at this banquet that Doctor Merritt presented the following bit of medical history.—THE EDITORS.

IT WAS in the year 1873 that our revered and honored guest of the evening applied at Toland College for admission as a medical student.

You women of the present day do not realize the struggles and hardships undergone by the women who first tried to get a proper medical education. To have lived in the time of those of us who are over 60 has been like living in a dream, so unreal and extraordinary have been the changes that we have seen.

The struggle to practice medicine was only a branch of the great struggle for the general enfranchisement of women. To get even a higher education, with no thought of making use of it outside the home circle, was considered unwomanly, and she who possessed any degree of learning was ridiculed as being a blue-stocking.

I was not one of that pioneer medical group. By my time the path had already been blazed and made easy, but I am old enough to have had the privilege of knowing many of these brave women—Dr. Emily Blackwell, Dr. Maria Zakzewska, Dr. Alida C. Avery, Dr. Helen Webster, Dr. Mary Putnam Jacobi, and others who had immediately followed them in the East; in this state I knew Dr. Buckle, Dr. Curran, Dr. Follansbee, Dr. Charlotte Blake Brown, and the first woman to graduate from a California Medical College and the first to enter the San Francisco Medical Society—Dr. Lucy Maria Field Wanzer.

Toland College was at the corner of Stockton and Francisco streets, the City and County Hospital down a street by the side of it. Dr. Toland had donated the college to the University of California. About one year after it was turned over, Dr. Wanzer, together with her friend, Miss Mary Frazer McDonald, applied for admission.

They had two friends to advise them, Mr. John Swift and Rev. Horatio Stebbins, regents of the university, who instructed the two women to say nothing, but first to apply to the Medical Department, and if they were turned down, then to apply to the regents. They sought the Medical Department, and were refused. They then went to the regents, who referred the matter to their attorney, who looked it up and said there was no law against

it, as the organic law of the state was that both sexes were to be educated if they so desired in the university, and as Toland College was an integral part of the university, the two women could not be kept out. Four months had been consumed in arriving at this decision.

Miss McDonald did not go in. She got tired of waiting—Cupid took her off. She got married and that ended her medical career. Dr. Wanzer told her it was an awful thing thus to desert her, but once her path has been clearly defined, Dr. Wanzer has never been known to turn aside, whatever the obstacles. She is born of fighting stock—her mother of New England revolutionary ancestry; her father of early Colonial period.

Her father as a boy apprenticed himself to Jones, a watchmaker and jeweler in Greenfield, Massachusetts, where he learned his trade. In 1837 he took to Milwaukee, then little more than an Indian village, a stock of cheap jewelry, showy brass beads, glass beads and the like. He was so successful in selling these to the Indians, that Jones finally broke up his business in Greenfield and moved to Milwaukee, where Storer Field married his daughter Lucy Ann and where their first child, Lucy Maria, was born October 11, 1841.

Field continued in the jewelry business till he fell ill, and was advised by his physician to seek life in the open. He became a farmer in Dane County, six miles out from Madison, where the howling of the wild wolves could be heard outside their house, built of rude logs, and with blankets at the openings for doors. He was justice of the peace for Dane County and member, from there, to the legislature.

Her father declared his girls must be capable women. So at the age of 10 Lucy was sent to her mother's sister, Mrs. Brooks, who lived in Milwaukee, to school. Afterwards she went to Madison to boarding school; later to Hartford, Connecticut, where she graduated from the high school. She could go no higher because college courses were not open to women at that time.

The mother was ill in those days, of what was called lung fever, and many a time the little daughter mounted a box and kneaded the bread for the baking under the mother's direction from her sick-bed. She nursed her mother as well. Her mother would praise her for the care. The little girl thought how fine it would be to do things when anyone was suffering. And the years of her mother's illness to follow, as likewise that of her father, only served to feed the flame of her desire some day to become a physician.

In 1858 the family came to California on account of the mother's health; eight in all—the parents, two brothers, and four sisters. The father's money was pretty well gone. He could find nothing to do and was much discouraged. So Lucy, then in her seventeenth year, took the burden of support upon herself by making sleeves in a fashionable dressmaking shop till she got a position teaching in the public school at Temescal, in Oakland, about where Idora Park now is.

The parents moved to Santa Cruz. The father opened up a general store, with one corner parti-

tioned off for the postoffice. He had been appointed postmaster. Though he was officially such, Lucy filled the position and drew the salary.

All the time she was working she was studying. She had private instructors in Latin, French, literature, algebra. She took Latin under a Presbyterian clergyman. Likewise she was saving up money some day to become a physician.

Walter Thorne, afterwards Dr. Thorne, and Lewis Glass had at the time a telegraph office in their drug store. They wanted to give it up, so Lucy, to add to her income, took it over.

She was 23 years of age when she married. She became a teacher in the public school at Santa Clara



Lucy Maria Field Wanzer

and finally the Lincoln grammar school, the best known boys' school at that day in San Francisco.

And now at 33 she stood alone—the one woman in the whole state of California demanding admittance to Toland College.

She went in prepared for trouble, but she did not care. The dream of her life was about to be realized. Some of the professors welcomed her, but the dean told the class that a woman was going to appear and for them to haze her so she could not stay. "Of course, she will complain. We will tell her we are very sorry, but we cannot lecture to two classes. With just one woman we can make short work of it."

The first day she spent from 8 to 12 going through the hospital. Before she got through, some

of the boys were edging away and pulling other boys to one side, so she could see the patients. But some of the "lost links" were trying to carry out the dean's instructions.

The first clinic was a medical one by Dr. Bates. He had a Southern way with him, and he made a nice speech when she entered. That gave her a little standing with some of the boys.

Then came Dr. Toland's clinic. She followed him through one of the wards, and then came the syphilitic and gonorrhoeal ward. He thought perhaps that was too strenuous, that perhaps she would not care to go, but she said, "Oh yes, doctor; I know the work is hard," but she told him she wanted to see everything, otherwise she was not fit to be a medical student.

Then she saw Dr. Martinache and the eye ward. Dr. Martinache told her a woman had no business to study medicine; that if she did she ought to have her ovaries removed. She replied if this were so that the men students ought to have their testicles removed.

Dr. Beverly Cole had the obstetrical clinic. He sent for her, told her he would not like to place her in an unpleasant position, but that he could not lecture to a mixed class without making it very embarrassing to her; that as he was about to commence his course, if she thought best he would excuse her. She told him she wished to be excused from nothing. He was rather pleased, and said if she wanted a preceptor he was perfectly willing for her to be his student. She asked him, "What would be the expense?" He said it would be nothing, but that he could give her advantages that he could not give a young man. So when there was no lecture going on she was in his office. Sometimes he would give her the most trying things to do and would think it a joke. No matter what it was she did it.

She was dissecting for hernia when the boys decided it was about time to haze her. The next morning when she went to the dissecting room she noticed an unusual number of students around. The cadaver had been arranged in a manner that they thought would shock her very much. She took no notice of it and went on working as if nothing had happened.

Then came one of the student's birthday. The boys planned to give him beer enough till he fell asleep. They then carried him after dark into the dissecting room and tied him onto the table. About midnight he woke up and screamed so, the whole neighborhood was aroused. It created such a commotion the faculty had to take note of it. They sent for every student, herself among the number. She told them she was not a detective. The students afterwards said they thought that every woman would blab. That sort of made a comradeship between them, and by the time she graduated there was not one who would not do anything for her.

She graduated in November, the Centennial year, 1876. Dr. Cole presented her name to the County Medical Society. A movement was set on foot to blackball her. She was advised to withdraw her name. She replied: "My name stands; blackball me if you will." They put her name through, the first woman ever presented. Three years previously Dr.

Charlotte Blake Brown had applied for admission, but her name was withdrawn before the time came for voting.

Dr. Wanzer set up immediately an independent office over a plumbing shop at 130 Geary street, right opposite where the City of Paris is now.

She had six rooms for about \$45 a month, and rented out three for \$15, with the understanding that the tenants must clean up the office and answer all calls that might come.

When she graduated the papers were full of all sorts of nonsense, ridicule, and praise, and her friends told her she would make a great success, and that they would help her. But very few sent other than their servant girls. At first she had to practice among the very poorest persons from Tar Flat. Gradually she got a better class. When the mistresses found their servant girls did not die, they came themselves.

That same year she entered the Pacific Dispensary. It was in the basement of the Synagogue on Taylor street, near Post. The next year the dispensary started the Hospital for Children on Post street, between Stockton and Dupont. They had four beds.

Dr. Wanzer remained on the staff of the hospital till the University of California took it over and made a teaching institution of it.

Twenty-two years after her graduation, Toland College was moved to its present site on Parnassus avenue. At the dedication, Dr. Wanzer was amazed at the number of women studying medicine in the building—twenty-two—and each year they had been graduating them for twenty-two years.

Tonight we are over sixty women physicians assembled to do her honor to show our appreciation of her unflagging zeal to duty, of her many deeds of charity, and of her rare devotion to the cause of women in medicine, which has done much to bring about the standing and success of the present-day woman physician.

She was beyond any professional jealousy, which all too often for a personal aggrandizement lessens another's achievement. She always tried to help other women up the ladder, and to push them forward beyond where she had been able to go. She took them to see her cases; she rejoiced in their four years as against her two; their European advantages as against her local; their internship in a hospital, even their professorship in the medical school, as against her struggle to enter.

Possessed of all her faculties, may she live to be 100.

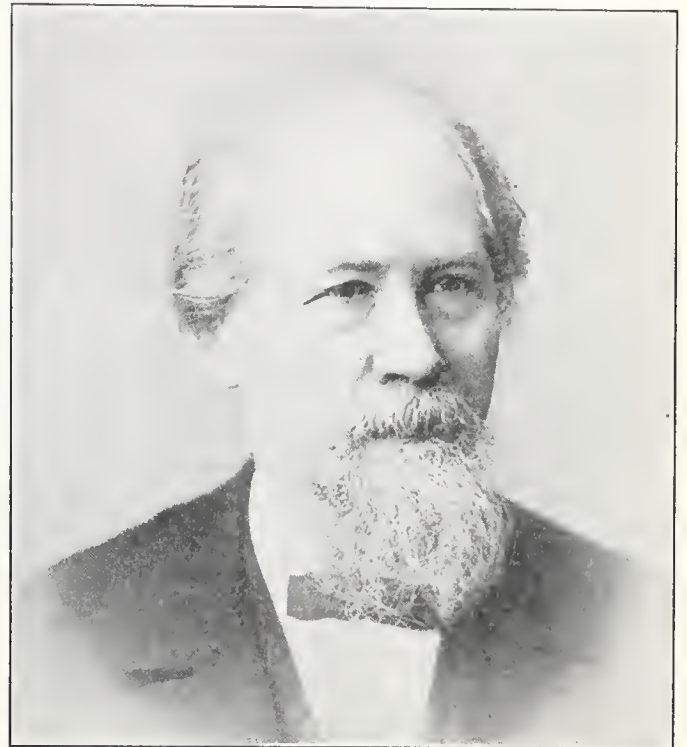
The Way of the Transgressor is Hard—"On November 25, the Indianapolis Medical Society passed a resolution which said that the consultation by any member of the society with any person or persons not graduates of a regular, constituted school of medicine and surgery with a degree of doctor of medicine is a violation of the principles of ethics of the American Medical Association. The owners of Clark-Blakeslee Hospital held that this ruling prevented members of the regular profession from operating at their hospital and hence was a damage to them. They conduct an osteopathic hospital, it is said. A suit was filed against the Indianapolis Medical Society by the owner of this hospital which was decided in favor of the Medical Society."

ORIGIN AND ESSENCE OF THE "LANE MEDICAL LECTURES"

By ADOLF BARKAN, M. D., *San Francisco*

I feel a better man from having carefully studied Dr. Barkan's inspiring message in manuscript. I commend the message and its telling to every physician who loves his profession and his fellow-man.—W. E. MUSGRAVE.

THE records of the history of medicine on the Pacific Coast contain few pages more worthy of being chronicled than those referring to the foundation of the "Medical Lecture Series by Dr. Levy C. Lane in the year 1896. In no small measure have these lectures caused a "Renaissance" of medical



Levy C. Lane, M. D.

education on our coast; they have created an atmosphere of international medical culture and progressive, scientific work.

Honor to the founder!
Honor to the lecturers—

who carried out the founder's far-seeing thoughts.

About the year 1893 a book had appeared, equally important to general, as well as to aural surgeons, William Macewen's classic on the "Pyogenic Affections of the Brain and Spinal System." It contained the ten years' experience of the Glasgow Regius, Professor of Surgery. It lifted the fog of mischievous ignorance which had prevailed heretofore in the field of affections of the brain and central nervous system, and revealed important facts and observations which threw new light on the pathology and therapeutics of brain and spine disorders. A few of us plunged into the study of the book, receiving from it inspiration and instruction. Chronic purulent affections of the middle ear, which for untold times had been neglected and misunderstood, and which, through their continuation to the brain had furnished hetacombs of victims, now assumed a most important aspect. There seemed no other way open



Hirschfelder Barkan Macewen Stillman
Lane
William Macewen demonstrating Macewen's Triangle.

but to study the subject at the fountain-head in Europe. Professor Macewen was to open the discussion on this very subject at the surgical section of the British Medical Association in London a few weeks hence. A quick resolution was taken to meet him there, and a letter forwarded asking for an interview.

A few days before leaving for Europe, Dr. Lane requested that I call at his house, and in the presence of Mrs. Lane stated: "We have concluded to found a course of medical lectures to be given annually by big men in our profession. They are to be ten in number—free to the medical student and practitioners of the coast; they are intended to form an encouragement for study and work. We have reserved a sum of money, the interest of which, \$2000, will be paid as an honorarium to the lecturer. I have the man in mind whom I would like to head the list of lecturers; I want you to bring him out."

What was my surprise and how great the joy at hearing that the man who had just given Cooper Medical College a new home and hospital was going to crown his work by establishing a lectureship open to the best medical talent of the world and thus establish a link that might unite the pioneering practice of the young Far West with the ever advancing and progressive work of Eastern and European medical centers. The thought was so big

and radiant! and there sat the man, deep in humanity and love of his profession, smilingly awaiting what I was to say. The honor and responsibility of being entrusted with such a commission filled my mind for an instant. Instead of asking Dr. Lane whom he had chosen as I should have done in a less agitated condition of mind, the possibility of securing Macewen for the place filled me so that I replied, "I will undertake the task and have the man, Dr. Lane." "So have I," he replied. "Who is your choice?" "Professor Macewen!" "He is mine!"

On the day before leaving, Dr. Lane called at my office; he handed me a slip of paper, which stipulated the program of the newly founded lectureship; it did not mention the honorarium fixed. A couple of days previous to the opening of the session of the British Medical Association, I arrived in London and found a short postal card, in answer to the letter written Macewen. He would arrive on such-and-such a train from Glasgow, and could be found at the hotel. The hour mentioned found me at the door of Professor Macewen's room at the St. Pancras Hotel, modest quarters indeed for a man of such figure and import. To my impression, he expanded and filled every niche of the small room and illuminated every corner of available space. He had nearly finished dressing for a dinner he was to at-

tend at a friend's house, and I remember distinctly his buttoning on his collar when taking Dr. Lane's slip of paper into one of his hands, read it and looked at me, the messenger from the far-off land, California, with a heart-winning, wistful glance of his blue eyes. The message evidently pleased him; I supplemented Dr. Lane's lines with a few explanatory remarks and concluded that the fee attached to the lectures was \$2000. He most good-naturedly, and with a delightful Scotch intonation, remarked: "The fee does not tempt me, but I like the idea." That was it! The Idea! The word and the tone of his voice—the glance of eyes filled my heart and mind—I felt sure that in the end he would accept. For is it not the "Idea," the Ideal, which fills life and makes it worth living? At his request, I jumped with him into the hansom cab; during the long, long drive he asked questions about California, its climate, its fauna and flora, schools, people, topography; he inquired about my own history of getting there, of living among free people; seemed pleased at their still upholding the traditions of the old Vigilantes—on I went, answering as best I could—and, after three-quarters of an hour's drive, I felt like a bag from which every drop had been pressed out, while the bird whom I hoped to bag myself was flying to the retreat of quiet second thought with free wings and a wistful look.

The next morning, an hour before the beginning of the meeting of the Otological Section before which he was to deliver his address on the surgery of the brain, I was in my seat; soon after the spacious hall of Kings College was filled to overflowing by men eager to listen to the master's words; he entered with the chairman of the section. Silence! Enters a messenger with the request that the beginning of this section be postponed a quarter of an hour, for the surgical section intended coming over in a body, a request which indicated the importance of the man and his work, but one which it was impossible to heed, as there was hardly any standing-room. For an hour, Dr. Macewen held his audience spellbound. Pathology, anatomy of the brain, clinical observations, surgical proceedings, clear and direct, the surprisingly positive results of the recoveries in the field of brain surgery, were communicated and the therapeutical suggestions to arrive at them described. A revelation of clear thought and penetrating action! A very few men asked questions even. There stood the noble figure, smiling at the ringing applause, demonstrating to whoever seemed interested in the subject matter, with drawings and chalk in hand. New groups of listeners formed about him, attracted like iron filings by a powerful magnet. From the man's manner of conversation the day before, I had expected much, but the man's flow of speech, his clearness of delivery, the simple earnestness with which he seemed to single out every man in the crowd assembled as his individual listener and student, his voice, his eyes, the noble mould of his face and figure—a surgical savior, speaking to his disciples! It was indeed a divine hour, a holy service!

When everyone had departed, he greeted me with a smile of sympathetic recognition. That quickly made up my mind. It was "Aut Caesar, aut nihil,"



E. S. Cooper.

and shaking hands with him, I said, "Professor Macewen, may I cable Dr. Lane that you accept to deliver the first medical lecture series next year?" He smiled, took me into a corner and, omitting all formality of conversation, mentioned a few points that needed a bit of clearing up—some explanations he would want the members of his family to hear from me when I came to Glasgow, necessary from the fact that being attached as surgeon to the King's person during his sojourn in Scotland, leave for longer absence might be difficult to obtain. He found, however, time to say a few pleasant words about friends in America, and wound up by stating: "Now you go over to the continent and see Schwarze's work. You will hear from me as soon as we have material worth while your coming to Glasgow. We will talk of the matter further. Write to your friends in San Francisco that they may send me a formal tendering of the lectureship." I felt that the seed of sympathetic consideration had been implanted and that it would be both improper and unwise to urge the subject any further. Having sent off a lengthy and enthusiastic report to Dr. Lane, I crossed over to Halle, where Professor Schwarze, another big man, but of a very different physical and mental type from the lovable dweller of the Highlands, albeit a good teacher and severe taskmaster, put me, during a period of many weeks, through a long, daily drill along the labyrinth of the temporal bone, so as to make my own bones ache.

In due time, the longed-for call came from Glasgow. I entered on my double mission of student and agent in re Lane Medical Lectures, the scene now being shifted to the Western Hospital, and Professor Macewen's home circle. These were happy

hours and days indeed. Genial intimacy soon developed on the base of simple hospitality and kindly understanding. The temporal bone in its important neighborly relationship to the brain and its sinuses; Macewen's triangle as a practically infallible guide into the depth of the middle ear by means of the gentle and steady use of searcher and dental burr in its then still simplest form—the quiet, quick, and safe method of entering the brain which snatched many a patient, it seemed, from the very clutches of death. The time spent under the humane clear-cut influence of this original thinker and genial teacher who, with pencil in hand, after many a dinner would explain the doings of the day, illustrate them with drawings, exhort and encourage—the most inspiring and useful study-time of my life was thus spent—gradually confidence was established; the Highland home was visited; prejudices and fears of too fatiguing a trip for the paterfamilias were conquered. I felt hopeful, and thus it came about that Dr. Rixford and myself met our guest some months afterwards on the overland train, eager to do his work and teach.

Almost directly, we escorted him to the old, big lecture hall of the Cooper Medical College. Whilst he was looking about and finding wall-space for his drawings, Dr. Lane came in. For about ten minutes they conversed—then our venerable and loved chief turned to me and with an appreciative expression of his face, shook hands, saying, "The man will do." And so he did. To me, what a feast it was! What an encouragement for the future!

The students and graduates of both medical schools, many visitors from the interior, up and down the coast, drank in Macewen's words to develop directive forces and sources of better work within themselves and the institutions they belonged to. A new era of medical thought and work had been inaugurated on our coast, Macewen as the first, followed by such lecturers as Clifford Albutt, Michael Forster, Manson, Fuchs, and others, brought the far isolated West nearer to the old and wiser medical culture of the East and the trans-oceanic centers. Thus they fulfilled Dr. Lane's most cherished thought.

Blessed be the memory of him who founded—
Blessed be the memory of the men who carried out his work.

2209 Laguna Street.

The Ultraviolet Rays of the Sun—Alfred F. Hess, New York (Journal A. M. A.), concludes his review as follows: Rickets affords an excellent criterion for the investigation of the biologic activity of the sun's rays, for we know within narrow limits the band of ultraviolet radiations that is effective in preventing or curing this disorder. A comparison of the yearly amount of actual sunshine in cities in the temperate zone demonstrates that there is no close parallelism between the incidence of rickets and annual sunshine. It shows, furthermore, that the occurrence of rickets does not depend on an equable distribution of sunshine throughout the year. In the Panama Canal Zone, where rickets is practically non-existent, not only is the yearly sunshine less than in New York, but it is less evenly distributed; there are fewer hours of sunshine during the rainy season in Colon or Ancon than during the corresponding winter period in New York. The determining factor is the quality, not the quantity, of the sun's rays—the amount of intensity of those short ultraviolet radiations which alone are of value in preventing rickets.

EARLY CALIFORNIAN MEDICAL JOURNALS

By EMMET RIXFORD, M. D., *San Francisco*

EARLY California medical journals are a typical product of Pioneer times in California. The men who came during the Gold Rush—who really made the state and gave it its character, its foundation in romance—were strong men, for no considerable number of weaklings could possibly get here. The pioneers may not all have been good men, for their variety was great, but it can safely be said that they were not goody-goody men.

It is true that among the medical men there were many so-called "natural-born doctors," many men—some of them capable, good men—who had no diploma, but there were also not a few college graduates—young men of family, of imagination, of determination, and possessed of that inspiring gift—the pioneering spirit.

It was a time when men stood up, man to man, ready to defend their position, and if we read between the lines it is evident that occasion frequently offered when defense was necessary; a time of rigid medical ethics, when violation of medical ethics brought greater personal censure, greater acrimony.

Many were the pamphleteers, and a spicy history of early Californian medicine might be compiled from even the few pamphlets which have been preserved.

The first really high-class medical journal published in California—and it now constitutes by far the most interesting and important volume in the history of medicine on the Pacific Coast—was the California State Medical Journal, founded and edited by John F. Morse (Sr.), a quarterly of excellent form published in Sacramento in 1856-7.

Its foundation was intimately associated with the organization of the State Medical Society, and its first number contains the full minutes of the meeting of that organization. These minutes are so important historically, the resolutions contained therein so far-seeing and so illuminating, in view of the recent emasculation of our medical law, that they deserve reproduction in our present State Journal.

Here we can only refer to those parts having to do with the founding of Morse's journal.

Pursuant to an invitation addressed to the members of the medical profession throughout the state of California, calling upon them to meet in general convention in the city of Sacramento on Wednesday, the twelfth day of March, 1856, for the purpose of forming a state medical society with auxiliary societies in each town or county, a numerous delegation from the various sections of the state assembled at Pioneer Hall on the date mentioned at 3 o'clock p. m. Seventy-six men answered roll-call, representing sixteen counties of Central and Northern California. Sacramento had the largest representation, numbering twenty-eight; San Francisco next, numbering thirteen. Dr. John F. Morse was elected temporary chairman. A constitution was adopted and under it Dr. B. F. Keene of El Dorado was elected the society's first president.

In an important resolution of declaration of poli-

cies of the new society, offered by Dr. Thomas M. Logan of Sacramento, this paragraph occurs:

Resolved, That a medical journal, conducted in accordance with the spirit of these resolutions, and maintaining a firm and independent stand against the malpractices and delinquencies of diplomatized, as well as all unqualified practitioners, shall receive the support and hearty co-operation of this Association, and that a committee of three be appointed to canvass the whole subject in the premises, and report, before the final adjournment of this Association, some practical plan for the accomplishment of the end in view.

The committee reported at the next session that Dr. John F. Morse had been engaged for some time past in making preliminary arrangements for the publication of an independent medical journal on his own responsibility, and that Dr. Morse would undertake the publication if guaranteed two hundred subscribers at \$5 per annum. Thus the journal was launched.

A few of the historically important matters brought up in the State Society meeting, and appearing in the minutes, may be briefly mentioned: The motion of Dr. J. T. McLane of Yuba City, to memorialize the state legislature to enact a law elevating the board of censors (of the society) into a board of medical examiners; the motion of E. S. Cooper memorializing the legislature to enact a law legalizing anatomical dissection and providing source of dissecting material; of Dr. O. Harvey of Placerville, urging the formation of county medical societies throughout the state.

On motion of Dr. Dustin of Nevada County, Dr. E. S. Cooper was invited to address the society on the experiments made by him in ligating the abdominal aorta in animals. This was the first paper on a scientific subject read before the California State Medical Society.

The journal contains, of course, the constitution adopted by the society, the code of medical ethics of the National Medical Association, a paper by Dr. A. Wierzbicky of San Francisco on the History of Medicine (general), and several by Dr. Thomas M. Logan on the History of Medicine in California. These latter papers expanded into studies in climatology, containing rainfall and temperature tables.

The second number of the journal was late in appearing. The publisher apologized, giving as his excuse the fact that the amount of type in his establishment was so small that the meteorological tables of Dr. Logan, which were nearly ready for the press, had to be distributed to meet the requirements of election returns in the newspaper attached to the publication department, and also to be able to lay before the readers a report concerning a case of laceration of the vagina which was considered too important to wait the issue of the third number. (The importance of the case was largely medico-legal.)

The troubles of the medical editor in California may be inferred from the publication on the last page of the second number a list of the subscribers; those who had paid their subscriptions were marked by an asterisk, those who had not paid, by a dagger.

At the second meeting of the State Society, February 11, 1857, Dr. Cooper, vice-president, presided because of the death of Dr. Keene. Dr. Henry Gib-

bons was elected president. At this meeting Dr. Morse stated his inability to continue the journal, preferring to transfer the journal to the State Society. The society was reluctant to undertake the task of publishing the journal, so it appropriated \$50 from the treasury to lessen the losses of Dr. Morse and started a new list of subscriptions. At the same meeting the secretary was instructed to drop from the roll all members delinquent in payment of their dues.

The society had but one more meeting, that of 1858, before it dissolved, but before this the journal ceased publication. The editor wrote:

"We regret that we must submit the fourth number of our Journal to the world without sufficient encouragement to continue the publication. The regret, however, is palliated with the assurance of relief from continued pecuniary loss and a vast amount of labor and anxiety, which are more agreeable in theory than practice. We had an idea that we were offering the profession a good opportunity for the establishment of a respectable medical journal, but we have not the slightest disposition to defend this idea against any positive or apathetic conviction of the general profession to the contrary."

Dr. Morse's last word is to subscribers:

"If the seventy-four subscribers of our small list who have not paid their subscription have no objection to remit us the amount due, we will receive it with becoming grace. The sum, if sent us, would, of course, materially abridge our losses, and consequently would be a source of convenience. We would not, however, inflict a harsh call upon delinquents in a country in which *five dollars* is getting to be a sum of such embarrassing magnitude and scarcity."

The stirring editorials by Dr. Morse are well worth reading today: one on Pacific Coast diseases and another describing the atrocities of farming out the counties' indigent sick, urging the building of county hospitals, and the cleaning up of those already in existence.

It is interesting to note that Dr. Morse later moved to San Francisco, and in the summer of 1863 became a member of the faculty of the Medical College of the Pacific, founded by E. S. Cooper in 1858.

The Pacific Medical and Surgical Journal had the longest life of any of the early medical periodicals of California. It was founded in 1858, published in San Francisco and edited by John B. Trask and David Wooster. It started out bravely with short original articles by H. H. Toland, J. Morrison, Isaac Rowell, and E. S. Cooper, from which one may judge that Trask and Wooster made a definite effort to preserve harmony in the local profession and have the support of the various factions, but in the third number the editor, Dr. Wooster, objecting to the report before the meeting of the State Society two weeks previously by Dr. E. S. Cooper of the first case of Caesarean section performed in California, and one of the few cases in the world in which the mother lived, published his (Wooster's) account of the case. (Wooster had been called in consultation and had consented to and assisted in the operation.) His account was a scathing criticism of Dr. Cooper.

This is not the place to take up the merits of the controversy, nor does space permit, but the interested reader of today will find, even in Dr. Wooster's account of the case, much that is illuminating in explaining the factional differences which divided

the profession in San Francisco. Dr. Wooster naively says: "We operated (no other physician present), he using the knife."

The after-treatment, in the light of today, is notable, and gives us a striking contemporary picture of the surgery of the fifties. Dr. Wooster says:

"We used diaphoretics, aperients, opiates, carminatives, tonics, stimulants, etc., etc., etc., according to symptoms. After the middle of the fourth day she had porter, California wine, bottled soda, eggs, small birds, mutton chops, loin steaks, rice, etc., etc., as much as she desired. The first three days a single thickness of domestic moistened in cold water is applied to the exposed abdomen, over the wound to get the refrigerating action of evaporation. As soon as suppuration is established, this dressing is replaced by a warm poultice of bread and milk, which is continued until she is well. A weak dilution of chloride of soda was several times injected through the vagina into the womb, from which it issued at the abdominal wound and did not return by the natural passages. These cleansings diminished very much the almost gangrenous foetor of the first days of suppuration. The abdominal flatus was drawn off by an esophagus tube per rectum. A silver catheter remained constantly in the urethra, by which the bladder was always kept nearly empty. The bladder was incised, at first accidentally, then purposely, during the operation, before the womb was reached. These slight openings closed kindly, by first intention."

It may be noted that the woman was 36 years old, primipara, in labor fifty-six hours, the presentation occipito-posterior. Ergot had been given. No progress had been made for twenty hours. The woman recovered and was able to walk in forty days; the child weighed eleven and one-half pounds.

After the publication of this article, Dr. Cooper did not contribute to the Pacific Medical and Surgical Journal. Thus we get a side-light on the savage criticism which appears in the journal on the Medical College of the Pacific which Cooper organized later in the year.

Nearly every number contained an article or case report by Dr. Toland, often illustrated by excellent lithographs by Britten & Ray.

The journal published annually a register of physicians in the state.

In the second volume, the journal published a caustic criticism by Dr. J. D. B. Stillman of the quality of medical literature served to the medical profession in the journal, showing by the deadly parallel where Dr. Toland got his material. Toland replied—plausibly, but with argument *ad hominem*. The two articles are spicy reading, and at the end the editor closes with the words: "If our friends wish to quarrel or fight, we recommend gunpowder and lead, not types and printer's ink."

A number of articles, entitled "Historical Sketches," by V. Fourgeaud, show much discriminating reading and are noteworthy in the history of medicine.

From its beginning, the Pacific Medical and Surgical Journal seemed fated to change sides, being alternately the organ of one institution or another.

After Cooper's death in 1862, the Medical Col-

lege of the Pacific lasted but two years. The students all went into the newly founded Toland Medical College, and several members of the faculty followed, notably Dr. L. C. Lane and Dr. Henry Gibbons. In April, 1865, the Pacific Medical and Surgical Journal united with Cooper's little journal, the San Francisco Medical Press, under the editorship of Dr. Henry Gibbons. It then might be considered the organ of Toland Medical College.

When Lane and Gibbons seceded from the Toland College in 1870, reorganizing the old school, the journal went too, and remained, as it were, the organ of the Medical College of the Pacific for the next forty years.

Under the editorship of Henry Gibbons and Henry Gibbons, Jr., in 1884, it absorbed the San Francisco Western Lancet, and Dr. Henry Gibbons, Jr., the editor, associated with himself in the conduct of the journal Dr. Whitwell, then editor of the Lancet.

Whitwell eventually took the journal and presently sold it to Dr. W. F. McNutt, then Professor of Medicine in Toland Medical College, by this time the University of California Medical Department. So the journal in turn became the organ of the University of California Medical School.

Dr. McNutt associated with himself Dr. Winslow Anderson, who succeeded to the journal, taking it with him when he left McNutt. Anderson organized the College of Physicians and Surgeons in San Francisco, and the journal became the organ of this new school. Under these auspices the journal lasted a number of years, dying in 1917, ending a continuous life of some fifty-nine years, in its earlier and middle periods being well edited and having a marked influence in medical professional matters in the state of California.

Not the least interesting of the early medical periodicals is the San Francisco Medical Press, published by Dr. E. S. Cooper, beginning January, 1860.

In the light of the above, Dr. Cooper's statement of his objects in establishing a medical journal in San Francisco is amusing:

First. To encourage unanimity of feeling and concurrence of action among medical men of this city and state, in the organization of new, and in perpetuating the old associations for medical improvement.

Second. To inquire into and remove, as far as possible, the sources of discord which have reigned to so great an extent in these organizations.

Third. To vindicate the rights of all honorable medical men when unjustly assailed.

Fourth. To offer a medium for the publication of the numerous interesting and often anomalous cases treated by practitioners on this coast.

Fifth. To encourage medical men of the Pacific Coast to extend their subscriptions to medical journals of the Atlantic States and Europe.

The design is more to furnish original articles than to reproduce those which have already been published in medical journals. To accomplish the above objects, Dr. Cooper promised "to labor for these results uninfluenced by passion, fear or favor." It is evident that Cooper was still smarting under

the attack of the malpractice suit, and felt that he needed a medium of publication of his original work.

This original work is historically of great interest, including as it does considerable surgical experimentation on animals. Cooper advanced, with considerable blare of trumpets, a number of new surgical principles, of which several are important: One, that admission of air into joints is not a cause of irritation or injury; that division of entire ligaments about the joints is no impediment to their ultimate strength and mobility; that large wounds of joints are less serious than small; that early and wide incision of joints is far more imperiously demanded than opening of other parts similarly affected.

After Dr. Cooper's death in 1862 at the age of 40, the Press was edited for a short time by Dr. L. C. Lane, the last volume by Dr. R. Beverly Cole and Dr. Henry Gibbons.

The Western Lancet, founded in 1862 by E. Trainor and H. P. Babcock as editors, in Volume 9 became the San Francisco Western Lancet, with Dr. A. W. Perry and William H. Mays as editors, and in Volume 10, Dr. W. S. Whitwell.

It was a monthly of pleasing form, but had a small circulation. In 1884 it was merged in the Pacific Medical and Surgical Journal.

Another ambitious attempt to furnish for the medical profession of California a dignified medium for publication was the California Medical Gazette, a small quarto which endured for only two years. Volume 1, 1868, names as editors Thomas Bennett, J. Campbell Sharpe, and W. F. McNutt; the second volume, J. D. B. Stillman and W. F. McNutt.

The Pacific Record of Medicine and Surgery, founded by Dr. C. W. Moore in 1886, lived for some twenty years. In the beginning it was published in two languages, English and Spanish, in parallel columns. In 1898, after the death of Dr. Moore, Dr. Louis A. Kengla became editor; he changed the form from a handsome quarto to a less attractive, but probably more useful large octavo. In 1904, Dr. Kengla combined this journal and the Occidental Medical Times under his editorship.

In the more peaceful and constructive middle period of medicine in California the field of medical journalism was occupied by the Occidental Medical Times. Founded in 1887 by Dr. J. H. Parkinson as a modest local journal under the title, The Sacramento Medical Times, it soon found that its statewide field required a change of name. This was made in 1889, in its third volume. Twelve volumes were published when it was removed to San Francisco, uniting with the Pacific Record of Medicine and Surgery, as stated above, under the editorship of Dr. Louis A. Kengla, who had rejuvenated the latter journal. Ceasing publication at the death of Dr. Kengla, it had furnished for seventeen years a most excellent journal worthy of better support than it received. Its influence for better medicine in California and its influence on legislation are worthy of more space than can here be given to it.

Reading between the lines, one can appreciate that the story of medical journalism in Califor-

nia is the story of editorial enthusiasm and infinite but altogether unrequited devotion and self-sacrifice struggling against a dead weight of apathy on the part of the medical public which is difficult to understand.

Only in recent years has the medical profession, as organized in the California Medical Association, given to a local journal the support and appreciative co-operation it deserves.

1795 California Street.

WILLIAM WATT KERR, M. B., C. M.

By JOHN HOMER WOOLSEY, M. D., *San Francisco*

EDITORIAL INTRODUCTORY NOTE

The original plans for an historical number of CALIFORNIA AND WESTERN MEDICINE provided for a number of brief sketches of the lives of medical Argonauts of California. All realize that much of what is most stimulating and helpful in medical history is reflected in the lives of medical leaders. Many such have acted their parts in the drama and romance of medicine, with the Golden West as the stage. The men and their doings are well known to those still living, but it is very difficult to find those who care to tell these useful stories.

The following brief sketch of the life of one of these medical Argonauts, whose memory is still much revered, is supplied by one of his students.

William Watt Kerr, of Scotch ancestry, educated at the University of Edinburgh, came to California



William Watt Kerr

in 1881 to begin his life's work. Starting in an humble way he rose, by 1887, to a conspicuous place in the field of Western Medicine as Professor of Therapeutics in the University of California Medical School. The following year he assumed a new title—Professor of Clinical Medicine—and contin-

ued as such to the time of his death. He was one of the leaders of his time. By direct teaching to students of medicine, by co-work with the medical profession at large, and by example he did much in keeping Western Medicine progressive and beholden to high ideals.

"Daddy" Kerr, as he was known to students, always enjoyed young people. Those close to him are familiar with his continuous endeavor to stimulate and to assist young men to further advance in medicine. His presentation of patients at his clinics were always an attraction, and it has been said that of all those present he was the most devoted student. His written contributions testify to his intense interest in medicine and his progressive spirit. Ever modest of his own ability and deeds, he allowed the facts alone of his works to speak for themselves.

His written contributions are as follows:

- Capillary circulation and stasis. *West. Lancet*, 1882, V. 11:486-534.
 Abattoirs. *West. Lancet*, 1883, V. 12:433-447.
 The value of drugs in the treatment of disease. *Pacific M. and S. J.*, 1884-5, V. 27:193-201.
 Cases of fatty heart. *Pacific M. and S. J.*, 1885, V. 27: 213-217.
 Treatment of pulmonary diseases by gaseous enemata. *Pacific M. and S. J.*, 1887, V. 30:339-344.
 Gangrene of the esophagus. *Sacramento M. Times*, 1888, V. 2:1.
 Treatment of aortic aneurism by Loretta's method combined with electrolysis. *Occidental M. Times*, 1889, V. 3:1-4.
 An interesting case of cerebral tumor. *Occidental M. Times*, 1890, V. 4:59-63.
 Digitalis in the treatment of croupous pneumonia. *A. M. A. Journal*, 1894, V. 23:148-151.
 Tachycardia. *South. Calif. Pract.*, 1896, V. 11:161-166; *Tr. M. Soc. Calif.*, 1896, V. 26:36-47.
 Two cases of trichinosis with eosinophilia. *Phila. M. J.*, 1900, V. 6:346-348.
 Obstruction of the inferior vena cava. *Occidental M. Times*, 1897, V. 11:661.
 Cases of angina sine dolore, due to diseases of the right ventricle. *Occidental M. Times*, 1898, V. 12:241-247.
 Typhoid meningitis. (With Moffitt.) *A. M. A. Journal*, 1899, V. 32:603-605.
 Clinical lecture. Plague. *Occidental M. Times*, 1900, V. 14:311-316.
 In Memoriam. An address in memory of Professor R. Beverly Cole. *Occidental M. Times*, 1901, V. 15: 35-37.
 Tropical diseases in California. *Calif. State J. M.*, 1902-3, V. 1:174-179.
 Renal tumor. *Occidental M. Times*, 1903, V. 17:444-446.
 Hodgkin's disease. *Occidental M. Times*, 1903, V. 17:443.
 Diagnosis of diseases of the gall-bladder. *Occidental M. Times*, 1903, V. 17:1-7.
 Myocarditis with special reference to disordered metabolism. *Calif. State J. M.*, V. 2:339-343; 339, 369; V. 3:16. 1904-1905.
 A case of pleural and pericardial effusion. *Calif. State J. M.*, 1906, V. 4:300-303.
 The intensity of the pulmonic sound in mitral incompetence. *Calif. State J. M.*, 1907, V. 5:192.
 The medicinal treatment of myocarditis. *Calif. State J. M.*, 1908, V. 6:17-21.
 Painless and painful angina pectoris. *A. M. A. Journal*, 1909, V. 52:1744-1746.
 Aortic regurgitation. *A. M. J. M. Sc.*, n. s., cxlii:550-558. 1911.
 "Acute cholecystitis. *Calif. State J. M.*, 1911, V. 9:96-99.
 Inter-auricular or inter-ventricular deficiency of septum? A question of diagnosis. *Calif. State J. M.*, 1913, V. 11:156-159.
 Gastro-intestinal symptoms in disease of the circulatory system. *Calif. State J. M.*, 1915, V. 13:345-348.
 Notes on angina pectoris. *Calif. State J. M.*, 1915, V. 13: 301-306.
 Case of pellagra. *Calif. State J. M.*, 1915, V. 13:154.

Some factors in the treatment of myocardial lesions. *A. M. A. Journal*, 1911, V. 57:1517-1521.

Danger of baths in patients suffering from arteriosclerosis. *Calif. State J. M.*, 1916, V. 14:279.

Some heart problems suggesting the necessity for a closer alliance between the physiologists, bio-chemists, and clinician. *Calif. State J. M.*, 1917, V. 15:283.

In 1916, while visiting at certain mineral springs, he first learned of the condition that eventually caused his death. Despite the danger to himself, he proceeded immediately with a series of these hot baths in order to determine their effect upon angina pectoris. Later in March, 1916, he presented these observations to his County Medical Society, but as of the third person, so inborn and noble was his modesty.

His final moment came as he always wished, while active in his care of others. Thus William Watt Kerr, a man of simple taste, untiring in his service to others in need, pioneer in Western Medicine, embodied in his life all that was noble and all but died that others might live.

DOCTOR BENJAMIN F. KEENE

At the Fifty-second Annual Session of the California Medical Association, held in San Francisco, June, 1923, the House of Delegates authorized the appointment of a committee to consider the question of repairing the last resting-place of the first President of the Medical Society of the State of California, Doctor B. F. Keene at Placerville, the lower portion of the old headstone having disappeared. The chairman of the Council, James H. Parkinson, appointed as members of this committee: W. A. Reckers, M. D., chairman, S. H. Rantz, M. D., and Mr. Louis Reeg.

Upon investigation the committee reported that "the grave is overgrown with grass and weeds, the mound is sunken down, the headstone is broken off, and the inscription is partly effaced. The broken headpiece bears the words, 'Here lies the body of Dr. J. B. Keene, the first president of the California State Medical Society.' Also the time of death, etc." The committee recommended that "the entire grave be covered with concrete and that the old broken headstone be placed flatly upon the concrete tomb. Also that the State Society erect a new headstone and place upon it an appropriate inscription."

Upon recommendation of the committee, the Council authorized the repairing of Doctor Keene's grave as shown in the following illustration.



OBITUARY

(Extracted from California State Medical Journal,
October, 1856)

"With feelings of deep regret, we are forced to acknowledge the sudden death of the worthy president of our State Medical Society, Doctor Benjamin F. Keene of Placerville, El Dorado County, on the evening of September 5. The doctor retired to bed in the apparent enjoyment of his usual health, and even evincing an unusual buoyancy of spirits. In the morning he was found dead in his bed. He had previously severely suffered from an attack of paralysis, and the probability is that his death was a consequence of a second recurrence of the malady.

"We have never found a member of the profession more highly endowed with all that constitutes a gentleman and well-informed medical man. Although of a serious and grave cast of character, yet his heart seemed warmed towards his fellow-beings with a benevolence and confidence unmarred by suspicion and unaffected by the admonitions of experience. The calm of a sunny yet deep fellowship seemed ever to be asking expression from every word and act that related him to the world."

Extracted from minutes of the Second Annual Session of the Medical Society of the State of California, held in Sacramento, California, February 11, 1857, as published in "Transactions of the Medical Society of the State of California for 1857":

Doctor O. Harvey paid the following tribute to the memory and character of Doctor Keene:

"It has been my fortune to have been intimately connected and associated with the late-lamented Doctor Benjamin F. Keene from the earliest history of this country to the time of his death, and to have assisted, too, in the practice of that noble profession which we are now representing. And I may add that it has been the misfortune of many, as well as myself, to lose in him one of the noblest and dearest of friends.

"Doctor Keene came to this country from the state of Georgia in the year 1849, and like most men, professional or otherwise, engaged in the pursuit of mining; but from his high professional attainments he soon succeeded to an enviable practice and reputation in the profession which he has ever maintained.

"Some portion of his life has been connected with the political history of this country. Four years he represented the county of El Dorado in the Senate of this state, with that ability, honesty, and fidelity known to but few; and had his life been spared one day longer, he would again have been chosen to represent a confiding constituency in the councils of this state.

"A short time before his death he was foremost in issuing a call to form a medical society in the county in which he lived, of which he was an ardent and working member. His devotion to science, his application of useful knowledge, had no bounds; he was a model for any of us to imitate. His character as a man of honesty, integrity, and morality, was beyond reproach. As a man of amiability and high social qualifications, he scarcely had an equal. Friends he had many—enemies none. To know him was to love and admire him.

"Not one year has passed away since Doctor Keene was chosen the presiding officer of this association. The dignity and ability with which he presided over our deliberations; his amiability and courteous demeanor has endeared him to us all. He is now no more. Suddenly, and in the meridian of life, he has been called hence, and may we now hope to take a place in a better world."

"Such is the character of the men who lived just before us. Their ideal was service, which they inculcated, not only by their precept, but by their example. It is the tendency of each generation to think they do things better than their predecessors; but do we, after all? Perhaps by dwelling once in a while on the achievements and the attainments of those who came before us, we may become a little more humble and a little more eager to do at least as well as they."—William Fitch Cheney, M.D., *Reminiscences of Eminent San Francisco Physicians* (California and Western Medicine, August, 1923).

DOCTOR LAFAYETTE HOUGHTON BUNNELL,
FRONTIERSMAN

MOST of our knowledge of the life of Doctor Lafayette Houghton Bunnell we owe to his fascinating book, "Discovery of the Yosemite and The Indian War of 1851," which led to that event, and to the painstaking researches of Dr. Howard A. Kelly of Johns Hopkins, who embodied his findings in an interesting article in "The Annals of Medical History" in 1921.

Doctor Bunnell did other writing, notably magazine articles on pioneer subjects, and a book called "Winona," which is described as a mine of Indian lore.

His history reads like that of the hero of a Western novel, full of romance and adventure.

Born in Rochester, New York, November 2, 1924, the son of American parents of good English ancestry, his father a physician, his mother a member of a distinguished family by the name of Houghton, Lafayette Bunnell spent most of the formative years of his boyhood in Detroit, then a small French village. Here he saw much of Indian life and learned something of the native languages and, of course, the sign language. He vied with the Indian boys in their sports and, under the spell of the frontier tales of Dr. Douglas Houghton, distinguished naturalist and geologist, as well as physician, his mother's cousin, he was fired with the pioneer spirit of exploration and adventure.

With moderate schooling he learned something of medicine, living as he did at home in a medical atmosphere, and was employed for a time as a clerk in a drug store; but his restless spirit and his ambition to be out-of-doors led him to forsake medicine for business. As a young man he engaged in various lumbering operations in the upper Mississippi region, even rafting logs down the river to St. Louis.

He served in the Mexican War in 1847 and in 1849 it was inevitable, as Dr. Kelly puts it, with his character and training, that he should seek gold in California.

Bunnell tells the story of his having had a glimpse from a Merced trail above Ridley's Ferry of the stupendous cliff which later was named El Capitan and which, as a member of the Mariposa Battalion, he was to know and appreciate more fully when the battalion camped just across the river from this mightiest of rocks. The Mariposa Battalion was a company of hardy mining men and pioneers organized in January 18, 1851, under command of James D. Savage, a tradesman, who had great knowledge of the Indians and their ways and who was commissioned Major. This company of horsemen entered the Valley in pursuit of the Yosemite Indians who had been making depredations on the white settlements and had killed a number of pioneers. The route was that of an Indian trail, practically the now well-known and so-called 'old Mariposa Trail.' While these were the first white men to enter the Valley and were on horseback, it was known that stolen horses and cattle had been taken into the Valley by the Indians, so it was known that the trail was passable, but to those who are familiar with the snowfall of the region, the trip must have been an arduous one in March. While the expedition was not much of a success as measured by the number of

prisoners taken, it accomplished a good deal in showing the Yosemite and their foxy old Chief, Tenaya, that the settlers could not be trifled with and that the mountain stronghold and the deep valley, Ahwahne, was not a safe refuge when the whites were aroused.

While the battalion was encamped opposite El Capitan not far from Bridal Veil Falls, it was suggested that the party name the Valley, and it is to the honor of Doctor Lafayette Houghton Bunnell that he suggested the name "Yosemite," which was finally adopted. It was not the Indian name of the Valley, but the name of the Indian tribe occupying it, and signifies the grizzly bear.

Bunnell never claimed to have been individually the discoverer of Yosemite Valley, but merely to have been one of the company of white men first to enter it, and to have suggested the name. It has been established that other white men, notably the party of Joseph Walker, which had crossed the Valley on the Mono Trail to the north of the Valley, had noticed the depression and had seen and remarked on the cliffs, probably Half Dome and Glacier Point.

By reason of his knowledge of medicine, Bunnell had something of a medical or surgical outfit with him in his mining days in California, and it is to be presumed that he had occasion to assist the sick and injured. In fact, he was appointed surgeon, at least to the later expedition against the Chowchillas, and promised extra pay as surgeon.

Dr. Kelly epitomizes Bunnell's subsequent military career as follows:

"After the Mariposa Battalion was mustered out, Bunnell remained in California, trading, mining, and surveying, as late as 1856. He returned to his early home in the Middle West and on April 18, 1861, at LaCrosse, Wisconsin, enlisted in the United States Army. He was appointed hospital steward July 22, 1861, and discharged in May, 1862.

"He enlisted in 'Company B, Second Wisconsin Cavalry Volunteers, in November, 1863, and was discharged March 1, 1865, to accept a commission as assistant surgeon Thirty-sixth Wisconsin Infantry Volunteers. He became surgeon in July, 1865, and was mustered out with the regiment the same month and year.'"

After the Civil War he married Sarah Smith. They had no children. Bunnell died at Homer, Minnesota, his brother's old home, on July 21, 1903, and was buried at Woodlawn Cemetery in Winona, Minnesota.

While he was known as *Doctor* Bunnell, there has been a good deal of skepticism as to whether he had a medical diploma. Dr. Kelly, in the article cited, dispels all doubt on this matter by publishing a reproduction of the diploma granted Lafayette Houghton Bunnell by the LaCrosse Medical College in 1864, the original being now in the possession of the Minnesota Historical Society. It has further been shown that for two years, beginning at the age of 16, Lafayette Bunnell read medicine in his father's office and attended clinics, a training which might compare not unfavorably with the curricula of most American medical colleges of 1840. It is well known that in the pioneer days in California many men who achieved prominence in the practice of medicine had no great schooling and some had no diploma, and yet were honorable men.

COMMITTEE ON BUNNELL MEMORIAL,
Emmet Rixford, Chairman,
Saxton T. Pope,
Egerton Crispin.

"CHIROPRACTIC FOUNTAIN HEAD"

AN INSIDE VIEW

By A. W. MEYER, M. D., *Stanford University, California*

IT WAS not necessary to visit Davenport in order to learn that fact and fable are two different things. The advertising matter distributed freely from the Palmer School alone shows that. As everyone knows the human body, as judged by these pamphlets, is made fearfully indeed and human ills are adjusted as strangely.

I had heard "B. J." himself compare Yale with the "Chiropractic Fountain Head," in a public lecture. The implication was that the latter was rather a greater institution, and the public was told that it would soon have a dormitory large enough to house several thousand students. Unfortunately, the dimensions given for this dormitory scarcely provided comfortable standing room for this number; not even without making allowance for stairs, corridors, and partitions! In spite of these things, the speaker nevertheless was applauded rather generously, and one might have supposed that he was some long-awaited saint coming with a message for suffering humanity.

I long had wanted to see this school for myself to obtain first-hand impressions of the students, the faculty, and the equipment. "The Plant" includes a commodious old residence and four closely adjoining buildings, ranging from one to four stories in height, not including the tower. These four buildings are separated slightly from each other and are adorned with Oriental gateways, bells, totem poles, plaster Buddhas, Chinese gongs, inscriptions, and colossal plaster busts of the three Palmers. A fourth bust, of the elder Palmer, rests on a large granite base in an areaway between two buildings. It is said to be a gift of the chiropractic profession, and stands in the entrance of "Twildo," a recreation area-way, furnished with rustic seats and tables, the latter inlaid with games of various kinds.

Inscriptions are about everywhere, some of them of considerable length. One side of the brick chimney advises "Keep smiling," and the other side announces "Votes 4 Women." One end of the radio station at the rear of "Up-e-Nuf" where "Inspiration Point" is located, carries the petition, "Let George Me do it." The other end asks: "Is life worth living?" and answers: "That depends on the liver." The arch over the gateway, in front of the parkway, declares that "Anything that you do that the majority do not do is queer. Queer, isn't it."

The largest building, which bears the wireless station, is proclaimed to be eighty feet higher than the Woolworth tower. It has a roof garden and a telescope. The "printery" is claimed to be "the prettiest in America." Besides these things, the plant includes a bakery, barber-shop, cafeteria, trophy room, mailing room for propaganda, and a room adorned with photographs of 5000 actors and actresses—mainly the latter—who are said to commend chiropractic.

The same incongruousness—or even grotesqueness—evident without is present within. The hallways are full of phrases, some of which are telling, well chosen, and worthy; others queer and un-

worthy, and some are in characters only. One of the hallways contains a third colossal bust of the elder Palmer, an airplane propeller, etc.

The cafeteria was especially placarded with phrases of all kinds. One of these read: "Only a mutt can make money without advertising." The food served there was of good quality and very reasonable in price, but the place was rather untidy. The much-advertised "well" with its "old oaken bucket" yielded none of "its clear, pure, sparkling water from ninety feet below." At this I was not surprised, for in spite of its "artistic and rustic setting," it was found to be a piece of advertising like most things connected with this institution. At my request for a drink of this pure, sparkling water, the guide grinned and said that they never used it because it was unsafe, as it well might be in the heart of a large city. The cafeteria was far from being "one of the most beautiful eating houses," although I am willing to believe that it serves the students well.

The equipment of the school is composed essentially of a small series of private treatment rooms, large lecture rooms, empty save for a platform and seats, or the characteristic trapezoid steel stools; megaphones for announcements; a chart or two and, in one instance, a skeleton. Contradictorily enough, there is an x-ray room and also a separate building in which the "spinograph" apparatus is housed. Good x-ray plates maintained, no doubt, for advertising purposes, though possibly also as a safeguard, adorned the walls. Since the catalogue announces that "the chiropractor gains his knowledge as to the condition of the spine by means of his palpation," there would seem to be no need for x-rays. Yet it is claimed that "our exhibit of x-ray negatives of the spine has no equal anywhere, and nowhere in the world does another department exist that can compare favorably with our thorough and most efficient 'spinograph' department." The student is told that "the ordinary x-ray operator does not possess the skill or knowledge necessary to obtain the kind of pictures that are wanted" (!).

The "osteological studio" is asserted to be "the largest collection of abnormal specimens in the world." It is housed in glass cases in the corridors on an upper floor of the classroom building. The catalogue truly says that this collection represents years of effort, and that it affords students an unusual opportunity of study. However, it is far from being the largest collection in any except the chiropractic world. There are unusual specimens, but many of them are wrongly labeled. Some of these really are very amusing and undoubtedly a source of error to any earnest students. A tubercular specimen, for instance, is labeled "This inco-ordination is N—C. The only secretion involved is serum in transitional stages. The location involved is determined by the distribution of fibers impinged on." Sutural (Wormian) bones are labeled "Osseous tumors formed between the walls." Arachnoidal (Pachionian) depressions are taken for abnormalities. A case of ununited acromiion in an adult scapula is called an "unhealed fracture," and is said to have prevented the raising of the right arm. A myelomatous spine is called a tubercular one, and

many specimens of arthritis deformans are labeled "osteomalacia." One specimen is labeled "Nodule and depressions congenital. External deformans. Internal normal." Verily a most unusual opportunity is afforded students of chiropractic.

As stated in the catalogue, the skeletons are kept in glass cases. Among these was one, that of a male acromegallic. It was pointed out to me as the skeleton of a giantess! A rattlesnake skeleton "with 432 vertebrae" also evoked amusing comment.

The only facilities for studying anatomy, aside from those already indicated, were to be found in an Auzoux model of the entire body, which also is kept in a glass case, and a few other specimens. No dissections are done, and the lecture in anatomy revealed rather unusual functions for some of the muscles of the thigh and a unique description of fascia. This is not to be wondered at, since there was alleged to be a duct which runs from the spleen to the stomach—the "duct of Palmer." This is not surprising, since the *Chiropractic Anatomy* by Mrs. Palmer states that "Chiropractors have for the following reasons long maintained that the spleen furnishes a secretion. It is used in the process of digestion." . . . "In artificial digestions the pancreatic juice alone, or mixed with an infusion of a contracted spleen, digests nothing, or almost nothing, while the same pancreatic secretion, to which has been added the infusion of an engorged spleen, digests rapidly and copiously." It is also stated in this anatomy that "it (the spleen) has been said to be the place of origin of the ganglionic nerve cells, for it was thought to possess some mysterious influence over the mind."

Just as delectable bits of anatomical knowledge as this came from the lips of "B. J." himself in one of the "Analysis Clinics." Of these, the catalogue says: "To see this great man, the developer of this institution, and the thoroughness with which he handles cases that seem impossible of correction, is a liberal education in itself. He is a master hand at spinal analysis, and his work is most phenomenal when it is considered that his patients come from every corner of the world and are absolute strangers. Invariably they attest to the sure truth of his quick conclusions, and his analysis in each case is summed up quickly in a brief explanation to the students in attendance. . . . Here the student sees a practical demonstration of what he is taught in the classroom and, furthermore, he achieves a confidence in his knowledge of diseases and his attitude toward a sick stranger, obtainable in no other way."

In this clinic I heard from the lips of "B. J." himself that the right of a certain pair of nerves goes to the neck and the left to the stomach! Here also one learned that an old healed fracture of the spine causes a "stretching of the spinal cord with consequent reduction of its conductive capacity, just as the conductive capacity of a rubber tube is reduced by stretching." It was interesting to see how many taut fibers were in evidence in the patients brought in, and how unfailingly they were located, . . . although these cases included acute fevers, cervical adenitis, and cases of anemia.

It is unnecessary to add that the treatment of these cases not only is ridiculous, but culpable, and

it is not without significance that cripples unrelieved by chiropractic were much in evidence about the buildings. Some of these were looked upon as fixtures. In the lectures on symptomatology, the genesis of lordosis and kyphosis was explained in a most amusing way, the instructor showing not the least comprehension of pathology. In chemistry the class was asked to cross out an entire table in the text, said to be printed by the school, because it was declared to be incorrect. The lecture was on acids, bases and salts, and it was reassuring to have the guide remark: "You see, everything is made so plain that even *you* can understand it."

The students were unusually friendly, good-natured, and most of them, I am ready to believe, are quite ignorant of the sham in which they are playing a part. They now, and the public later, will pay dearly for this. Only a few seemed suspicious, and vented their indignation in no uncertain terms. However, if these had paid \$475 in advance, their position can easily be imagined.

The men in certain classes buttoned their shirts on the back and so did the women their dresses, in order to make their spines more accessible in palpation and demonstration classes, in some of which the students practice on each other. The students ranged from 18 to 60 years, and with the exception of a very small percentage, very plainly had had the advantage of but a common school education. The order was fair, even in classes numbering 250 to 300. However, some students wore red bandanna handkerchiefs about their heads during recitations. Others had baseball mitts on their hands, and still others were tickling the necks of men and women who were sitting in front of them. A few, as always and everywhere, were dozing. Considerable talking was going on while the lectures were in progress, but there was no boisterousness, not even in the hallways. Some few, apparently not all husbands and wives, or of the same sex, walked and sat with arms entwined. The attendance was taken by a proctor and classes changed every half hour, with a five-minute intermission.

The monotony of a class in orthopedy was appalling. Student after student went through a certain series of manoeuvres on the back of a prostrate fellow-student resting on two supports standing on the platform, while the instructor counted seven. Each count indicated a certain movement, and the last one the "chiropractic thrust." Large Junior and Senior treatment classes were almost wholly unsupervised. In one of the Senior classes a few patients rolled onto the floor after the thrust had been given, and one of these very evidently felt injured. Since the patient lies face downward with the abdomen unsupported, this is not surprising.

From what I had seen in print and heard myself from the mouth of "B. J." in public lectures, I had fully expected to see a far more prosperous and better equipped institution, or "plant" rather. A tuition fee of \$500 for an eighteen months' course, running consecutively, and without laboratories, should offer more if there really were something worth while to impart.

Students can enter at any time, and besides the relatively high fee, pay excessive prices for their

texts. The Palmer Chiropractic Anatomy, which is an abridged, garbled, compilation sells for \$10. It is an octavo volume of only 569 pages bound in cloth in the fourth edition, and contains many anatomical facts such as already mentioned. The quality of the paper and illustrations is good, but it should sell for about \$4. The same criticism applies to other books sold to students, especially those on the "philosophy of chiropractic," written by "B. J." himself.

One cannot refrain from quoting briefly from these volumes on philosophy, although no quotation can convey an approximate idea of their absurdity. In the introductory chapter on power it is stated that "if it takes 100 per cent of intelligence acting through 100 per cent of matter in that innate brain to appreciate beauty of the nude, you can imagine how an educated mind would look upon the same object if there was only 50 per cent of intelligence acting through 100 per cent of matter."

On page 213, in the chapter on Diseases of the Senses, it is stated that "the human race would be worse off if it were not for the number odd daily adjustments that innate adaptation unknowingly (to the educated mind) gives to us. There are very few but what get one or more adjustments every night during sleep. I refer to the acute mild subluxations. When they become chronic, that shows the inability of the internal appliforuns to handle them, and also shows that they were so excessive that they were beyond her individual help to move them comparative to the medium she has with which to work against them. The result is that while this individual is lying perfectly relaxed, there will be an attempt by innate to adjust these subluxations with these adaptive recoils, and if the subluxations is not great he will get well. While asleep there will be an internal adjunct concussion of forces going which will adjust that vertebra. These are not accidents; they are *intentional* upon the part of an adapted intelligence."

One of the ludicrous, if not reprehensible things, is the "coccygeal clinic" extended through three quarters. In the Anatomy we are told that the "segments of the coccyx have a spinal canal" and that "the nerves after passing through the inferior part of the sacrum spread out and surround the coccyx." . . . Hence, "the coccyx, like other vertebrae, may require chiropractic adjustment." It would be easy to continue these comments, but there seems little reason for further emphasis.

I cannot close this sketch without reminding my colleagues in medicine that just as long as some of them continue to refer patients to chiropractors and, in a measure, to osteopaths, instead of treating them themselves, they share responsibility for these things. The chiropractors, too, will soon begin to incorporate portions of the medical curriculum just as the osteopaths have done in the recent past and gradually extend their activities over the whole field of medical practice, retaining their sectarian designations only for their advertising value. Surely, as the Supreme Court of the United States has held, to practice chiropractic and osteopathy is to practice medicine, and it is difficult to see why more energetic steps have not been taken in the various states

to see that this vital fact is incorporated in legislation. Until that can be accomplished, let us hope that medical practitioners will increasingly realize that when they refer cases of neuralgia, neuritis, sacro-iliac diseases or neurasthenia, etc., to chiropractors and osteopaths, they are educating the public to regard these sectarians as their betters and consultants. For this folly scientific medicine and the public are paying and will pay dearly, before the public learns that all who make a profession of treating human ills should have the same minimum qualifications.

Routine Urine Examinations in University—At the University of California, a compulsory physical examination is required of all students on matriculation, according to Robert T. Legge, Berkeley, Calif. (Journal A. M. A.) The record of this examination is utilized on every occasion on which hospital or dispensary care is required, as it contains the full personal and family history and the complete physical findings. During the fall semester of 1924, 1224 men students, averaging in age from 18 to 20 years, were given complete chemical and microscopic urine examinations, and 4.2 per cent were found to have abnormal urine findings. In several of the samples submitted, two or more abnormalities were found. Of the fifty-one students whose urine specimens were regarded as abnormal, the following conditions were present: Albumin (faint trace), 34; albumin (decided trace), 6; sugar reduction, 3; mucus, 21; pus cells, 17; red cells, 4; granular casts, 4, and hyaline casts, 6. All these student cases were followed up, and it is of interest to observe the actual end-results and diagnosis. The specimens with faint traces of albumin determined in this group, in the majority of instances, were found to be physiologic, either as a result of a preliminary shower, or the escape of prostatic secretion during the excitement of the examination and the straining in the act of micturition. These cleared up on subsequent examinations. Of the six with decided traces, with or without casts, two were nephritic and one had a history of previous eruptive fevers. In three cases with red and white cells in the urine, two proved to be tuberculosis of the kidney and one a case of nephrolithiasis. The diagnosis was confirmed by cystoscopic and roentgen ray examination and animal inoculation. The patients that needed surgical treatment were referred for operation, and the remainder were treated medically. The point made is that, with the exception of one case, none of these students realized that they possessed any kidney or bladder lesions.

History of Medical Journals—"In an article written by Leartus Connor, M.D., and printed in the Journal of the American Medical Association, June 14, 1884, it is stated that the first medical journal published was issued at Paris, France, in 1679. It was edited by Nicholas de Blegny, 'who seems to have been "a good bit of a charlatan."' The first medical journal printed in the United States was in the nature of a translation of the Journal de Medicine Militaire issued in Paris from 1782-88. This appeared in New York about 1700. The first strictly American medical journal, according to Connor, was the Medical Repository, a quarterly, edited by S. L. Mitchell, Edward Miller, and E. H. Smith, and published in New York, 1797-1824. The Philadelphia Medical Museum, the second American journal, came into existence in 1804, and retired from the field after a career of seven years. This was edited by Dr. —. —. Coxe. Baltimore was the home of the third medical journal of the United States, the Baltimore Medical and Physical Recorder, 1808-09. Dr. Tobias Watkins was its editor. Medical journalism in Boston began with the New England Journal of Medicine and Surgery, 1812-27. This was a quarterly, and in 1828 was consolidated with the Boston Medical Intelligencer. This combination established the Boston Medical and Surgical Journal, which is still in existence and is now published by the Massachusetts Medical Society under the editorship of Dr. W. P. Bowers."—A. M. A. Bulletin.

EDITORIALS

MEDICAL HISTORY OF CALIFORNIA AND ELSEWHERE

The story of the beginnings, growth and development of medicine in the Golden State has never been told. This number of CALIFORNIA AND WESTERN MEDICINE is largely devoted to that subject. No attempt has been made to mold the articles into a fixed pattern, but rather to let them reflect the minds of students versed in various phases of the stimulating problem. There also are articles upon other phases of the history of medicine. We are pleased with the result, and we hope our readers will approve.

Unfortunately, several promised manuscripts came in too late to be used, and one of exceptional value had to be omitted because of its unusual length.

The complete story of the history of Western Medicine ought to be told, and the House of Delegates of the California Medical Association would render medicine and humanity a service by appointing and financing a wisely selected committee to push the work through to completion and publication.

Several of the illustrations used in this number have not before been published. Others have been lent to us by various friends and publishers. The Long Island Medical Journal and the Arlington Chemical Company, one of our advertisers, have co-operated with us most helpfully in supplying cuts of several copies of old masterpieces upon medical subjects.

We regret that biographical sketches of more of our own Western physician pioneers could not be secured.

EDITORIAL ACKNOWLEDGMENT

I wish to take this occasion to express my appreciation of the efforts of Doctor Hans Barkan, who has acted as co-editor with me in the production of this number of CALIFORNIA AND WESTERN MEDICINE.

Both Doctor Barkan and the editor wish to acknowledge the very splendid spirit of co-operation which the contributors to this number and many other physicians have shown in its production.

It would be of material assistance to the editor if readers would write notes of the reactions the number produces on them, with particular reference to whether or not in their opinion it would be considered advisable to repeat the Historical number at irregular intervals when sufficient material is available.—EDITOR.

THE PASSING OF A BELOVED PHYSICIAN

The cause of better health loses one of its most useful and valuable exponents and leaders in the passing of Walter Thomas Williamson, who died recently at his home in Portland, Oregon. All physicians everywhere lose a valued counselor, and thousands of those of Western America a loved friend. The public in general have lost a health leader of greater value to them than they will ever understand or appreciate.

DOUBTFUL METHODS OF PROMOTING PHARMACEUTICALS

Physicians always have been, and the general public is getting to be, "from Missouri" when it comes to the question of promoting new pharmaceutical and other "scientific discoveries" primarily through the public press, and particularly when there is a university's quasi endorsement behind the propaganda.

The new pharmaceutical, hexylresorcinol, may be all that the news story-writers claim for it—and it may not. Whatever is known about the drug is still in the experimental stage. To this all scientific writers whose opinion carry any great weight agree.

Detail men are pestering doctors in their offices by quite aggressive and intensive salesmanship propaganda in favor of this drug. The big talking point in this salesmanship is, that it came from Johns Hopkins University and presumably has the endorsement of that university. This we have been unable to confirm by correspondence between alumni of Johns Hopkins and the professors and heads of departments of that institution.

There is no more certain nor prompt method of destroying a worthless preparation, nor of permanently crippling the value of a good preparation, than by the "high-powered" salesmanship methods and newspaper propaganda being put forth in the interest of hexylresorcinol. Physicians everywhere resent the insult to their intelligence that they must submit to nowadays in the forceful talks so persistently presented by "detail men," some representing otherwise legitimate concerns, and others with similar methods representing those that are at best of questionable standing.

THEY KEEP THE HOME FIRES BURNING

The "home fires" are kept burning for every editor by authors on the one hand, and his editorial council on the other. Some authors, and particularly those of quite limited experience, often *resent* having their manuscripts declined; some not only resent such action, but salve their own hurt feelings by personal abuse of the editor—firewood for the home fires. On the other hand, members of the editorial council who act as confidential advisers to an editor occasionally, and quite properly, feel that he should be more discriminating than he sometimes is in what he accepts for publication. Many of these problems are interestingly analyzed in the recent autobiographies and trials and tribulations of editors by such experienced men as Stead, Mitchell, and Tooker.

Of importance in our own more restricted field are the following abstracts from letters from authors of declined manuscripts on one hand, and the confidential opinions of editorial councilors on the other hand.

One Author—"I was very angry when you declined my article on '——.' Upon reading it again after a lapse of some months, I believe you are right,

and that it would not be creditable as a part of my permanent record, nor to our Journal."

Another Author—"When I received my article back all marked up with corrections and suggestions, I was 'mad' and considered you presumptuous. After further study and a clean copy, I realize and appreciate the value of the work of the editors."

Another Author—"I am relieved that you have the impertinence to decline my article. I only sent it to help out, and will now send it to a journal with national circulation. You will not be bothered with more of my papers."

(Note—The article in question had already been declined by journals "with national circulation" before it was offered to CALIFORNIA AND WESTERN MEDICINE.)

Another Author—"Thank you for the splendid editorial work on my article on—"

Comment by members of the Editorial Council, which explains why some of these essays were declined:

One Manuscript—"I feel that this paper should not be published under any conditions. The few constructive points could be put in a brief report, omitting criticism of other authors and practitioners. We have too much destructive criticism."

Another Manuscript—"This paper has nothing to recommend it, and it would be very harmful if published."

Another Manuscript—"It is a privilege and a pleasure to co-operate with you in your splendid efforts to edit a high-grade medical journal. I feel that this manuscript contributes nothing new in its presentation and contains no attempt to compare the data with other reports in the literature. In short it is merely a case report without any effort to fix any significance to the clinical and post-mortem findings. Some value, of course, attaches to the publication of interesting case records; now and again some writer later on will collect such reports scattered in different journals and think out a story worth reading; but I doubt the advisability of publishing this manuscript in the type of journal you are editing. Your readers would not derive much stimulation from it. I am, of course, not casting any reflection on the accuracy of the reports as rendered, but the naked facts without appraisal and discussion afford but little interest to the average physician."

Another Manuscript—"I cannot see that this paper presents any material that is new or that has not been presented in far better style to our readers in the past. *It should not be published.* I do not know what your attitude is toward writers who send in papers partly typewritten and partly written by hand, full of corrections, and full of errors that need correction. Personally, I feel that if a man wants a paper published, he should send it in in such shape as he would present an essay competing for a prize, i. e., in as perfect typographical shape as he can command. In 1924 we spent over \$600 for authors' corrections. I would let the authors foot the bill."

Thus an editor is kept warm between two fires.

AMBROSE PARÉ

It was only yesterday on time's eternal calendar that physicians were arguing about whether the infection following gunshot wounds of war was caused by poison from the lead bullets or by the burned gunpowder. These wounds were treated by pouring boiling oil into them.

Then God gave to the world another great pioneer thinker and leader; one of the great surgeons of all times—Ambrose Pare. He demonstrated the startling fact when only 26 years that it was not necessary to pour boiling oil in wounds. Pare himself relates his accidental observation that men whose gunshot wounds had to be dressed with "a digestive made of the yolke of an egg, oyle of roses and turpentine" suffered less than the others dressed before the boiling oil ran out. Pare's kindliness was shown in the anxiety these patients caused him. "I could not sleep all that night, for I was troubled in minde, and the dressing of the precedent day (which I judged unfit) troubled my thoughts; and I feared that the next day I should finde them dead, or at the point of death by the poyson of the wound, whom I had not dressed with the scalding oyle. Therefore I rose early in the morning, I visited my patients, and beyond expectation, I found such as I had dressed with the digestive onely, free from vehemencie of paine, to have had good rest, and that their wounds were not inflamed, nor tymified; but on the contrary the others that were burnt with the scalding oyle were feaverish, tormented with much paine, and the parts about their wounds were swolne." Pare's shrewdness is shown by his immediate drawing the conclusion that "difficulty of curing proceeds not from the venenate quality of the wounds, nor the combustion made by the gunpowder, but the foulness of the patients bodies, and the unreasonableness of the aire."

Pare lived 900 years ago, and his memory is still green in the hearts of all lovers of the medical sciences.



Ambroise Paré

Medicine in the Public Press

A Sample of What One Newspaper Is Telling Its Readers Through an Alleged Health Column—"Why, then, is surgery so generally recommended for cancer? There are two reasons. First, it is in line with the immemorial custom of medical practice to suppress and remove symptoms, instead of going after causes, and, secondly, cancer surgery is perhaps the most lucrative branch of the profession since appendectomy declined somewhat in popularity."

Our Father in Heaven forgive them for they know not what they do.

"It's Easy to Keep Fit," says Walter Camp (Collier's) in a recent article under this title. But before the advice could be published, the author had joined those of the great beyond."

Making a fetish of exercise is no more conducive to longevity than is plowing corn or hoeing potatoes.

Which Is Equivalent to Saying What?—Doctor Alexis Carrel is quoted as saying that "the development of a new psychology is our only hope of improving the quality of human beings."

"Health First"—In a column under this heading, we read in the San Francisco Daily News that "It is an authentic fact, which no medical denial or camouflaging can wipe out, that in the 'flu' epidemic of 1918-19, every drugless healing cult in the business proved itself more efficient in caring for their patients—and with a lower mortality rate—than the regular medical school."

Itinerant Psychologists in Action—Another of these recently completed a series of "free" lectures in San Francisco. According to a newspaper this "erudite healer" made quite a hit with two large charts which "prove conclusively that two people with protruding chins shouldn't marry. When they kiss, their chins will strike, and then look out for the fireworks! Two people with long noses shouldn't mate—their beaks will get all messed up with each other."

How Big Medicine Works—In the recently published letters of Franklin K. Lane, that distinguished Californian telling of his experiences at a large clinic says:

"I am being ground and wound and twisted and fed into and out of the Mayo mill, and a great mill it is. Of course, they are giving me a private view, so to speak. Distinguished consideration is a modest word for the way in which I am treated—not because of my worth, but because of my friends. Those men are greater as organizers, I believe, than as workmen, which is saying much indeed, for they are the surgeons supreme. . . . Two or three hundred people, new people, a day pass through (their shop). Sixty to seventy thousand a year received, examined, diagnosed, treated perhaps, operated on (50 per cent) and cared for. The machinery for this is colossal and superbly arranged.

"Dr. Mayo told me to come over at 2 o'clock and register. . . . I stood in line and was duly registered, telling name and other such facts, non-medical. Then a special guide took me to Dr. Mayo, who had already heard my story at the hotel but who wished it in writing. Accordingly, I was presented to a group of the staff and one man assigned as my escort. I answered him a thousand questions, touching my physical life for fifty-six years. Then to the tonsil man, who saw a different 'focus,' now and there, a focus in the tonsils! Nose and ears without focus or focii or focuses. Down an elevator, through a labyrinth of halls, down an inclined plane, up a flight of steps, two turns to the left, and then a group of the grumpiest girls I ever saw or heard or felt. They were good looking, too, but they didn't care to win favor

with mere males. They had a higher purpose, no doubt. They openly sneered at my doctor escort. They lifted their eyebrows at my good-looking young son, and they told me precisely where to sit down. I was not spoken to further. My ear was punched and blood was taken in tubes and on slides by young ladies who did not care how much of my blood they spilled or extracted. They were so businesslike, so mechanical, so dehumanized, these young ladies with microscopes! One said cryptically '57,' another said '53.' I was full of curiosity, but I did not ask a question. They tapped me as if I were a spring—a fountain filled with blood—and gave me neither information, gaiety nor entertainment in exchange. Each one I am convinced has by this life of near-crime, which she pursues for a living, become capable of actual murder.

"There are 150 physicians and surgeons in the clinic, and Heaven knows how many hundred employees. No hospitals are owned and run by the Mayos; all these are private, outside affairs. The side tracks are filled with private cars of the wealthy. Scores of residences, large, small, fine and shabby, are little hospitals.

"I am tomorrow to be medically examined further, to the revealing of my terrible past, my perturbed present, and pacific future. The result of which necromancy I shall duly report. I am afraid that they will not find that an operation will do good; if so I shall truly despair. And if they decide for the knife, I shall go to the guillotine like the gayest Marquis of the ancient regime. Yes, I should do better, for I have my chance, and he, poor chap, had none."

Old Maids and Evolution—Haeckel, who followed and extended Darwin's conclusions about evolution and heredity, believed that it was not necessary to be a parent to become an influence in this field. He recognized "indirect adaption," which he jokingly illustrated by this story:

"The superiority of Englishmen is due to their being fed on excellent beef; but the beef results from the cattle being grazed on rich clover pastures. Clover is fertilized by wild bees, but wild bees are decimated by field mice which are being kept in check by cats. Cats are usually kept by old maids and, therefore, this habit of unmarried females is the original cause of British pre-eminence."

More "Health Education"—A San Francisco newspaper through its "Health First" column says: "The public school child, in particular, is looked upon as fair game for medical exploitation; and through the officious activities of 'medical inspectors' and 'visiting nurses' this most helpless and dependent class of society—the new-born hope of races—are vaccinated, Schick-tested, serumized and 'immunized'; poisoned, crippled, syphilized, and mutilated, in the name of 'science'!"

A Compliment to the Stimulating Effects of California Climate—A "noted medical authority" who told the newspapers that he came West to confer with Governor Richardson about establishing a "psychopathic ward in San Quentin" also gave some glad tidings to the doctors of the wild and woolly West when he exonerated pie, plum pudding, and Welsh rarebit from responsibility for bad dreams. He says that it's all a matter of the "subconscious mind."

Surgeons Classed With Highwaymen—The "health column" of a San Francisco newspaper says of surgeons: "The highwayman of the Jesse James type demands: 'Your money or your life.' The modern surgeon takes both. For even where death does not immediately ensue, the mutilated victim is condemned to a living death of misery oftentimes."

Are Garterless Socks a Health Menace?—One of our good doctors is quoted in the press as saying that: "Flopping socks leaves the delicate ankles exposed to the inclemencies of the weather. This brings on not only

colds, but a general loss of vitality and weakening of the collegians' robust constitutions."

The statement doesn't sound like what the doctor would have said, but in any event it furnished "copy."

"The New Hokum"—"When I was quite a small boy," says Wallace Irwin (Collier's), "I used to think that the Greek word Psyche was pronounced 'fish,' and, although I soon learned my grievous error, in my years of experience I am beginning to believe that children are sometimes intuitively right. In these later years they have twisted Psyche into psycho—psycho-this, psycho-that—until the saner of us enjoy a keen sense of fishiness even while we incline our ears to fish stories clothed in more or less scientific nomenclature . . . Inhibitions, Complexes or Repressed Personalities. If you get these three catch-words in your head, you can go far in psychoanalysis. Inhibitions, Complexes, Repressed Personalities—you have practically the whole conjuring kit.

". . . Between amateur child culture and home-brewed psychoanalysis, I often wonder what the next generation is going to be like.

". . . Psychoanalysis, of course, is getting a little stale in America, where it hit rather late. Like cubism and mah-jongg, it is bound to be replaced by some newer, sillier caprice. Already the cubists are being regarded as quaint fogies, and the cross-word puzzlist—himself doomed to extinction—jeers at Grandpa and his Chinese tiles."

Some Things That Are Called Medical Education—A doctor revives an old controversy by saying that:

"The blonde is more irresponsible, nervous and flighty; she doesn't sit down and take life seriously, she is usually frail, and liable to get into trouble much more easily than a brunette." He adds in even more general terms that the "darker type of person is calmer, more settled, and uses better judgment in most cases than the fair-haired species."

Suppose this is a fact—which it isn't—what of it?

More Health Education!—"A learned doctor" is quoted as saying that: "Smoking alters women's faces, making their features sharper and their skin taut. The corners of the lips become prematurely wrinkled and there is a tendency for the lower lip to project past the upper. The eye of the female smoker also undergoes a change. The lids move more slowly and some of them even become cross-eyed."

These claims are not new as propaganda by the anti-tobacco crowd, but they rarely are able to induce "a learned doctor" to endorse their claims.

Not So Simple—The question of drug sickness is neither so insignificant nor limited among our citizens as the San Francisco Bulletin (editorially) makes it out to be. In condemning the drug addict hospital bill now before the legislature, the editorial in question says:

"Money is to be taken from those that have earned it, and spent on those that, instead of earning anything, have devoted their time to making wreckage of their lives. Prudence and frugality and thrift are to be penalized for the benefit of fools."

If the benefits of medical science were to be withheld from all whose troubles are due to ignorance or folly, the state could still further reduce its expenses by many millions. The statement in the editorial that:

"There are some drug addicts that have become addicts through the misfortune of disease and pain, but they are very few, and usually get over it when the occasion passes, or cure themselves by an exertion of the will. They need no legislation."

Such statements reflect an ignorance of narcotic disease that is surprising.

"When Doctors Disagree"—Under this heading the San Francisco Daily News says editorially:

"The century-old conundrum which has puzzled the

lay world since the dawn of medicine, now confronts the newly impaneled jury in the Dorothy Ellingson case that is to decide the question of the girl's sanity.

"Two eminent alienists, psychiatrists, psycho-analysts—and whatever other expert terms may add to the weight of their authority—called in to pass judgment on the 16-year old matricide's mental condition, are in absolute disagreement about it.

"Dr. Jau Don Ball, employed by the defense, after probing into Dorothy's psychic anatomy and watching her during a tantrum, announces to the court that the prisoner is suffering from 'psychosis' and stakes his professional reputation on the die.

"On the other hand, Dr. Joseph Catton, chief of the prosecution's staff of alienists, stands by his original judgment that the girl is normal in every way.

"And now the jurors will have the double task of deciding not only the sanity of the jazz girl, but of the doctors!"

Is It a Man's Gifts or His Training?—"One of the dangers of an advancing civilization going forward through the mechanism of an education process is that it opens the door to so many various activities as to endanger the social homogeneity of that civilization. Human beings are not equal and never can be, either individually or racially. The notion that they are so or may be so is no more than a dream of humanitarian sentimentalists.

In the fashion of the world of trade it dispenses the capabilities of the richly endowed and so changes the poverty of the common man into what seems like affluence. The pioneers who made America and turned its original ugliness into beauty have been followed by a host of lesser folk eager to eat at our table. In popular education a like thing happens.

If we cannot attend to the mediocrities and at the same time do the best for the best, we should let the mediocrities go. Education at the higher levels is for leadership, for initiative, for inventive achievement. Even in a democracy not all can lead. . . . It is time to stand at the door of the college and the university and thin the mob on its way to the seats of honor. This very thing is now being done in America."—Lewis Worthington Smith (Dearborn Independent).

What About These Law Violators?—Californians are daily being treated to an interesting line of disregard for law by so-called "herbalogists."

These unlicensed "doctors" not only carry extensive advertisements in the public press, but give their office hours and make such claims as these:

"Come and have us give you a scientific diagnosis that will tell you absolutely the true condition of your whole system."

"No matter what your affliction is, come and be made well again by the herbs God put in the ground for the very purpose of healing mankind: we guarantee to relieve all ailments."

"We have restored sufferers to health who had been given up. They came to us as a last resort and were made well by the wonderful Chinese herbs."

"We have herbs which will give you permanent results for gall-stones, asthma, goiter, stomach and liver trouble, weak kidneys, rheumatism, constipation, heart trouble, diabetes, high blood pressure and general tonic to build up your run-down condition."

"Our wonderful Chinese herbs offer relief for the stomach, kidneys, nerves, skin and rheumatism and indigestion, hemorrhoids."

If this isn't flagrant disregard for law, what is it? Why are these law violators not punished?

For most men torment themselves with watchings, journeyings, and running up and down for no advantage and with no good design, but only that they may do others an injury, or because they envy them or are competitors with them, or because they hunt after unprofitable and empty glory. To such as these I think Democritus chiefly spoke, when he said, that if the body should summon the soul before a court on an action for ill-treatment, the soul would lose the case. And perhaps, on the other hand, Theophrastus spoke well when he said, metaphorically, that the soul pays a dear house-rent to its landlord, the body.—Plutarch's Rules of Health.

WAHRHEIT UND DICHUNG ANENT

THE SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT

By WALLACE A. BRIGGS, M. D., *Sacramento*

The Sacramento Society for Medical Improvement, organized March 17, 1868, has the undisputed distinction of being the oldest, in continuous existence, of all the medical societies of California. Of its twenty charter members, eight or ten were physicians of exceptional ability, attainments, and service. In the order of their registration, these were:

Thomas M. Logan, who first began systematic meteorological observations in the state and was, I believe, the first secretary of the California State Board of Health.

F. W. Hatch, a scholarly gentleman of Virginian lineage and education; frequent contributor to the medical journals of the time and, for many years efficient secretary of the State Board of Health.

G. L. Simmons, prime mover in the organization of this society, to which he gave its present name, of which he was the most devoted member and, until his fatal illness, its most faithful attendant; the best of our early surgeons; author of numerous papers on medical and surgical subjects; founder and, for many years, chief supporter of the first hospital of Sacramento, the lineal predecessor of the present Sisters' Hospital; one-time president of the State Society.

G. G. Tyrrell, redoubtable democrat; author of many medical papers; secretary of the State Board of Health; permanent secretary of the State Society and later, I believe, its president.

W. R. Cluness, genial family physician; master of obstetrics, who, in the room next the wailing patient, could calmly sleep, wisely avoiding "meddlesome midwifery" by letting nature take its course until the physiologic—not always with the patient, however, the "psychologic"—moment had arrived; one of the founders of the Pacific Mutual Life Insurance Company and long its medical director, laboring for many years to collect life insurance statistics which were consumed at last in the San Francisco catastrophe which the local citizens of that city by the sea call a fire, and recalcitrant insurance companies denominated an earthquake—the tragedy of his life; generous friend of young and struggling confreres and popular president of the State Society.

Edward R. Taylor, scholar, poet, and that noblest work of God, who, later, became mayor of our wayward metropolis.

H. W. Harkness, scientist of no mean pretensions, nipped a little in the bud by the untimely frost of wealth.

W. T. Wyte, botanist and microscopist, and later Professor of Materia Medica, I think, in Cooper Medical College; and last but, in picturesque personality, not least, a year or two later, H. W. Nelson, audacious surgeon, bon viveur, who, at the society's banquets, drained his cups not always "wisely, but too well" and trailed his serpentine mustachios over his ears and down his back to prevent their unseemly swimming in the soup—a galaxy of stars of various magnitude, brilliance and idiosyncrasy, unequaled by any other county or municipal medical society of its numbers, within my knowledge—now all, including the Nelsonian asteroid, returned to dust—star-dust.

The baptismal paper of the society, entitled "What Connection Exists Between Erysipelas, Diphtheria and Scarlet Fever," espoused the thesis of their consanguinity and suggested that, if the patient survived the initial shock of either disease, the ultimate diagnosis might depend on the prevailing epidemic influence. Dr. Fin de Siecle, forego thy condescending smile: what may the better part of a century do to thy fine-spun theories of gossamer. And haven't we just discovered the near affinity of erysipelas and scarlet fever more than fifty years behind Dr. Frey? But, like other prophets, Dr. Frey was without honor in his own country. His ingenious theory was vigorously assailed and the doctor himself soon retired to the obscurity of a suburb of the metropolis.

Two weeks later Dr. Catman read a paper on "The Treatment of Typhoid Fever," in which, as reported, he maintained that the cause of this scourge "could be found

in an intense and protracted action of the nervous system, whereby melancholy and great depression are produced." This seems to us not unlike a whiff from Tutankhamen, but, of the members present, only Drs. Simmons and Tyrrell appear to have held their noses. Two weeks later, again Dr. Cluness read a paper on "The Use and Abuse of Alcohol," which, after the lapse of nearly sixty years, is not an anachronism. At the next meeting, Dr. Harkness read a really scientific paper, based on original research and buttressed by actual thinking. Unfortunately, at the close he ventured into the treacherous realm of prophecy and, himself a microscopist, relegated the solution of the etiology of malarial fever to the chemist! The next paper, entitled "Scarifying the Gums and Death Therefrom," was read by Dr. Hatch, who reported four deaths following that simple procedure. It was a fact significant to Dr. Hatch that, in all of these cases, mercury had been used more or less persistently.

In its lusty infancy the society met twice a month, and its feasts, judging by the record, were intellectual rather than gastronomic, and its appetite seems to have been insatiable, for, with a membership of twenty, there was a formal paper at each meeting. There were evidently intellectual gourmards in those days. But the intellectual fecundity of the society seems to be in inverse geometric ratio to its numbers. With five times the membership today, it averages about one-third as many papers—less than 10 per cent of the original output per capita. The question not unnaturally arises, Is contraception at work, or is it a case for Steinach?

Meanwhile, between its precocious infancy of perpetual motion, when every movement was a joy and every new sensation an ecstasy, and its seeming post-climacteric of inhibited if not atrophic thyroid, pituitary and gonads, the Sacramento Society for Medical Improvement has served the profession and the public, on the whole, not unfaithfully, and it has contributed its share at least to that progress which, by a witty Frenchman, has been defined as a sentiment in contra-distinction to evolution which is a fact. Notwithstanding the opposition of a few, it has been in common with the profession at large, a contributing delinquent to the ignominy of our present medical law, whose noxious and unexpected by-products are the multiplication of imbecilities raised to the doubtful dignity of legalized medicine; an inevitable confusion of the public mind regarding scientific medicine which the latest fledgling of the medical law can properly toast as "Once our superior, now our equal"; an increasing socialization of medicine and the substitution of the judgment of majorities or of concubinal minorities, for individual judgment, in matters of chiefly personal concern and the consequent atrophy of that individual judgment now being reflected in majority judgments, that is, in government itself. In these matters vox populi vox diaboli.

Not only did we beget this medical law which, like that monster of fable, has turned upon its creator, but in the dim backward and abysm of time we attempted the fatuity of its enforcement. A horny-handed cyclops, by trade a blacksmith, by profession an "eye doctor," who having one eye, knew, of course, how to save the other, for not only had he saved it, as you could plainly see, but he had saved many another, as was proved by voluminous testimony and the actual presence of the eyes in court. A jury of his peers upheld the good old Anglo-Saxon doctrine of the inalienable right of every man to live or die or to save or to lose an eye at the hand of whatever doctor he likes. And this is Nature's edict—inspired and eternal.

Worth Meditating Over—"What is the element which enables some physicians to hold the confidence of their patients," asks the New York State Journal of Medicine editorially. "Think over the names of your personal friends who are highly successful general practitioners of medicine. What do they do that is different from the methods of their confreres? . . . Frank Billings states that: 'I made a point never to take more than four new patients in any one day in my office. I saw some patients daily who had been to me before, but I wanted plenty of time to go thoroughly over new patients. I had always been struck by the fact that patients who stripped sometimes did it reluctantly and often made a remark that they had never been unclothed for examination before.'"

HISTORY OF THE COUNTY MEDICAL SOCIETIES OF SOUTHERN CALIFORNIA

Compiled by William Wenzlick, M. D., Los Angeles

NOTE—*Doctor Wenzlick has compiled a very complete history of the medical profession of Southern California, from which these notes are abstracted. It is hoped that the complete history will be published later.*

LOS ANGELES COUNTY

1871, January 25—There were six physicians present in the office of Dr. H. S. Orme. A constitution and by-laws were drawn up January 31 at the office of Doctors Griffin and Widney. Seven charter members signed the constitution on February 7, 1871, and thereby created the Medical Association. There were: John S. Griffin, Henry S. Orme, Joseph P. Whitney, William F. Edgar, R. T. Hayes, L. L. Dorr, and F. H. Rose. Officers for the first year were: John S. Griffin, president; L. L. Dorr, secretary. There were no officers from 1872 to 1876.

1876, April 4—The society endorsed the bill for the Regulation of Medicine, which became a law April 3, 1876, and was amended April 1, 1878. February 1—A communication to the City Council was drawn up showing the unsanitary condition of the city and urging the establishment of a board of health and appointment of a health officer. At the request of the Council, the society on June 1 elected Dr. J. H. McKee for the position. June 4, there was a general discussion on the peculiarities of malarial fever as manifested in this locality, and upon the anti-malarial virtues of the eucalyptus tree.

1877, February 6—A motion was carried to report irregular practitioners to the district attorney. A committee on ethics was appointed, and the newspapers were requested not to publish any names of the profession in connection with accidents, surgical operations, or private professional matter.

1878, July 3—The society was incorporated under the name of "Los Angeles County Medical Association."

1884, August 1—Arrangements were begun for the organization of the Southern California Medical Society.

1888, August 2—A special meeting was held to suppress quackery.

1896—A more intimate affiliation between the State Medical Society and its county units was proposed and carried.

1910—The Los Angeles County Society had a membership of over 400 this year. The bulletin of the society has become an historical record of the society's transactions and, incidentally, also of the general medical progress in Southern California.

1912—This society is the largest county unit in California, with 568 members versus 557 of San Francisco County. This shows that medical societies, as well as other activities in this indivisible Golden State, help in the general progress of California.

1918—The secretary-treasurer, George H. Kress, M. D., incumbent since 1910, completed his seventeenth year of service, and announced that his work would end with this year. During his term the society had grown step by step from a modest and simple beginning to an organization which included all the many professional activities systematized in perfect order for the effective progress of medical science. The Medical Officers' Reserve Corps of the Army and Navy; the Medical Corps of the National Guards, 18,000 strong, of whom 8500 applied for commissions, and the League for the Conservation of Public Health, were fostered by Doctor Kress.

1919—The society presented a set of resolutions and gave a token of esteem in the shape of a watch to the retiring secretary, Doctor Kress. Doctor Harlan Shoemaker succeeded him. He worthily follows with like ideals for the good of the order.

1921—The fiftieth anniversary of the Los Angeles County Medical Association was celebrated at the Ambassador Hotel, in honor of the founders of the society.

1925—The directory of 1924 of the Board of Medical Examiners shows that Los Angeles County has a total of 2935 licentiates, of which 2730 are physicians and surgeons. And on October 16, 1924, the membership of the Los Angeles County Medical Association was 1429. The

growth of the society, from seven members in 1871 to this number, has been conspicuous in an ever-increasing ratio. Its members individually and collectively are doing their professional and their civic duty in a conscientious and efficient manner *pro bono publico*.

ORANGE COUNTY

In June, 1889, Los Angeles County was divided at Coyote Creek, the smaller southeast segment becoming Orange County. Immediately thereafter, June 13, the Orange County Medical Association was organized through the efforts of C. D. Ball and J. A. Crane. The charter members were W. B. Wall, J. A. Crane, J. M. Lacy, C. D. Ball, J. P. Boyd, J. L. Dryer, S. B. Davis, J. R. Medlock, L. H. Fuller, J. H. Bullard, W. B. Wood. The next meeting was held June 25, at which time a constitution and by-laws were adopted, and under the permanent organization the following officers were elected and installed to serve until the first annual meeting in 1890: President, W. B. Wall; vice-president, J. M. Lacy; treasurer, W. B. Wood; secretary, J. P. Boyd. Board of Censors: C. D. Ball, J. R. Medlock, J. H. Bullard. The first paper was read by C. D. Ball at the meeting of July 2, who reported some interesting cases of pulmonary disease. From 1890 to 1925 the society has steadily progressed in membership. A new generation has replaced the organizers. Only two of the pioneers remain. The new members are carrying on and are now meeting the conditions as they arise.

IMPERIAL COUNTY

Not many years ago a barren desert where men died from lack of water, will soon become a paradise more populous and prosperous than ever were the irrigated valleys of the Nile. The Boulder Dam will never fail to furnish the Colorado River water without stint and make the alluvial soil produce abundantly the food we need.

These are Imperial County's pioneer days. Things are in the making. Medical history there, it is true, has only just begun, but the founders have organized a county society, and we miss its story of stern facts which the officers have not yet compiled for us.

RIVERSIDE COUNTY

The Riverside County Medical Society was founded May 13, 1893, the charter members being C. J. Gill, J. C. Baird, M. Maybee, D. B. Rutherford, E. S. Goodhue, F. M. Gardner, L. W. Gardner, G. G. Kyle, W. B. Sawyer, A. A. Sulzer, Frank H. Moss, F. B. Morrell, C. W. Craver, R. D. Barker, T. E. Ellis, W. B. Payton, W. F. Perry, C. S. Dickson, J. L. Shibley, C. E. Lawrence. There have been no other medical organizations in this county. Some of the most important progress in our county has been the formation and development of the County Society, which has stood for the better things medically, and at the present time there is a splendid esprit de corps.

SAN BERNARDINO COUNTY

According to the "Medical Profession of Southern California," Dr. George H. Kress, editor, this society was organized June 7, 1902, at a meeting of the regular physicians of San Bernardino County, which met in San Bernardino and organized by electing J. P. Booth of Needles, president; Hoell Tyler, vice-president, J. M. Hurley, second vice-president, C. O. Mackechnie, secretary-treasurer.

The society was organized with a membership of sixteen, and meetings were held in San Bernardino monthly.

SAN DIEGO COUNTY

The San Diego County Medical Society was first founded July 26, 1870. Its founders were H. B. Hoffman, president; Jacob Allen, vice-president; T. C. Stockton, secretary-treasurer; and Robert Gregg.

In July, 1886, the society was reorganized, but no meetings were held. December 1, 1886, the present society was organized, with Dr. McSwegan as president, C. C. Valle, vice-president, and D. B. Northrup as secretary.

SAN LUIS OBISPO COUNTY

Dr. Kress, in his Medical History, 1910, says:

"The San Luis Obispo Medical Association was founded September 29, 1892. It was first known in 1892 as the

'S. L. O. and Northern Santa Barbara County Medical Association.'

"The names of the founders were as follows: W. W. Hays, president; G. B. Nichols, vice-president. S. M. Hitt, secretary; J. N. Conley, treasurer; H. C. Murphy, H. C. Bagley, C. C. Gleaves, J. H. Gass."

SANTA BARBARA COUNTY

The Santa Barbara County Medical Society was founded July 4, 1894. The founders were Doctors Anderson, Bates, Hall, MacKinley, Parks, Stoddard, Sidebotham, and Shaw. Doctor Shaw was the first president. The society has had the usual history of such organizations in small cities, until at the present time it numbers about fifty-six members in good standing.

The hospital history begins in 1891, before which time there was no regular building; a band of devoted women procured or erected a building to be known as the Cottage Hospital, with Richard J. Hall as its first surgeon.

VENTURA COUNTY

Dr. F. E. Blaisdell, Jr., president of the society writes:

"In May, 1886, there were four licensed physicians in Ventura County: Drs. C. L. Bard, A. J. Comstock, R. W. Hill, and O. V. Sessions. From these pioneer physicians, the sparse population of a large territory received a willing and skilful service. In the early days, down to about thirty years ago, the horse and saddle was the most practical, quickest, and safest means of travel for the doctor.

"Following the building of the Southern Pacific Railroad in 1886 and 1887, the population rapidly increased, and more physicians came.

"On March 25, 1890, the first County Medical Society was organized, all the physicians of the county participating. The charter members were Drs. Cephas L. Bard, A. J. Comstock, R. W. Hill, J. P. Hinckley, A. L. Kelsey, Joshua Marks, D. W. Mott, C. F. Miller, M. F. Patten, B. L. Saeger, O. V. Sessions. The first officers were: Dr. C. L. Bard, president; Dr. D. W. Scott, vice-president; Dr. A. J. Comstock, secretary. These physicians met monthly to exchange views and experiences upon the most advanced phases of medical practice.

"Those who have passed to their reward, Drs. C. L. Bard, A. J. Comstock, M. F. Patten, John Love, F. H. Huning, are remembered by the living in tenderest appreciation for their skill and devotion.

"From the coming of the first white settlers down to the present time, it is conceded by the profession and the laity that, for length of service, hard work done under pioneer difficulties, and for the impress of gratitude and affection left upon the hearts of the county's entire population, the life work of the late Cephas L. Bard stands highest in the medical history of Ventura County.

"In 1917 the membership of the Medical Society consisted of twenty-five members, consisting of the addition of Drs. J. C. Strong, G. S. Herbert, Allen Peek, A. A. Maulhardt, C. A. Jensen, T. E. Cunnane, G. H. Stockwell, Peter Cavanagh, Philo Hull, Benjamin E. Merrill, W. R. Livingston, Ralph W. Avery, Benjamin F. Korts, Charles Teubner, W. J. Lewis, R. W. Homer, John Crawford, Will R. Manning, Grace H. Sharp, Harold B. Osborne, Phillip S. Van Patten, J. T. Gardner. The society prospered and was very active until the World War interrupted.

"Since 1917, the society has had a hard struggle. The older members lost interest or found that their health prevented their attendance at the meetings. The society was kept alive only by persistent efforts of the younger and more recent members. However, during the past couple of years the comparatively few active men of the society have made the monthly meetings regular and well worth while, so that once again the society, small it is true, is again coming to the front and is a real live organization. Speakers from Los Angeles, Santa Barbara, or more distant points are always willing to come and talk before the society, and thereby increase our knowledge and keep us in intimate touch with the advances of the medical and surgical profession.

"There are at present sixteen active members, as listed in the directory of 1924. This is the smaller half of the thirteen active physicians of the county."

HISTORY OF THE ALAMEDA COUNTY MEDICAL ASSOCIATION

By PAULINE S. NUSBAUMER, *Secretary*

The following may be of *Historical* interest: Minutes of the Alameda County Medical Society, August, 1860.

San Leandro, Alameda County, August 18, 1860.

At a meeting of physicians of Alameda County held at the Court House, San Leandro, August 18, at 2 o'clock p. m., there were present Drs. Haile, H. Gibbons, Green, Randall, Coleman, Newcomb, and Worthington.

On motion of Dr. Gibbons, Dr. Haile of Alameda was chosen temporary chairman and Dr. Worthington of Oakland temporary secretary of the meeting.

Dr. Newcomb then moved "that we now proceed to organize a county medical society," which motion was carried. Dr. Newcomb moved that a committee of three be appointed by the Chair who shall draft a Constitution and By-Laws for the government and regulation of this society, and report same at next meeting. Carried. Whereupon the Chair appointed Drs. Newcomb, Gibbons and Worthington as said committee. After some discussion in regard to credentials and qualifications for membership, Gibbons moved "that when we adjourn, we do so to meet at this place for the purpose of permanent organization and examination of credentials for membership. Carried. Gibbons then moved that when we adjourn, we do so to meet at this place on Saturday next (25) at 2 p. m. Carried. Randall moved that secretary be requested to inform other physicians of the county, *not now* present, of the next meeting. Carried.

The chairman then declared this meeting adjourned.

(Signed) R. WORTHINGTON,
Secretary pro tem.



HISTORY OF THE MONTEREY COUNTY MEDICAL SOCIETY

By T. C. EDWARDS

Forty years ago there were but nine physicians in Monterey County outside of Monterey City. One of these kept a drug store and did not engage in the practice of his profession. Another was the "county doctor" and did little outside work. Of the others, two were located in Salinas, one in Gonzales, and one in Soledad, while there was none between Soledad and the San Luis Obispo County line. At this time there is no record so far as known of more than four or five practicing physicians at Monterey. Twenty years later there were nine in Salinas, seven in Monterey, thirteen in Pacific Grove, one at Gonzales, and two each at Soledad and King City, one in San Lucas, and one in Bradley, making thirty-six in all.

Some twenty-five years ago the physicians of Santa Cruz, San Benito, and Monterey Counties, organized what was called the Tri-County Medical Society. "Our own" Saxton Pope and his "Better Half" or Dr. Emma, as we familiarly called her, were shining lights in this society. The meetings were held alternately in the different counties, and were well attended, good papers were read, and an active interest was maintained. About this time, Dr. McCormick came out from Kentucky, under the auspices of the American Medical Association, and preached the novel doctrine of good fellowship, harmony, and co-operation among the members of the medical profession. To his efforts, coupled with the very able and active help of Dr. Jones, we may attribute much of the present strength and activity of the California Medical Association.

Following quickly on the heels of this campaign for common sense and common courtesy, Philip Mills Jones used his good offices, to the end that a county society was organized here and the following were the first officers, viz.: President, John Parker, M. D., Salinas; vice-president, E. K. Abbott, M. D., Monterey; secretary, N. E. Richardson, M. D., Salinas; treasurer, Doris Brumwell, M. D., King City. Censors: Drs. E. J. Rankin, Gonzales; H. B. Christensen, Salinas; and A. M. Ritchie, King City. Alternate: Dr. T. C. Edwards, Salinas; second alternate: N. E. Richardson, M. D., Salinas. Now there are thirty-six physicians in the county and twenty-two members of the County Medical Society.

The meetings of the Monterey County Medical Society are well attended, considering the distance over which

the twenty-two members are scattered, and the long drives required to attend. We have recently listened to some very interesting and helpful papers from our colleagues in San Francisco who have been kind enough to give us their time. At our last meeting in April, W. M. Gratiot of Monterey presented a most interesting and enlightening paper on "Cancer," which was discussed by the other members of the society.



HISTORY OF THE SHASTA COUNTY MEDICAL SOCIETY

By C. A. MUELLER, *Secretary*

The Shasta County Medical Society was organized by a representative of the State Medical Society, on September 20, 1903. A committee on organization was appointed to select a constitution and by-laws in conformity with the constitution and by-laws of the medical society of the state of California.

The original membership of Shasta County Medical Society was: O. J. Lawry, president; J. M. Read, vice-president; R. F. Wallace, secretary. C. W. Harper, treasurer; B. E. Stevenson, C. W. Bryant, L. J. Tabler, trustees; A. B. Gilliland, J. M. Read, C. W. Bryant, executive committee. Other members: E. H. Pitts, M. D. Pratt, D. B. Fields, J. E. Taylor, J. H. Foothill, Thomas J. Edgecomb, T. H. Shanks.

COUNTY NEWS

CHANGES IN MEMBERSHIP

New Members—Alameda County—Omer R. Etter, E. Geoffrey Smith, Charles C. Boericke, Oakland.

Contra Costa County—Rosa A. Powell, Richmond.

Fresno County—Oliver P. Pisor, Monmouth.

Imperial County—Philip Hodgkin, El Centro; Alfred L. Heck, William T. Talbott, Brawley; Ralph M. Smith, Calexico.

Los Angeles County—Henry S. Keyes, William Noble Carter, Walter Christensen, A. E. Hoffman, George S. Kalichman, William P. Kroger, William C. Lucas, W. F. McCool, John P. Mortensen, Newton M. Otis, Emmet A. Pearson, David R. Robbins, Emmason A. Rose, William Benbow Thompson, John G. Turley, Calvin B. Witter, William A. Key, Los Angeles; William Cole, Suttan H. Groff, Charles S. Means, Long Beach; William Edler, Pasadena; Archibald C. Weaver, Santa Monica.

Mendocino County—R. O. Le Baron, Talmage; Royal Scudder, Fort Bragg.

Orange County—John D. Ball, J. Muncey Bulpitt, Z. N. Bulpitt, Franklin H. Gobar, M. L. Pindell, Santa Ana; G. I. Sellon, Fullerton.

Riverside County—Leslie J. Clark, Hemet.

Sacramento County—Herbert S. Burden, Richard Gray Soutar, Sacramento.

San Benito County—Lloyd E. Smith, Hollister.

San Bernardino County—Gordon I. Reynolds, Carl Williams, Ethel H. Williams, Loma Linda.

San Diego County—C. E. Strite, La Mesa; Donald K. Woods, Frederick L. Schwartz, San Diego.

San Francisco County—Norman N. Epstein, D. G. Macpherson, San Francisco.

San Joaquin County—James F. Doughty, John A. Smither, G. L. La Berge, Tracy; C. A. Broaddus, Fred Foard, Stockton.

San Luis Obispo County—Paul K. Jackson.

Santa Clara County—Dudley Fagerstrom, San Jose; Louis Mendelssohn, Saratoga.

Santa Cruz County—Harold J. Beaver, Santa Cruz.

Siskiyou County—Joseph D. Mahan, Fort Jones.

Sonoma County—H. K. Wilson, Healdsburg; John L. Spear, Lyde H. Bernard, P. S. Quarry, Santa Rosa; G. W. Burgess, Guerneville.

Yolo County—E. Eric Larson, Walter J. Spencer, Woodland.

Transferred Members—Richard G. Scribner, from Yuba-Sutter County to Sacramento County; Frank H. Paterson, from Santa Clara County to Orange County; John C. Hethcock, from Orange County to Santa Cruz County; Emil Windmueller, from Los Angeles County to Sacramento County; Emil L. Cottrell, from Humboldt County to Santa Clara County.

Resigned—Susan J. Fenton, Oakland; Joseph Fife,

Victor Randolph, San Francisco; Charles E. Winfermute, San Jose.

Deaths—Keith, Ivan Whitfield. Died at Beaumont, April 4, 1925, age 36. Graduate of Hahnemann Medical College of the Pacific, 1911. Licensed in California the same year. Doctor Keith was a member of the Riverside County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Miller, Byron Young. Died at San Francisco, March 30, 1925, age 48. Graduate of the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1914. Licensed in California the same year. Doctor Miller was a member of the San Luis Obispo County Medical Society, the California Medical Association, and the American Medical Association.

ALAMEDA COUNTY

The regular monthly meeting of the Alameda County Medical Association was called to order at the Ethel Moore Memorial building, Monday evening, March 16, by the president, H. B. Mehrmann. The program was arranged by H. Gordon MacLean and presented by the Providence Hospital staff. Two case reports were given—one by Hobart Rogers and A. H. Rowe, and one by C. A. DePuy.

The first paper, "Intestinal Drainage," was read by W. B. Palamountain. The discussion was opened by J. L. Lohse. In his paper, Palamountain stated that the predominant causes of death in intestinal obstruction are toxemia and exhaustion, and toxemia is the chief. Peristalsis is essential, and without it no bowel drainage can occur. Treatment must be directed to relief of the toxemia and removal of the obstruction. In advanced cases relief from obstruction is not sufficient; drainage of the bowel is essential. Releasing the obstruction is but a method of draining and very often insufficient. Washing out a paralyzed, toxic bowel, is the quickest and most certain method of treatment of toxemia, and is highly efficient. A properly placed vent tube is a most valuable preventive of distention.

The discussion of the paper on "Headache," by H. Gordon MacLean, was opened by W. H. Strietmann. Headache occurred as the chief complaint in 12.3 per cent of 2500 individuals examined. Migraine occurred in 44.3 per cent of the 307 individuals with headache examined. He further said that there are two underlying factors in migraine: (1) An inherited nervous instability; (2) an hepatic insufficiency with inability of the body to handle carbohydrates and fats, with resulting carbohydrate intolerance and the absorption of toxic fatty acids. He finds that treatment consists of: (1) Making the nervous instability less by rest, change of position, change of environment, and general health measures; (2) making the diet low in carbohydrates and free from fat, and giving bile salts to aid fat digestion.

P. L. Ansell gave a paper on "The Value of the X-ray in Diseases of the Digestive System, With Special References to the Negative Report." The discussion of this paper was opened by S. A. Jelte. The writer of the paper emphasized the careful study of those patients in which the indirect signs are the only roentgen evidence, and the use of anti-spasmodics, with a view of more definitely placing such cases either in the positive or negative column. He also stated that where the gall-bladder is suspected, a negative roentgen report on the digestive tract is most important and that localized tenderness in the lower right quadrant is exceedingly valuable in favor of chronic appendicitis, even when not restricted to McBurney's point.

The fourth paper, "Indications for Arthrodesis of the Sacro-Iliac Joints," was presented by O. P. Stowe. N. A. Cary opened the discussion on this paper. The writer mentioned the three types of chronic low back pain due to disturbance of the sacro-iliac joint, which present indications for operation. Type No. 1—Persistent pain following a shearing force applied to the lower lumbar vertebrae and sacro-iliac joints, through trauma or severe muscular effort. Type No. 2—Persistent low back pain following disturbance of the pelvic girdle, as fractures of the pelvic bones. Type No. 3—Persistent low back pain following operations under full surgical anesthesia. He said all of these cases have been treated for an extensive period by braces, plaster of paris casts, manipulation (with or without anesthesia), diathermy, baking, mas-

sage, without relief of pain, and that after operation (using a modification of the Smith-Peterson Sprengel's procedure) all cases had disappearance of pain and their full earning capacity was restored.

Others participating in the discussion of these papers were Roderick O'Connor, A. A. Alexander, R. J. Nutting, J. F. Carlson, and W. H. Sargent.

After the transaction of the routine business the meeting adjourned to the refreshment hall.

The annual banquet of the Samuel Merritt Hospital staff was held at the Hotel Oakland, Monday evening, March 30. One hundred and fifty guests enjoyed the occasion. The decorations came up to the Merritt staff standard and consisted of pink blossoms, most artistically arranged. The music was of a high order, two violin numbers being rendered by J. H. Todd Jr., son of the beloved senior member of the staff, James Hamilton Todd. The speaker of the evening was Allen H. Babcock, the son of Dr. H. P. Babcock, who was secretary of the association in 1871, serving later as treasurer, and in 1877 as president. This fact, when announced in his introduction by the president of the staff, C. L. McVey, recalled memories to some of days far away and long ago. Mr. Babcock spoke on "Mexico." Dr. J. Wilson Shields came from across the bay to help round out the evening, and Mr. Ezra Decoto, too, added his bit to the evening's enjoyment. It was an occasion long to be remembered.

Doctor Changes His Name—Doctor Boles Albert Rosenthal has had his name changed in the Superior Court of Oakland to Albert Boles. Hereafter, in all official and other documents, Doctor Boles will be recognized under his new name.



CONTRA COSTA COUNTY

Contra Costa Medical Society (reported by L. St. John Hely, secretary)—The regular monthly meeting of the Contra Costa County Medical Society was held at the beautiful home of Dr. John Beard at Martinez Saturday evening at 8 p. m., March 28.

Ralph H. Kuhns of San Francisco talked on the breast-feeding of infants. A lively discussion was carried on by the members. Resolutions of sympathy were passed by the members, and a committee of two was appointed by the Chair to draft resolutions and forward to the family of Dr. F. S. Cook of Brentwood, who died in Los Angeles, February 28, 1925. E. Merrithew and G. W. Sweetser were appointed as the committee. The next meeting will be held with one of the members at Pittsburgh, April 25. The subject will be selected later by the member with whom the meeting will be held. The Martinez physicians report a group of new arrivals from Butte, Montana, afflicted with simple goiter.

The following members and visitors were present: J. Edward Clark, John Beard, H. L. Carpenter, Frances Franklin, E. B. Fitzpatrick, L. St. John Hely, Denninger Keser, E. Merrithew, Rosa A. Powell, G. W. Sweetser, William A. Rowell, Elizabeth Redmond, R. N.; Lena Gardella, R. N.; Mrs. F. L. Risen.



FRESNO COUNTY

Fresno County Medical Society (reported by T. Floyd Bell, secretary)—Dr. Clifford D. Sweet of Oakland, formerly of Fresno, was the speaker at the luncheon of the Fresno County Medical Society, March 21, at the Hotel Fresno. There were thirty-two members and two visitors present, besides Dr. Sweet. Members—Aller, Anderson, Bell, Goldberg, James, Jorgensen, Lamkin, G. L. Long, Manson, Mathewson, Montgomery, Mitchell, Morgan, Madden, Pettis, Pomeroy, Schottstaedt, Sciaroni, Sheldon, Thompson, Tillman, Tobin, Tupper, Vanderbilt, and Willson.

Dr. Sweet spoke on "Diphtheria." Many said his talk was the best they had ever heard on the subject. He spoke of the high death rate from diphtheria, in spite of modern means of prophylaxis and treatment. Of course, part of this is due to the presence of carriers who do not suffer from the disease themselves, but spread it to susceptible persons. In regard to the diagnosis, he emphasized the importance of edema of the throat preceding the necrosis. He also stressed the point of giving antitoxin early in those cases in which the diagnosis is in doubt. The early diagnosis and the giving of antitoxin early is most important, before the toxin is fixed in the

tissues. He gave some experimental data in support of this, in addition to clinical data. Routine nose and throat cultures should be taken from every case of sore throat. However, the clinical findings should determine whether or not antitoxin should be given, and not the laboratory report.

In toxin-antitoxin we have a means of conferring active immunity. Every child under 6 years of age should be immunized with this mixture. Children over 6 should have the Schick test first. Six months after being immunized, all children should have the Schick test, to be sure of the immunity. This is now a harmless procedure and one of proven efficiency. The doctor should spread propaganda among his patients and the community about the value of this important procedure. He should be a teacher as well as a physician and not let epidemiologists take the lead in this. Sheldon, Cowan, and Ellsworth discussed the paper.

The regular meeting of the board of governors of the Fresno County Medical Society was held in President Anderson's office April 6. Those present were Cross, Couey, Miller, Tillman, Anderson, and Bell.

Mr. Speed B. Leas of the Aetna Insurance Company spoke to the board in regard to the group indemnity insurance. He explained that, under the new type of policy now issued, the insured is not protected in the use of x-ray and radium for therapeutic purposes. Even if he simply prescribed it or is a consultant, he is not protected. However, he may obtain this protection by the payment of an additional fee of \$162.75 per year, making the total yearly premium \$187.70. The secretary was instructed to notify the members of the status of policies held under the Aetna Insurance Company.

In regard to the closing of physicians' offices Saturday afternoons during the summer, Miller moved, Tillman seconded, recommending the closing of offices Saturday afternoons. Carried.

President Anderson reported that the San Joaquin Light and Power Corporation had discontinued medical care to their employes and the families of employes, except industrial accident cases of the employes. The employes now have a sick fund from which medical care will be taken, the patients having the doctor of their choice. The report was accepted.

The committee, in regard to the nurses of the Sun-Maid Welfare League practicing medicine without licenses, reported that they had taken the matter up with the governing board of this organization.

The secretary was instructed to get in touch with Dr. T. M. Hayden, an honorary member, and ask him to compile a history of our society.

Dr. Tillman moved, Dr. Couey seconded, that the new Constitution and By-Laws, as presented by the special committee, be recommended to the society for adoption. Carried.

Miller moved, Bell seconded, that the president appoint a committee to ascertain the methods of admission to hospital and clinic, and fees at the General Hospital of Fresno County and report. Carried.

The regular meeting of the Fresno County Medical Society was held April 7 at dinner at the Hotel Fresno. There were forty-six members and ten visitors present. Members—Drs. Aller, Anderson, Bell, Binkley, Burks, Couey, Cross, Crawshaw, Dixon, Diederich, Dahlgren, Dau, Foster, Goldberg, Garrett, Hare, James, Jorgensen, Kjaerbye, G. L. Long, S. M. Long, Mathewson, Miller, Mitchell, Morgan, Milholland, Madden, Peterson, Pettis, Pomeroy, Ransom, Rosson, Schottstaedt, Sheldon, Thompson, Tillman, Tobin, Traber, Trowbridge, Vanderburgh, Wahrhaftig, G. W. Walker, Weddle, Wheeler, Wiese, and Willson. Visitors—Drs. Terry, Seligman, Walters, De Lappe, Betts, Zumwalt, Newbecker, Yocum, and two others.

Dr. Cross, as chairman of the committee on revision of Constitution and By-Laws, presented a revised compilation of them. Dr. Couey moved, Dr. Trowbridge seconded, that the reading of them be postponed till next meeting. Carried.

The application of C. G. Newbecker of Lemoore for transfer of his membership from the San Bernardino County Medical Society was received, and on motion duly carried. The secretary was instructed to cast a ballot for his election to membership in our society.

The application for membership of J. M. Frawley of

Fresno was received and ordered placed in the proper channels for action.

Fred R. De Lappe of Modesto, the councilor from this district, was the guest of the society and spoke a few minutes on the activities of the state association.

Wallace I. Terry, Professor of Surgery at the University of California Medical School, was the speaker of the evening. He took for his subject, "Surgery of the Thyroid Gland." The classification of goiters he divided as follows: Adolescent or simple hypertrophy, colloid, hyperplastic or exophthalmic, thyroiditis, adenomatous toxic and non-toxic. Chronic thyroiditis goes hand in hand with exophthalmic goiter. The non-toxic adenomas become toxic in 95 to 98 per cent of cases if enough time is allowed to lapse. Malignancy has been present in Dr. Terry's cases in about 3 per cent, and is usually associated with adenomas.

The distribution of endemic goiter is practically confined to the area of the earth's surface which was covered by ice during the glacial period. The iodides were probably washed out of the soil in these areas. The types of goiter found in these regions are usually the adenoma and colloid. The exophthalmic type may be found anywhere. Goiter is several times more common in females than males.

Dr. Terry took up the diagnosis of the different types of goiter and pointed out the main characteristics of each. In most cases the diagnosis is not very difficult.

Iodine is a very useful agent as a preventive in certain goiters, but its use therapeutically is very limited. It helps and, at times, cures the adolescent type. It also helps some colloids. Adenomas are usually made worse by iodine. The iodine in the ash of burned sponges was used many centuries ago in the treatment of goiter. Plummer of Rochester first used Lugol's solution pre-operatively in exophthalmic goiter, and by this procedure has probably contributed more to the surgery of the thyroid than any other man in the last century. Lugol's solution is given seven to ten days before operation, and also for a short time post-operatively in small doses.

In the treatment he outlined the pre-operative care of the mouth, as well as other means to minimize infection. He uses nitrous oxide—oxygen as the anesthetic of choice in all his goiter work. He also spoke of some of the technical details of the operation itself. His patients leave the hospital four days after entry and three days after operation.

There were numerous questions asked by those present.

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HUMBOLDT COUNTY

Humboldt County Medical Society (reported by Lawrence A. Wing, secretary)—The general meeting of the Humboldt County Medical Society was held on January 28. A 6 o'clock dinner at the Eureka Gymnasium preceded our business meeting. The following officers were elected: President, John A. Lane; vice-president, Charles Caskey; treasurer, Mabel Geddes; secretary, Lawrence A. Wing.

On February 19 a regular meeting was held at the Union Labor Hospital. An excellent paper by B. M. Marshall on "Diseases of the Stomach" was enjoyed by a large percentage of our membership. The discussion following was opened by C. O. Falk and John N. Chain. An excellent lunch was served by the nurses of the hospital.

The March meeting was held on the 20th at the Tubercular School. A very interesting exposition of the Tubercular School was given by John N. Chain, M. D. We were taken throughout the school and the new contagious department, and shown how fresh air and heat are conveyed to the different wards. An interesting talk on the care and treatment of each patient followed. A very excellent lunch was served by the nurses of the school.

Our next meeting will be held at the Sequoia Hospital, April 28. Paper by O. R. Myers on "Discussion of Fractures."

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MERCED COUNTY

Merced County Medical Society (reported by Brett Davis, secretary)—The following members were present at the regular meeting of the Merced County Medical

Society on April 2: Parker, Davis, Lilley, Zirker, Mudd, Yacom, McDaniel, Kylberg, and Catton.

Curtis E. Smith of San Francisco presented the program for the evening, a talk on "Safe Handling of Mouth, Breast, and Uterine Cancer," thus making cancer week for us one of instruction for the medical men. A very general interesting and instructive discussion followed the talk.

In March, J. C. Robertson of Modesto gave a talk on his experiences on his recent trip to London and Paris hospitals. Dr. Robertson stated that the European methods of preparation and sterilization for operations are not so carefully done as in the United States.

Dr. Fred R. DeLappe of Modesto also told us what the State Medical Society and Council have been doing for us.

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RIVERSIDE COUNTY

Riverside County Medical Society (reported by Thomas C. Card, secretary)—The regular meeting of the Riverside County Medical Society was held on April 13 in the Riverside Community Hospital. The program presented was by Ernst F. Mueller, M. D., Hamburg University, Germany, on the "Importance of Skin Functions in Medicine," and W. W. Roblee, M. D., Riverside, on "What Do We Know About Blood Pressure?"

Dr. Mueller holds the chair of Privatdozent Internal Medicine, Hamburg University, and has been for the past year and a half on leave of absence from the university for research work in this country. For the past year he has been carrying on his research work with Dr. Fordyce of Columbia University and with Dr. Peterson of Chicago. Mueller illustrated his talk with graphic charts and told of experimental work done on humans, demonstrating the fact that the skin holds a hitherto unknown important function in its control over the function of other organs.

In the second paper, Roblee brought out the known facts in the etiology and treatment of hypertension. This review was of very practical worth.

One of our members, Dr. Ivan W. Keith of Beaumont, died on April 4, after a few days' illness of influenza pneumonia.

The members of the County Medical Society are co-operating with the Riverside County Clinic in the examination of the pre-school age children. This examination will be conducted May 4 to 12.

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SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by Bert Thomas, secretary)—The regular March meeting of the Sacramento Society for Medical Improvement took on its usual festive color, March 17 being the date set for the annual banquet. Skipper Charles B. Jones and his able committee decided on a real innovation this year. The surging waters of the Sacramento River having subsided, they decided upon a nautical banquet. The steamship Enema had all of her holiday flags drawn from her locker before Admiral Scatena took his post. The weather god was kind and produced such a beautiful evening as is only found on the Sacramento River for the boat ride.

The senior medical officer of the night was recruited from San Francisco, in the person of Dr. Alanson Weeks. He proved successful enough to return a blank form, No. 996 (United States Naval Regulation), which means that the mess served, from the pate de fois gras (a la Loizeaux) down to the demi tasse (a la "Wally" Briggs), caused no casualties.

The only regret of the committee was that one of the very smallest gatherings that ever attended any medical banquet boarded the jolly ship. Only approximately one-quarter of the membership of the society attended.

The Admiral docked his ship in the wee small hours.

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SAN DIEGO COUNTY

San Diego County Notes (reported by Robert Pollock)—About twenty members of the County Medical Society motored over to Riverside on the occasion of the Southern California Medical Association meeting, and enjoyed one of those excellent programs so characteristic of this society. It would be difficult to conceive of a more suitable meeting place for a small scientific gathering

than the Mission Inn at Riverside, with the genial hospitality which Host Miller so capably expresses.

At the recent election the voters of San Diego granted to the United States Government an extra strip of land in Balboa Park, upon which to make an extension to the Naval Hospital. This building is now rapidly approaching the maximum capacity, as originally planned—something around a thousand beds. The Government has left nothing undone to make this one of the best-equipped hospitals in the service.

It is with regret on the part of the local profession that we learn of the resignation and withdrawal of Captain Wieber as medical head of the Naval Hospital. Dr. Wieber has always been extremely courteous to members of the profession outside of the Navy as well as in, and has made hundreds of friends in and about San Diego who will miss his genial countenance and pleasing personality.

The April meeting of the county society will greet Charles F. Kofoed, Ph. D., of the University of California, who will discuss the question of intestinal parasitism, a subject on which he is splendidly qualified to speak as an outstanding authority.

A Visit to a Floating Hospital (by E. B. Nelson, M. D.)—Through the kind invitation of Commander Owen and his medical staff, members of the San Diego County Medical Society had an opportunity to inspect the United States Hospital Ship "Relief," the regular March meeting being held on board Saturday, March 14.

A large motor-boat and several speedy launches were filled with adventurous M. D.'s, who enjoyed a ride of about two miles from the foot of Broadway to the hospital ship, through a wide, watery avenue bounded on each side by brilliantly lighted battleships, cruisers, destroyers, and with busy little speed boats passing in every direction. Listening to that constant put-put-put gives a slight appreciation of the importance of gasoline to the Navy.

On boarding the Relief, it was apparent that a new hospital, completely equipped and operating at full blast, had been acquired by San Diego overnight. This hospital is of all-steel construction, and architecturally the equal of any of its size. It has, however, one defect which every landsman would notice—they forgot to put in a front door, and you enter by the fire-escape.

The surgery, the x-ray department, laboratories, cystoscopic room, eye, ear, nose, and throat departments are all supplied with modern equipment and operated in the most up-to-date manner. The Government has not spared expense in caring for the sick and injured of the Navy. A bed in this hospital is said to cost approximately \$25 a day for each patient. In return for this, the patients get more frequent changes of climate than in other institutions.

In constant competition with the exhausts of passing motor-boats, two interesting papers were read and discussed. Dr. Thompson gave his experience with ethylene as an anesthetic, presented in a practical and convincing manner. The very best character of clinical papers can be prepared by drawing on the experience of our own society members. Dr. Sherrill's paper on the "Acidosis of Nephritis" explained clearly some of the more recent conceptions that frequently confronts every general practitioner.

Refreshments and a social time followed.

Fully a hundred members of the County Medical Society then made a successful exit by the fire-escape, and a happy trip back through the brilliantly lighted waters of the bay. Not one case of seasickness was reported.

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SAN FRANCISCO COUNTY

Doctor Shiels Honored—Colonel (Doctor) George Franklin Shiels of San Francisco has been notified of an award of two citations for bravery in the Spanish-American War. Shiels now holds the Congressional Medal of Honor and the Croix de Guerre with palms, and has been cited for the Distinguished Service Cross.

Meeting of the Section on Urology, San Francisco County Medical Society, March 31, 1925 (reported by Miley B. Wesson, M. D., chairman)—The program was devoted to some of the common diagnostic and therapeutic errors in urology and the overlapping specialties. P. K. Gilman read a paper on "General Surgical Condi-

tions Simulating Lesions of the Right Kidney." He reported a series of six cases, all having been wrongly diagnosed as surgical kidney lesions: (1) A subdiaphragmatic abscess containing 500 cc. pus, probably secondary to an attack of appendicitis two months before; (2) an abscess in the upper pole of the kidney, due to an extension of a liver abscess, pyelogram simulating that of a stone in the kidney; (3) a narrowing of the ureters, following the dilatation of same, a mass over the right kidney and symptoms of appendicitis disappeared; (4) following a severe attack of tonsillitis, symptoms in the upper right quadrant developed; after the drainage of a right empyema they disappeared; (5) an enlarged kidney surrounded by an inflammatory mass proved to be an amebic granuloma of the intestine; (6) a fistula in the right flank persisting from a former operation proved to be, not from a tuberculous kidney, but from an osteomyelitis of the twelfth rib.

Urinary, biliary, and renal colic, as well as gastrointestinal angio-neurotic edema must be carefully differentiated, if unnecessary kidney surgery is to be avoided.

The discussion was opened by Herbert Gunn, who stated that, from the standpoint of tropical medicine, three infections are of interest to the urologist. (1) Liver abscesses cause the most confusion; many a suspected perinephritic abscess proves to be an amebic abscess, even though the stool examinations are negative; on the other hand, the presence of ameba in the bowel must not lead one to make a diagnosis of liver abscess without very careful differentiation; in amebic abscess cases, there is generally a history of fever over a long period. He had one patient who developed an amebic abscess fifty years after an attack of dysentery; the stools showing no ameba during the interim. (2) In bilharziosis, blood and pus occur in the urine. (3) *Filaria* with a low-grade chyluria in the presence of blood has caused many a tentative diagnosis of tuberculosis of the kidney.

R. R. Newell stated that, in the absence of a pyelogram, filling the colon with air helped differentiate the kidney behind from the liver in front.

William E. Stevens reported a case seen in Germany last year, where a diagnosis of a surgical kidney was made on the presence of a mass in the upper right quadrant and blood in the urine; after the operation, the diagnosis was changed to that of retroperitoneal sarcoma.

Stanley Stillman reported a ruptured pyonephrosis from a pin in a retrocecal appendix; he has seen frequently an acute appendicitis diagnosed when there were merely showers of uric acid crystals coming down the ureter; a four months' extra-uterine pregnancy, because of the close relationship with the ureter, caused blood in the urine and a diagnosis of kidney tumor; any suppurative condition overlying any part of the ureter causes pus and blood in the urine; he does not believe in indiscriminate cystoscopies because of the danger of anuria from the passing of the catheter; death has followed such an anuria and where pyelograms have been made, the pyelogram medium was blamed for the death, whereas it was from the passing of the catheter. He had one acute retrocecal appendix where complete anuria followed catheterization of the ureters, and though the patient did not die, he was very sick. He recently saw a case of mechanical obstruction of the bowel from a ureteral calculus; he did not operate, for, although all the symptoms but one warranted a diagnosis of acute intestinal obstruction, there was no peristalsis, and that one symptom indicated no intestinal obstruction. A diagnostic point is the question of radiation of pain; pain in the kidney radiates, whereas that of the retrocecal appendix is merely referred.

James R. Dillon said that many genito-urinary cases seen by the general surgeon or internist have no urinary symptoms, and hence go undiagnosed; the only cases referred are those that have definite symptoms; all cases with blood or pus in the urine, tumor in the upper quadrant, confusing x-ray shadows, or indefinite abdominal pain should be seen by an urologist.

A. B. Spalding read a paper entitled, "Skene's Glands, Bartholin's Glands, and the Cervix as Foci of Infection." A series of thirteen cases was reported in which arthritis was cured or improved by operating upon one of these three foci; glands with free drainage are not of interest from the standpoint of arthritis; the gland that has no drainage encourages the organisms to pass through the

lymphatics to the lymph glands, and from them absorption takes place to the body. The cervix has the best drainage and is the least dangerous, whereas Bartholin's glands have the poorest drainage and are the most dangerous; if the gland suppurates and breaks down, or if it forms an aseptic cyst, it is harmless, but if it forms a septic cyst it is dangerous. Temporizing methods are worthless; the only surgery indicated is radical excision of the entire infected area.

William E. Stevens, in opening the discussion, reported that the examination of 3429 prostitutes showed these glands to be infected in 45.5 per cent of the cases. He advised destruction by fulguration or by cautery.

R. S. Zumwalt called attention to the fact that very commonly the foci first removed are not the ones responsible for the arthritis.

H. A. R. Kreutzmann very seldom finds the gonococcus in Skene's glands in the acute stages; the glands are hard to find because of the atypical position of the ducts; he injects 0.5 cc. of 4 per cent mercurochrome in the region of the ducts, and the resultant induration generally destroys the glands.

T. H. Kelly stated that any break in the mucous membranes of the body serves as a focus; the only dangerous foci are the chronic ones. The internist is always in doubt as to which focus to first consider in looking for the cause of arthritis; it is very easy to remove a large part of the original equipment of the body, and in the end find that only harmless foci have been disturbed and the dangerous ones overlooked. A careful history is of the utmost importance in deciding which is the important focus. If there is drainage there will be no absorption, and yet dentists still dam up discharges by placing gold caps over diseased teeth.

L. W. Ely stated that chronic arthritis is rarely connected with the female genitalia, whereas acute arthritis is not uncommon. Everybody treats a joint; pain is called arthritis or neuritis, and the teeth and tonsils come out, although teeth are never responsible for arthritis; the foci of arthritis are closed ones and are commonly found in the deep urethra—in the prostate and seminal vesicles. A dead tooth lies in a suppurative cavity and keeps open a portal of entry of infection to the body, but is itself never a focus of infection. Aspiration of a joint furnishes only confusing information as to etiology; the organisms may be in the fluid one day and the next day be in the tissues, hence the differences of opinion advanced by various surgeons.

"Report of Cases of Tumor of the Bladder; Radical Resection Compared to Conservative Forms of Treatment," by L. R. Reynolds. Tumors of the bladder treated in Stanford Hospital in recent years were analyzed and tabulated. The prognosis is generally considered hopeless, hence the only question is the best method of handling them. Three methods are considered: (1) Resection of the tumor, (2) a wide resection of the tumor with possible transplantation of the ureters, (3) and use of fulguration and radium needles. Results with radium are unsatisfactory because of the tendency to form rectovesical fistulae. The patients treated by radical wide resection have been made the most comfortable and have the best chance to live.

R. L. Rigdon, in opening the discussion, stated that he believes in being as radical as you can and never temporize; if he uses radium needles, he does it only under direct vision through a suprapubic opening. He has never felt justified in doing a radical resection and using radium at the same time.

Lloyd Bryan, discussing the paper from the standpoint of the use of deep therapy, stated that the deep therapy statistics will always be bad, as the roentgenologist sees only the inoperable cases; it has now been proven that the use of radium alone is worthless, but that combined with x-ray it is very efficacious. He reported some startling statistics from South America; one authority had six hopeless cases well two years after deep therapy; and another with the use of diathermy and x-ray had only two failures in eleven hopeless cases. An analysis of statistics from John Hopkins Hospital shows that 25 per cent of bladder tumors are inoperable, and these are treated by means of radium implantation through suprapubic openings and x-ray. Papillary carcinoma disappear

with radium, but recur; if x-ray is then used they stay cured.

J. R. Dillon believes that granular tumors should be operated upon, and smooth, glistening tumors fulgurated; that tumors which are not destroyed with one fulguration should be immediately operated upon before the scars from fulguration and from radium make it more difficult.

L. C. Jacobs is very partial to the cystogram, in arriving at diagnosis; he uses radium seed through a cystoscope at intervals of three weeks. Inasmuch as most of these cases die shortly, whether they have been treated by radical or conservative surgery, the patients are made much more comfortable during their last days and can continue with their work if palliative measures are used; otherwise, they are converted into bed-ridden patients, and for that reason he hesitates to advocate radical surgery.

L. R. Reynolds was elected chairman, and Dr. M. Silverberg secretary for the coming year.

St. Joseph's Hospital—St. Joseph's Hospital staff, San Francisco, met April 8, A. S. Musante presiding. William Quinn opened on "Observations With Mercurochrome," including cases of generalized infections of various character which showed improvement. He also presented a history of a newborn with rudimentary cecum and colon. Alex Keenan, W. C. Cummins, and Ethan Smith discussed the subject, bringing out the importance of the method of administration of the drug, the apparent help of the latter in a case of subcutaneous induration, probably elephantiasis, and the advantage of the same in treating infections that may be luetic, respectively.

Frank Lowe showed moving pictures of "Treatment of Rachitic Limbs," demonstrating the gaits before and after mechanical braces and the application of the latter, which obviates operation.

J. M. Stowell described "Remedial Partial Gastrectomy," and quoted a case of ulcer of the lesser curvature, upon whom a gastroenterostomy had been done at the same time. G. D. Schoonmaker discussed the paper.

George Wolf spoke on "Ferretting Obscure Malaria." A slightly acid Wright stain was recommended for staining the organisms in the blood. Suppositories of muriate of quinine had been found advantageous in the treatment. Howard Dixon and A. J. Remmel spoke on "Prostatectomy—After Treatment." R. H. Dunn reported on the opportunity for specialists in the clinic.

M. B. Ryer presented a history of "Curative Hysterectomy Fifteen Hours After Rupture," and J. C. Newton was called upon to discuss it.

Mr. Leon Kuttner, one of the generals in the drive for a new fireproof hospital building, enthused those present with his earnest plea for the success of the campaign.

St. Luke's Hospital—The regular monthly meeting of the St. Luke's Hospital Clinical Club was held on Thursday, April 9, at the hospital. Following lunch, Dr. E. I. Leavitt, Chief of Anesthesiology for the hospital, presented a paper on "Rectal Anesthesia." The technique of this procedure was gone into carefully and its advantages and disadvantages noted, the former, in the speaker's opinion, being preponderant. The comparative safety, comfort, lack of surgical shock, and avoidance of heat loss in this form of anesthesia, and its superexcellence in surgery of the head, neck, lung, and thorax, were all emphasized.

Considerable discussion followed, participated in by Drs. Ryfkogel, Kilgore, Gibson, and others. Ryfkogel mentioned the presence of sudden vomiting in several cases of abdominal surgery that he had witnessed. He stated that the amount of rectal anesthetic used in these cases was less than the speaker of the day had outlined. Kilgore thought that unpleasant complications, such as vomiting, etc., arose from the fact that the patient was not given deep anesthesia. He stressed the importance of great care after such operations; that the rectum should be washed out carefully and the patient watched for a long time. All speakers had noted the smoothness of convalescence in such cases.

In closing, Leavitt reiterated the importance of a slight induction anesthetic of nitrous oxide and ether, and a preliminary hypodermic of morphia and scopolamine. Where this is done, there is no ejection of the rectal anesthetic.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by the secretary, Alex C. Soper)—The regular monthly meeting was held at the Cottage Hospital, April 13, President Nuzum in the chair, and thirty-one members, three interns, and the superintendent of the Cottage Hospital, and four other guests present.

The first business was the admission of Horace Hagen and Kent R. Wilson, both of Santa Barbara, to membership. They were unanimously elected.

The principal address of the evening was a talk on "Allergy," by George Piness of Los Angeles, introduced by a discussion of its chemical phases by Gordon Alles, A. M., his associate. Piness dwelt especially upon the clinical side of the work, and cited many cases, and showed lantern slides.

Owing to an unusual press of routine business, a discussion of this interesting topic of Allergy was omitted. But a motion of a vote of thanks was unanimously passed and given standing.

Dr. Eaton, the City Health Physician, spoke on the necessity of city ordinances to give power of quarantine in cases of typhoid carriers and diphtheria carriers, and a motion was duly passed to authorize the president to appoint a committee therefor.

An invitation from the Lompoc Valley Chamber of Commerce to meet with them on Monday, May 4, was unanimously accepted, a vote to make it a special meeting being passed.

Telegrams to State Senator Hollister regarding the Optometry Bill No. 201 were read.

The matter of the High School Annual's soliciting advertisements from members of the society, in the form of insertion of name, specialty, and office address, was dropped as having been ruled upon in a similar case in 1924 as not ethical.

St. Francis Hospital, Santa Barbara, Accredited for the Training of Interns—The Sisters of the St. Francis Hospital have been notified by the Council on Medical Education and Hospitals of the American Medical Association that their hospital has been placed on the approved list, in the following letter:

"The Council very much appreciates the excellent spirit of service which prevails in your hospital, and especially is it gratifying to note the high stand which you have taken with regard to the character and qualifications of the doctors who are permitted to use the hospital. The necessary steps have been taken to place your hospital on the list of hospitals approved for internships, and a notice of this accrediting will be published in an early issue of the Journal of the A. M. A.

"In this connection, it is the desire of the Council, and I am sure it is the sincere wish of Doctor Musgrave and Doctor Magan, that we may all be of assistance to you and may encourage you in striving for better and better things all the time. Kindly call on any of us for any assistance that we may be able to render you."

Good Theories That Don't Work—Everyone may have occasion to consult a physician, but comparatively few can judge of the qualifications of learning and skill which he possesses. Reliance must be placed upon the assurance given by his license, issued by an authority competent to judge in that respect, that he possesses the requisite qualifications. Due consideration, therefore, for the protection of society may well induce the state to exclude from practice those who have not such a license, or who are found upon examination not to be fully qualified.—H. E. Kelly, member of Chicago Bar.

Quantitative Changes in Hepatic Glycogen in Anaphylactic Shock—F. I. O'Neill, W. H. Manwaring, and H. Bing Moy, Stanford University, Calif. (Journal A. M. A.), found that glycogen disappears almost quantitatively from the canine liver during the first fifteen minutes of anaphylactic shock. No conclusion is as yet drawn as to the mechanism of this hepatic glycogen disappearance, nor as to its clinical significance. These observations are in line, however, with the initial hyperglycemia in guinea-pig anaphylaxis, recently reported by Zunz and La Barre.

Utah State Medical Association

SOL G. KAHN, Salt Lake City.....President
 WILLIAM L. RICH, M. D., Salt Lake.....Secretary
 J. U. GIESY, Kearns Building, Salt Lake City,
 Associate Editor for Utah

ARE WE SCIENTIFIC?

It is spring! The trees are budding—crocuses and dandelions star the grass. Fifty years ago our grandmothers were feeding our fathers and mothers-to-be sulphur and molasses, with maybe a little cream of tartar, and making them guzzle sassafras. Two thousand years ago and more the ancients were celebrating the Spring Festivals. The Egyptians were welcoming the northern swing of Ra—the Giver of Life, before that.

Today we have horseless carriages, airplanes, wireless telegraphy, the radio, and what have you? Also we have foodless food and infected teeth. We have "metabolism," insulin, hexylresorcinol, mercurochrome, arsphenamine, crowded tenement districts, caloric feeding, an increasing incidence of cancer, birth control and contra-ceptionists, a high cost of living and an almost equally high cost of death.

Ra—God or Nature—(this isn't a religious discussion) we regard as the source of Life. The ancients worshiped the sun, because they recognized the fact that Light *was* Life. Our grandmothers cleaned house and the physical systems of their children, because they recognized the need. Any consistent observer knows there is a solstice in the vital forces of the body, as well as in the seasons. Fishermen know that as the spring advances and the schools of fish swing north, there is a rise in medicinal efficacy in the oil extracted from the cod.

The law of cause and effect in all things is as immutable as the trademark of a well-known life insurance company. Get away from that fact and you're going to bog down as effectually as a four-year-old vintage tin Lizzie in a ditch.

God, Ra, or Nature, meant mankind to eat. That's why he was given teeth. And before that he was meant to be nourished from his mother's teats. Teeth, like muscles or brain tissue, need exercise to preserve their health. The food has been provided, but "scientifically" how is it being used? A soft job or a soft pabulum will not exercise teeth or brain or muscles. Laugh that off. But before you do so, think it over as applying to diseases of the mouth, with their multifarious systemic results. Furthermore, a devitalized food or a partially devitalized food will not furnish the full measure of nourishment. After all, what is the vitamin of which we speak today but the essential characteristic life element of a given food. How about deficiency diseases from this viewpoint? A lack of fresh vegetables means a lack of soil-born iodine—the spring solstice, unless guarded against, means a shortage in the blood potassium and calcium, after the winter lowered sunlight, which is essential to their binding in the tissues. Lack of potassium means weakened muscle action, lack of lime means digestive effects, as well as possibly diseased teeth. And any of these lacks may mean a lot of other things. Cod liver oil,

as proved today, is of value in rickets, because it is an actino active substance—a substance that has actually absorbed the actino active quality of sunlight and will give it off upon ingestion, as will also the yolk of egg.

These are but points. But if there is a law of cause and effect, then all these things will affect "metabolism"—pretty word. Metabolism, like vitamin, is a mouthful, which means nothing unless we get back to first principles more or less. And the first principle of life is that the best food is live food, not food doctored or treated or pasteurized and sterilized half to death. Go to the calf, physician. Ask any calf if milk isn't the best food. Ask any calf if it prefers it condensed or modified. Personally, we are of the opinion that the best food for infants also is milk. And we don't mean maybe, and we don't mean condensed. We mean the milk from its mother's breast, provided her "metabolism" is such that she can feed her infant; and after that milk from some contented cow, properly prepared and served. And we wonder if all of us who treat human ailments would think of these things, and preach them, whether we wouldn't find that it made a big difference in the general state of health.

Are we scientific? Sure we are. We've found out a lot of things old Doc. Jones with his little black bag and his horse and buggy knew nothing about. And it's right we should be. More honor to those who have and will advance the knowledge of our craft. But in the midst of it all let's not forget that Life is Life, and its laws unchanging, and that "metabolism" means just simply the working out of those laws on a basis of supply and demand, and that an unbalance in that one element, with its resultant effect on the cell functions of the body, is the primal difference between a state of health and disease. Green spectacles won't turn shavings into grass.

Utah News Notes (reported by J. U. Giesy, associate editor for Utah)—One of the outstanding items of interest to the medical men of the state is the opening of the new Diagnostic Laboratory at the State Capitol in connection with and directly under the control of the State Board of Health. This, it is hoped, will put the availability of laboratory diagnosis within the reach of all men who desire to exercise the privileges extended.

Under the present postal arrangements, specimens may be mailed on zone rates as fourth-class matter (parcel post) at regular rates plus the new service charge now in effect. This insures the transportation of the specimens in the regular mail-sacks and prompt delivery, especially if the package be insured to guarantee safety and attention. Outfits for shipment will be furnished to any physician who applies to the Board of Health, and these should be employed in order to insure, not only the correct transmission of the specimens, but to avoid all confusion in their handling, since each outfit is standardized. The board has put out a very comprehensive booklet covering all the salient points of the service it is intended to render, together with a card designed to carry the request for outfits desired. The laboratory itself is a very complete affair.

Doctor T. B. Beatty, secretary, is to be congratulated upon the accomplishment of this service, which is a thing for which he has consistently worked for a considerable time.

As a part of their health educational campaign, President J. Z. Brown of the Salt Lake County Society, has appointed a committee, consisting of W. R. Calderwood,

T. C. Gibson and Claude Shields, to arrange for and supervise the broadcasting of a series of lectures on subjects deemed timely and calculated to prove of interest to the general public. It is hoped that such a series of lectures will not only do much to counteract misinformation, but to bring the laity into closer touch and understanding with physicians, their objects, endeavors, and aims.

Death of E. D. Woodruff—Doctor Edward Day Woodruff died recently of angina pectoris at the age of 74.

Dr. Woodruff was born in Bonus, Boone County, Ill., on September 24, 1850. Early in life he entered the employ of the St. Louis Iron Mountain and Southern Railroad as an axman on a surveying gang. During the reconstruction days that followed the Civil War, he assisted in mapping the road's future lines through Missouri and Arkansas.

Forced by malaria fever and rheumatism, contracted while tramping the swamps of the Middle Western States, to give up the engineering profession, he returned to Chicago to attend a medical school. In 1879 he was graduated, and in 1880 he prefixed Dr. to his name and began practicing in Chicago.

In the summer of 1880, while on a visit to the West, he was summoned to Rock Springs to attend several persons injured in a mine disaster. After filling the immediate needs, he was offered and occupied the position as chief surgeon for the Union Pacific Railroad and Coal Company.

Dr. Woodruff is survived by four children: Mrs. Lesley D. W. Riter and Mrs. Helen M. Hill of Salt Lake, Mrs. Virginia M. Gifford of Burlingame, and E. R. Woodruff of Los Angeles, and two brothers, J. D. Woodruff of Shoshone, Wyo., and R. D. Woodruff of Salt Lake.

Salt Lake County Medical Society (reported by M. M. Critchlow, secretary)—The March meeting of the Salt Lake County Medical Society was held March 23.

President John Z. Brown, fifty-nine members, and three visitors were present.

L. N. Ossman demonstrated a case of dislocation of the right shoulder with an excellent result following treatment, which was outlined.

The scientific program was a symposium on peptic ulcer. "The Medical Diagnosis and Treatment" was discussed in detail by R. T. Jellison. "The X-ray Diagnosis and Differential Diagnosis" was taken up by J. P. Kerby, who illustrated his points with lantern slides. "The Surgical Treatment" was taken up by E. F. Root, who stressed the surgical judgment and individualization of the patient rather than the operative technic, and emphasized the importance of the prevention of cancer. These papers were discussed by H. T. Anderson, Fuller B. Bailey, A. A. Kerr, and George F. Roberts.

E. F. Root reported for Fred Stauffer on the proposed new medical building, stating that insufficient stock had been subscribed for as yet. President Brown announced the committee to supervise public lectures: W. R. Calderwood, chairman; T. C. Gibson and C. L. Shields.

The applications for membership of Drs. Hueter, Wright and Young were read and referred to the board of censors.

The April meeting was held April 13, as the guests of T. B. Beatty, secretary of the Utah State Board of Health. President John Z. Brown, eighty-four members, and five visitors were present.

A paper on "Acute Osteomyelitis" was presented by J. C. Landenberger. The essayist considered the etiology, bacteriology, pathology, clinical course, and differential diagnosis. The anatomy of the bones and x-ray of osteomyelitis were illustrated by lantern slides. Operative treatment was outlined. Discussants were D. K. Allen, T. A. Flood, S. H. Allen, A. L. Brown, S. C. Baldwin, A. J. Hosmer, W. F. Beer, L. N. Ossman, and S. D. Calonge.

"Aspects of Industrial Practice" was the title of an essay by A. Jack Hosmer. He compared the work of the industrial surgeon of today to that in the past, described the cases that industrial surgeons are called upon to treat, and outlined the importance of prevention of disease and injury in industrial practice. Discussants included E. Spencer Wright and F. D. Spencer.

Fred Stauffer, in reporting for the building committee,

said that ninety-five doctors had subscribed for stock, and announced a meeting of the subscribers at the Hotel Utah, April 14.

T. C. Gibson reported verbally for the Committee to Supervise Public Lectures. The secretary announced that he would take orders for the new caducei. A. L. Huether, Wallace H. Wright, and Clark Young were voted upon and unanimously elected to membership, forty-eight members voting.

T. B. Beatty spoke about the new State Health Laboratory, and announced the prescription pharmacy would receive specimens at any time, day or night, for the laboratory.

Refreshments were served by the personnel of the Utah State Board of Health, after which the new laboratory of the State Board of Health was inspected.

Nevada State Medical Association

W. M. EDWARDS, M. D., Mason.....President
CLAUDE E. PIERSALL, M. D., Reno.....
Secretary-Treasurer and Associate Editor for Nevada

Washoe County Medical Society (reported by Henry Albert, secretary)—The society met in regular session in the rooms of the Chamber of Commerce, April 13, 1925, Vice-President G. E. Piersall presiding.

Minutes—The minutes of the previous meeting of March 10, 1925, were read and approved.

Program—Mr. Gilbert of the Bell Telephone Company had a class in emergency work demonstrate two first-aid procedures: (1) a procedure in connection with an automobile accident, and (2) one of resuscitation of a man overcome in a gas-filled room.

Mr. Bernard, representative for the new Physicians and Surgeons' building, which Mr. Harry Sheeline is planning on constructing on Virginia street, described the construction of the contemplated building, and stated that they planned the construction of a room which would be suitable for use for the Washoe County Medical Society.

Dr. T. W. Bath demonstrated the Soresi direct blood transfusion apparatus, and offered its use to members of the society.

C. E. Piersall referred to a new medical automobile emblem which is copyrighted and protected by the American Medical Association and will be sold to members of the association only.

Attendance—Members: Albert, Bath, Brown, Caples, DaCosta, Pickard, Piersall, Servoss, Walker. Also Mr. Gilbert and his class, Mr. Bernard and a class of girls who were interested in the first-aid demonstrations.



Shou-Lao.
God of Longevity.
(Old Chinese Porcelain.)

CORRESPONDENCE

Doctor C. A. Nahl of Sacramento, in calling our attention to the following notes the warning that physicians who may be inclined to become careless will do well to heed:

DR. CRESS WANTS INSANE WARD AT COUNTY HOSPITAL

City Health Officer Declares Present Method Treating Patients Is Old-Fashioned

The need of a psychopathic ward at the Sacramento County Hospital, where insane suspects can be observed under proper conditions instead of being placed in the county jail, as is the present custom.

Dr. Cress declares that the method of handling insanity cases in Sacramento County is far behind those used to treat mental cases in other counties of the state. Conditions in Sacramento, he said, have not improved during the past fifty years.

The health officer discussed the subject in a letter to and at the request of Judge Pullen. It follows in part:

"Under the present conditions an insane man is turned over to the sheriff and the patient is placed in jail until a board is appointed to examine him as to his alleged insanity. This board consists of a superior judge and two physicians.

"After the examination by this board, if the patient is considered insane, he is ordered transferred to a hospital for the insane by the judge. Under this system mistakes are bound to occur, as the time allotted for examination and observation is entirely too brief. If the patient is violent it is practically impossible to take care of him at the jail, and there is no hospital in the city properly equipped to care for him.

Typhoid Not Insanity—"Recently a man, apparently insane, was found wandering about the streets by the police. He was placed in the city jail and after he was there twenty-four hours, it was decided he was insane. He was ordered before a board, and while being transferred to the county jail he collapsed. He was transferred to the county hospital and died within forty-eight hours. Post-mortem examination revealed the man died of typhoid fever.

"According to our modern conception of insanity, an insane man is not a criminal, but a sick individual and should be treated as such and not placed in jail. I would recommend that all insane cases or cases suspected of being insane be confined to a psychopathic institution, where they can be properly observed and their exact mental status determined before final disposition is made of the case.

"I am of the opinion that the county hospital is the proper place for such cases, but I am informed that under the present plans there are no facilities at the institution for the care of these cases. I would recommend that facilities be provided at the county hospital, where at least ten mental cases can be properly taken care of."

In this connection, and of particular concern to California physicians, is the following question of a California physician and the answer supplied by the A. M. A. and published in that journal:

Liability for Certifying to Insanity

To the Editor—A physician, licensed to make insanity examinations, is requested to certify to the insanity of some named person. In support of the request there is submitted an affidavit made by a stranger to the physician, in which he has sworn to the supposed facts of the case and that the person whose insanity is to be certified to is in fact insane. The physician has no personal knowledge of the case. He makes no examination of the supposedly insane person, for we have no facilities here for keeping such patients under observation. If under such circumstances, and relying solely on the affidavit of a stranger, the physician certifies that the person named therein is insane, is he liable in damages if ultimately it be proved that such was not the case?

_____, California.

ANSWER—A physician who certifies to insanity, whether

a licensed examiner in insanity or not, must use due care and ordinary knowledge and skill, and must exercise his best judgment. Furthermore, he must comply strictly with the requirements of law with respect to the procedure leading up to the issue of his certificate and to the form and execution of the certificate itself. A physician who certifies to the insanity of any person on the sole basis of an affidavit made by a third person, whether by a stranger to the physician or not, without personal knowledge on the part of the physician as to the truth of the facts sworn to and without examining the supposedly insane person, can hardly be said to have met the requirements stated above. Even though a community has no place in which persons suspected of being insane can be held under observation, a physician may still examine the suspect under such conditions as are possible. The fact that he cannot make such an examination as he would like to make does not excuse him from making such an examination as he can make, and he should make that examination or else not certify to the mental condition of the patient. Conceivably, a licensed examiner in lunacy might be authorized by statute to certify to insanity on the basis of an affidavit and without an examination of the patient, but an examination of the laws of California has disclosed no statutory authority for such a procedure. It is believed that a physician who certifies to insanity on the basis of an affidavit made by a stranger and without having personally examined the patient would be liable in damages if the certificate proved false.

Medicine Before the Bench

Findings and Comments of the Courts on Acts and Omissions of Doctors

(EDITOR'S NOTE—*The law reports contain many interesting decisions, involving the reputations and fortunes of doctors. In this column in each issue a brief summary of one or more decisions and comments of the several courts of last resort upon the cases will appear. The matter will be selected by our general counsel, Hartley F. Peart, who, with Hubert T. Morrow, attorney for Southern California, will contribute from time to time.*)

In a comparatively recent decision involving the liability of a hospital and its staff physicians for the alleged wrongful death of a patient, it appeared that the deceased had been injured in falling from a ladder, resulting in a fracture of the skull. No operation was performed, and the plaintiff, the surviving wife of the deceased, brought suit claiming that the defendants negligently failed to perform an operation which would have saved her husband's life. A post mortem disclosed a blood clot on the brain about the size of a fist, and at the trial a physician testified that this could have been removed by a simple operation and would have saved the patient's life.

The court in discussing the statute in the state involved, providing for an action for wrongful death through negligence, held that where there is a cause of death already in motion, mere non-action or non-feasance is not the act contemplated by the statute. In other words, a failure to save life is not regarded as a positive act which causes death. In this connection, the court said:

"We fail to see how any 'failure to arrest the effect of said injury' by surgical operation can be said to be the cause of death as these words are used in the statute. To say that the failure of a physician to prevent death is the cause of death, is merely to play with words. The words in the statute mean the direct cause which, without the intervention of any other cause, produces death. We are referred to no decisions holding a defendant answerable in damages in a death case for failure to arrest the natural progress of accidental injuries."

In Support of Evolution—"Oh, what a cute little dolly! Does she say 'Mama, when you squeeze her?'" "Naw. My dolly's a modern dolly. When you squeeze her she says 'Oh Boy.'"

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Every Instrument High Grade

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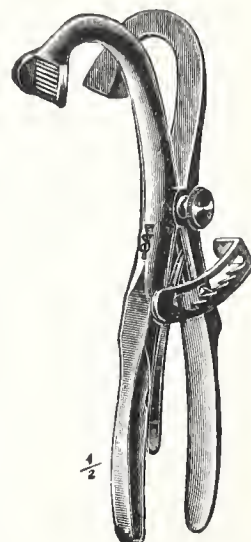
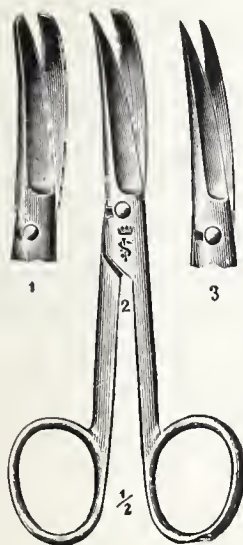
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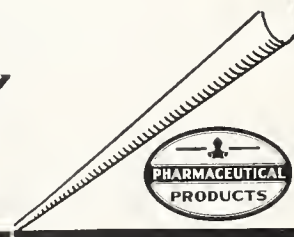
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MEDICAL STRAWS

By THE EDITOR

Experience is fallacious and judgment difficult

Has It?—"It is in the early detection of possible communicable conditions," says the California State Board of Health Weekly Bulletin, "that the value of the *teacher* has often been underestimated."

Every physician deplores his limitations in this difficult phase of diagnosis. We doubt the possibility of "underestimating" the teacher's diagnostic ability.

Why Babies Die—"More than 100,000 of the 250,000 children less than one year old who die every year in the United States die from causes connected with their birth," says the United States Public Health Service. "The need," it adds, "for further study and investigation of these causes is urgent."

MEDICAL science knows no country, no creed, no politics, and in general no personal advantage. The underlying motive is truth, which may be applied to the benefit of mankind. Whatever the offshoots from this development, it must be recognized that the fundamental purpose is honest, dignified, and indispensable.—Henry B. Favill.

PREVENTIVE medical practice—pre-clinical medicine, if you please—applies to all supposedly well individuals. Doctors should be leaders and undergo health examinations personally.—Long Island Medical Journal.

How Can They Give It?—"United States Comptroller General McCarl of Washington has rendered a decision that, in the case of illness of a consular clerk, a certificate by a Christian Science practitioner is sufficient to secure leave of absence."

66 **ACCORDING** to a recent issue of Better Times, the people of the United States spend annually 65 cents per capita on coffins, and 11 cents on health service."

THE man of delicate constitution who has had to watch his health from childhood, and who calls in a doctor every time he sneezes, stands in perhaps the smallest need of annual overhauling. In the ordinary course of events he is likely to receive all the medical scrutiny he requires.—Long Island Medical Journal.

BY ALL means we must educate the patient in the ways of the doctor, but let us not forget the equally important fact that the doctor must also be educated in the ways of the patient.—Medical Pocket Quarterly.

IN THE hands of the charlatan, people in general are nothing but absurd puppets, and their emotions are the strings by which they are worked.—Colorado Medicine.

HE WHO plants an oak tree and he who plants an idea must love the future more than the present, for both are of very slow growth.—Journal Social Hygiene.

MEN'S passions operate variously, and appear in different kinds of actions, according as they are more or less rectified and swayed by reason.—Joseph Addison.

Will California Ever Do This?—"The Cincinnati

Board of Education enforces a vaccination rule as a prerequisite to school enrollment, with the result that last year there was not a single case of smallpox among the school children of the city."

"Drink Deeper"—One may as well not know a thing at all as to know it imperfectly. To know a little of anything gives neither satisfaction nor credit, but often brings disgrace and ridicule.—Earl of Chesterfield.

IT IS extraordinarily difficult to establish the efficacy of a therapeutic agent.—C. A. L. Binger.

66 **THE** modern Moliere, Bernard Shaw," says Riesman (A. M. A. Bulletin) "has sensed our foibles, and has not spared the rod, to the delectation of those who are ignorant of the great advances made by medicine in recent times. However, we need the Moliere and the Shaws as counter-irritants, lest we wax proud and become unmindful of our deficiencies."

'Tis a Pity Some Are Not Sent Younger—Most men go out better than when they come in. Prisons are often said never to have done anyone any good, but that is not generally true. Of course, having been in prison is a social handicap, but most men leave better off mentally and physically than when they came in. Regular food, regular hours, hygienic conditions, and regular work have given them better health—as to morals we cannot say.—Warden Johnson, San Quentin Prison.

Is Poverty Increasing?—During 1922, 7,000,000 people were treated, with a total of 30,000,000 visits in over 4000 "free clinics."—Editorial Boston Medical and Surgical Journal.

This Is Not New—Perhaps You Know the Author?—The strange thing about knowledge is this: Every new discovery but opens up wider regions to be conquered. The less a man knows, the less for him there is to be known. The more a man knows, the more there is for him to know. Wise men no longer measure learning by what they know, but by what their learning shows them they do not know. The Unknown is the only region that is increased, the only region that is not decreased, by discovery.

IF WE step down a little from our pedestal, we shall surely come to a better understanding with our fellow-citizens—David Riesman (A. M. A. Bulletin).

MY FUNCTION as a physician is not discharged when I say to a solicitous client, "There is nothing the matter with you"; unless that opinion is fully accepted. And if my patient continues to believe there is something the matter with him, there is something the matter with him and my function has not been fulfilled until I have made him see, as I see, that he is not in jeopardy.—Henry B. Favill, M. D.

A Country Doctor Praises Specialists—The specialists I have called and who have assisted me have always done their best and have treated me and my people faithfully and ethically, and I trust that this has been your experience. The welfare of the patient is ever paramount, and it certainly is to the best interests of our patients if quickly, cheerfully and confidently we take them to those places and to the men who, better than anyone else, can operate and treat, and where the hopes for recovery are the best.—Austin Flint (Iowa Medical Journal).



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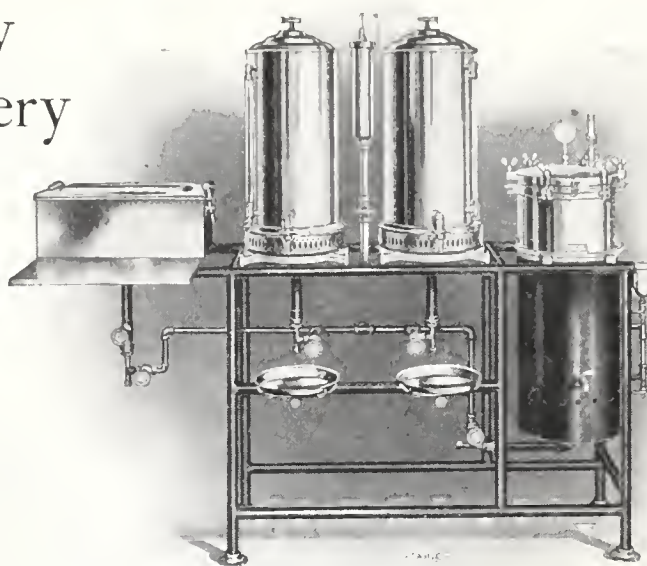
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BOOK REVIEWS

This column is conducted solely in the interests of California and Western Medicine readers. Critical comment, favorable and unfavorable, purely from the standpoint of the interests of the medical reader, will be made about books selected from the larger number acknowledged in the Books Received column. The advertising columns are open to book publishers who wish to make additional statements about their publications.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1924. Cloth. Price, postpaid, \$1. Pp. 82. Chicago: American Medical Association, 1925.

This volume contains the reports of the Council on Pharmacy and Chemistry that have been adopted and authorized for publication during 1924. Some of these reports have appeared in The Journal of the American Medical Association. Others are now published for the first time.

The annual volumes of the "Council Reports" may be looked on as the companion volumes to New and Non-official Remedies. While the latter contains the medicinal preparations that are found acceptable, the reports contain the reasons why certain products were not accepted. Thus the present volume contains reports on the following products which the Council denied admission to New and Nonofficial Remedies: Aolan; Aspatol; Atussin; Pepto-proteasi; Paraganglina Vassale; Fosfoplasmina; Asmoganglina and Endo-Ovarina Tablets; Borosodine; Carsinol; Colodine and Colobromidine; Ferrasin; Glyeuthymenol; Hoyt's Gluten Flakes; Iodeol; Loefflund's Food Maltose; Mistura Creosote Comp. (Killgore's) and Tablets Cascara Comp. (Killgore's); Neo-Riodine; Nicomors; Peptone Solution for Hypodermatic Use (Armour); Pixalbol; "P-O-4"; Pollantin; Promonta; Pruritus Vaccine Treatment-Lederle (Montague Method); Restor-Vin; Some "Mixed" Vaccines of G. H. Sherman and Tersul Hiller.

The volume also contains reports on products which were included in former editions of New and Nonofficial Remedies but which will not appear in the 1925 edition because they were found ineligible for further recognition. Among these are polyvalent antipneumococcal serum, colon bacillus vaccine, gonococcus serum and gonococcus vaccine.

The volume contains a number of reports of a general nature; for instance, a report on the therapeutic value of benzyl benzoate; a report on anaphylaxis produced by thromboplastic substances and a report on the therapeutic use of digitalis.

Physicians who keep fully informed in regard to the value of proprietary remedies will wish to own this book.

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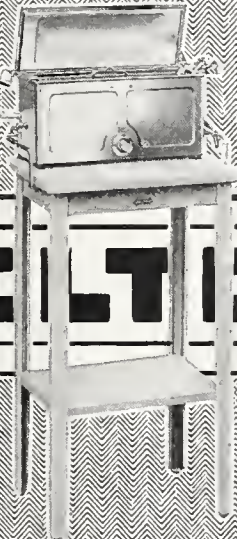
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Woodcut from his book, "De Fabrica
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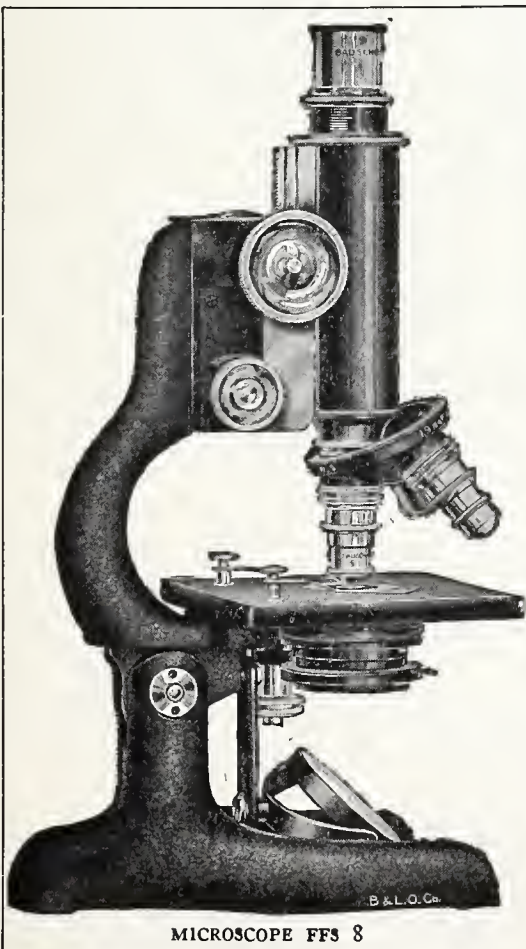
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When Newspapers Adhere to Their Ethics—With national advertisers out after the "nostrum advertising" and a number of newspapers and periodicals already closing their columns to them, the day is approaching when fake health "cures" should cease to be a problem—at least to the extent it is today.—*Editorial, Ohio State Medical Journal.*

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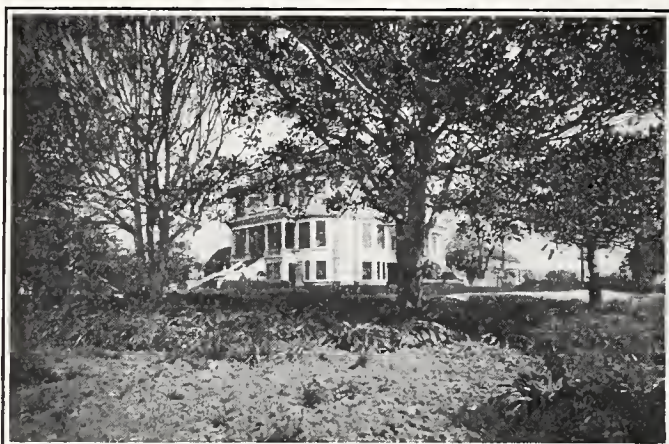
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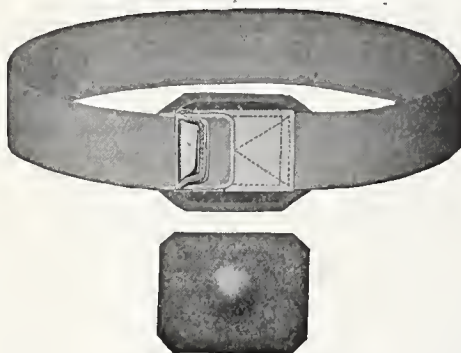
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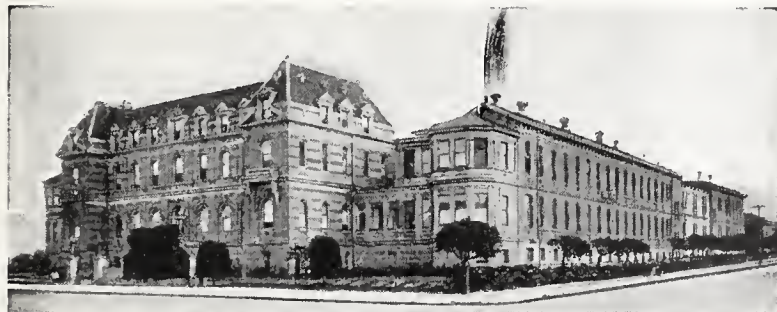
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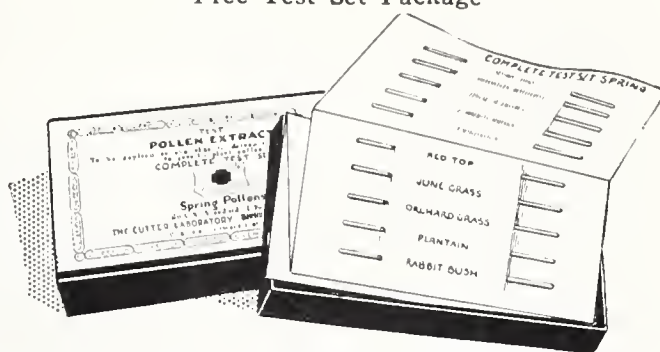
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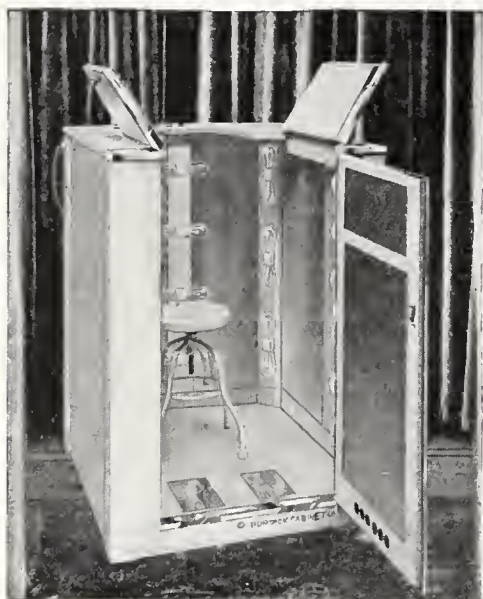
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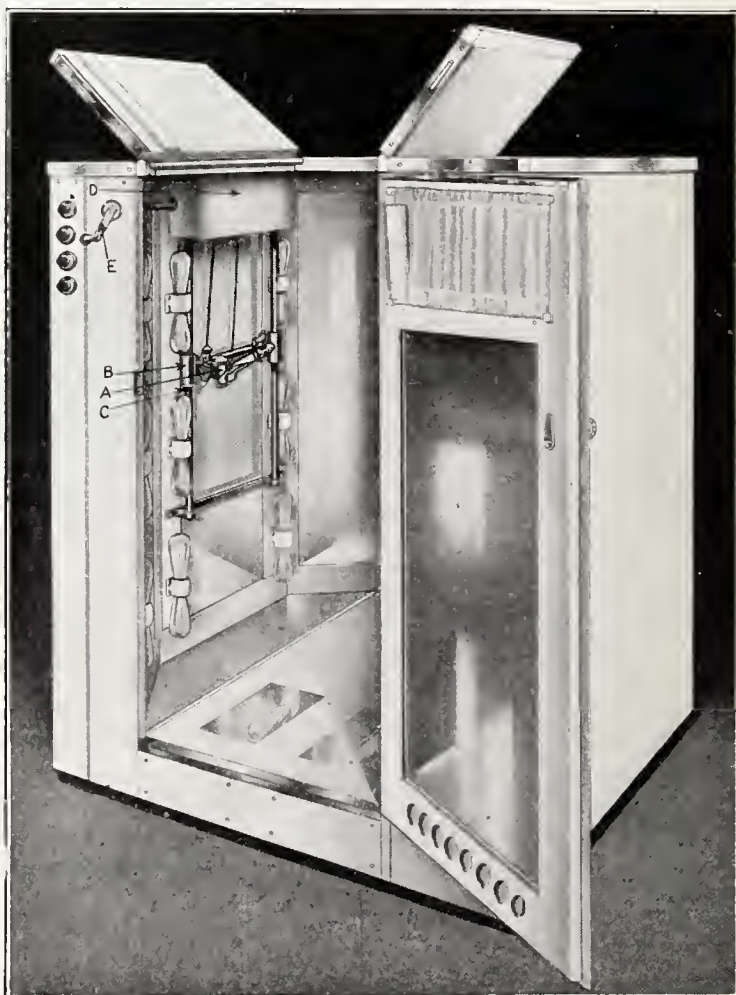
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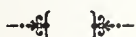
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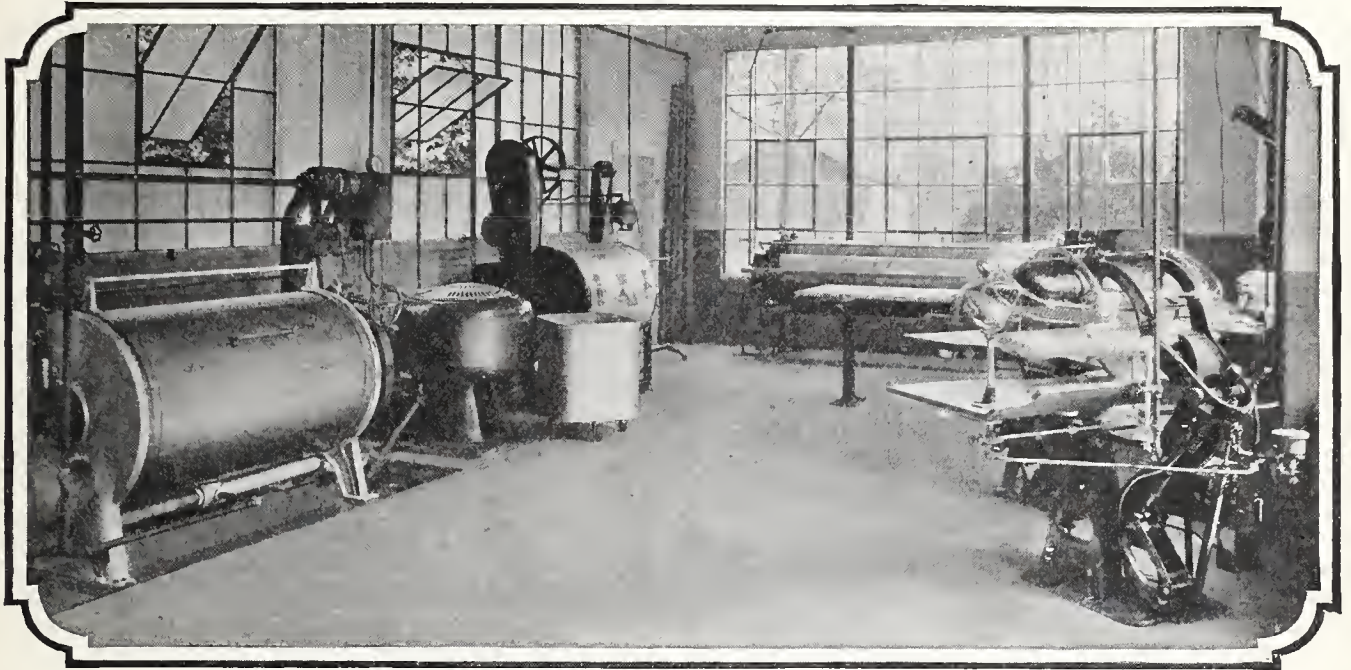
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Directory of Hospitals, Sanitariums, etc., of California

ALBERT H. ROWE SANITARIUM Diabetes and Metabolic Diseases 2545 Regent Street, Berkeley, Calif.	FRENCH HOSPITAL General Hospital Geary Street, bet. 5th and 6th Avenues San Francisco	O'CONNOR SANITARIUM General Hospital in Charge of Sisters of Charity Race and San Carlos Streets, San Jose, Calif.
ALEXANDER SANITARIUM Nervous and Mild Mental Diseases Belmont, Calif.	GOTTBRATH'S SANITARIUM (Dr. N. J.) Nervous Diseases and Semi-Invalidism Belmont, California	PARK SANITARIUM Alcoholic and Drug Addictions 1500 Page Street, San Francisco
ALUM ROCK SANATORIUM For the Treatment of Tuberculosis San Jose, Calif.	HOSPITAL FOR CHILDREN AND TRAINING SCHOOL FOR NURSES General Hospital for Women and Children 3700 California Street, San Francisco	PHYSICIANS & SURGEONS INSTITUTE OF PHYSIO-THERAPY Limited to Patients referred by the Medical Profession. No other cases accepted 226 Haight St., San Francisco, Calif.
ANDERSON SANATORIUM Mental and Nervous Diseases 2535 Twenty-Fourth Avenue Oakland, Calif.	JOHNSTON-WICKETT CLINIC Anaheim, Calif.	POTTENGER SANATORIUM For the Treatment of Tuberculosis Monrovia, Calif.
BANKSIA PLACE SANITARIUM Nervous and Mental Diseases 5227 Santa Monica Blvd. Los Angeles, Calif.	LAS ENCINAS SANITARIUM For Treatment of Nervous and General Diseases Las Encinas, Pasadena, Calif.	RADIUM AND ONCOLOGIC INSTITUTE Diagnosis and Treatment of Neoplastic Diseases 1052 W. 6th St., Los Angeles, Calif.
BANNING SANATORIUM Treatment of Tuberculosis and Throat Diseases Banning, Calif.	LIVERMORE SANITARIUM For Treatment of Nervous and Mental Diseases Livermore, Calif.	ST. FRANCIS HOSPITAL Limited General Hospital Bush and Hyde Sts., San Francisco
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CANYON SANATORIUM For the Treatment of Tuberculosis Redwood City, California	MENDELSSOHN REST HOME 870 Fell Street San Francisco	ST. LUKE'S HOSPITAL Limited General Hospital 27th and Valencia Sts., San Francisco
CLOVERDALE HOSPITAL Medical, Surgical and Convalescent Cloverdale, Sonoma County, Calif.	MONROVIA CLINIC Diagnosis and Treatment of Tuberculosis 137 N. Myrtle St., Monrovia, Calif.	ST. MARY'S HOSPITAL General Hospital 2200 Hayes Street San Francisco
COLFAX SCHOOL FOR THE TUBERCULOUS For the Treatment of Tuberculosis Colfax, Calif.	MOUNT ZION HOSPITAL General Hospital 2200 Post Street, San Francisco	WOODLAND CLINIC AND SANITARIUM Woodland, California
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TRUTH ABOUT MEDICINES

New and Non-official Remedies

(Abstracts from reports of Council on Pharmacy and Chemistry, A. M. A.)

Note—These do not represent all of the actions of the Council, but they do represent those remedies manufactured by firms who co-operate with California and Western Medicine in its advertising columns, and thereby with the physicians in California.

In addition to the articles enumerated in our last report, the following have been accepted:

Abbott Laboratories—Butesin Picrate Dusting Powder.

Eli Lilly & Co.—Hletin (Insulin—Lilly) U-80, 10 cc.

Parke, Davis & Co.—Desiccated Parathyroid Gland (P. D. & Co.); Cauliflower Protein Extract Diagnostic (P. D. & Co.); Lentil Protein Extract Diagnostic (P. D. & Co.); Friedlander Bacillus Protein Extract Diagnostic (P. D. & Co.); Micrococcus Tetragenus Protein Extract Diagnostic (P. D. & Co.); Streptococcus Hemolytic Protein Extract Diagnostic (P. D. & Co.); Streptococcus Non-Hemolytic Protein Extract Diagnostic (P. D. & Co.); Paratyphoid A Protein Extract Diagnostic (P. D. & Co.); Paratyphoid B Protein Extract Diagnostic (P. D. & Co.); Pine Pollen Protein Extract Diagnostic (P. D. & Co.); Apricot Protein Extract Diagnostic (P. D. & Co.); Yellow Daisy Pollen Protein Diagnostic (P. D. & Co.); Ox-Eye Daisy Pollen Protein Diagnostic (P. D. & Co.); and Oak Pollen Protein Extracts Diagnostic (P. D. & Co.).

E. R. Squibb & Sons—Insulin (Squibb), 40 Units, 5 cc.; Bean (Kidney) Allergens (Squibb); Cauliflower Allergens (Squibb); Frog's Legs Allergens (Squibb); Daisy Pollen Allergens (Squibb); Bacillus Acne Allergens (Squibb); Bacillus Friedlander Allergens (Squibb).

Squibbs Liquid Petrolatum With Agar—A mixture composed of liquid petrolatum (Squibb) heavy (California) 50 cc.; agar 1.5 gm.; sodium benzoate, 0.1 gm.; acacia, glcerin, and water sufficient to make 100 cc. Squibb's liquid petrolatum with agar, has the action of liquid petrolatum. It is claimed that the agar, by adding bland bulk to the bowel contents, stimulates peristalsis in a normal way, and that the combination of liquid petro-

latum with agar mixes readily with the feces and softens them.—E. R. Squibb & Sons, New York.

Mercurosal Ampules 0.1 Gm.—Each ampule contains mercurosal (New and Non-official Remedies, 1924, p. 207), 0.1 gm. in 5 cc. of distilled water containing 0.1 per cent of sodium citrate.—Parke, Davis & Co., Detroit (Journal A. M. A., March 7, 1925, p. 751).

A chap was arrested for assault and battery and brought before the judge.

Judge (to prisoner)—“What is your name, your occupation, and what are you charged with?”

Prisoner—“My name is Sparks, I am an electrician, and I am charged with battery.”

Judge—“Officer, put this guy in a dry cell.”

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(With apologies to Kipling)

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The lightly proffered laurel,
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The judgment of your peers!

—T. V. Smith.

“Excuse me,” she said, as she entered the country editor's office. “You editors are supposed to know everything. How should I treat sick bees?”

“With respect,” was the answer.

Some Religions Make Even the License Unnecessary—“A physician's conduct toward his patient, and also toward the public health, may be so harmful, disgraceful, diabolical or infamous as to make his continuance in the profession a public wrong,” says H. E. Kelly, member of the Chicago Bar, “yet no other ground than that of unprofessional or dishonorable conduct may enable the authorities to revoke such a physician's license. This ground ought to be stated in the law, so that it may be used for the protection of the people in cases in which a specific ground is not stated because the particular offensive acts are unusual, entirely unforeseen, or as a matter of expediency too many subjects of detail to be specifically enumerated in the statute.”



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Monday 9:00 a. m.—Medical Ward Rounds. Samuel H. Hurwitz, M. D.
 Tuesday 8:00 a. m.—Weekly Staff Conference.

Tuesday 9:00 a. m.—Urologic and Cystoscopic Examinations. Louis Clive Jacobs, M. D.

Wednesday 8:30 a. m.—Operations. Charles G. Levison, M. D., and Harold Brunn, M. D.

Thursday 8:30 a. m.—Eye, Nose and Throat Operations. Aaron Green, M. D., and Herbert Cohn, M. D.

Thursday 9:00 a. m.—Medical Ward Rounds. Emil Jellinek, M. D.

Friday 8:30 a. m.—Clinical X-Ray Conference. Lloyd Bryan, M. D.

Friday 9:00 a. m.—Pediatrics Rounds. E. Chas. Fleischner, M. D., and Ralph Kuhns, M. D.

Friday 9:30 a. m.—Prenatal Clinic. D. Louis I. Breitstein.

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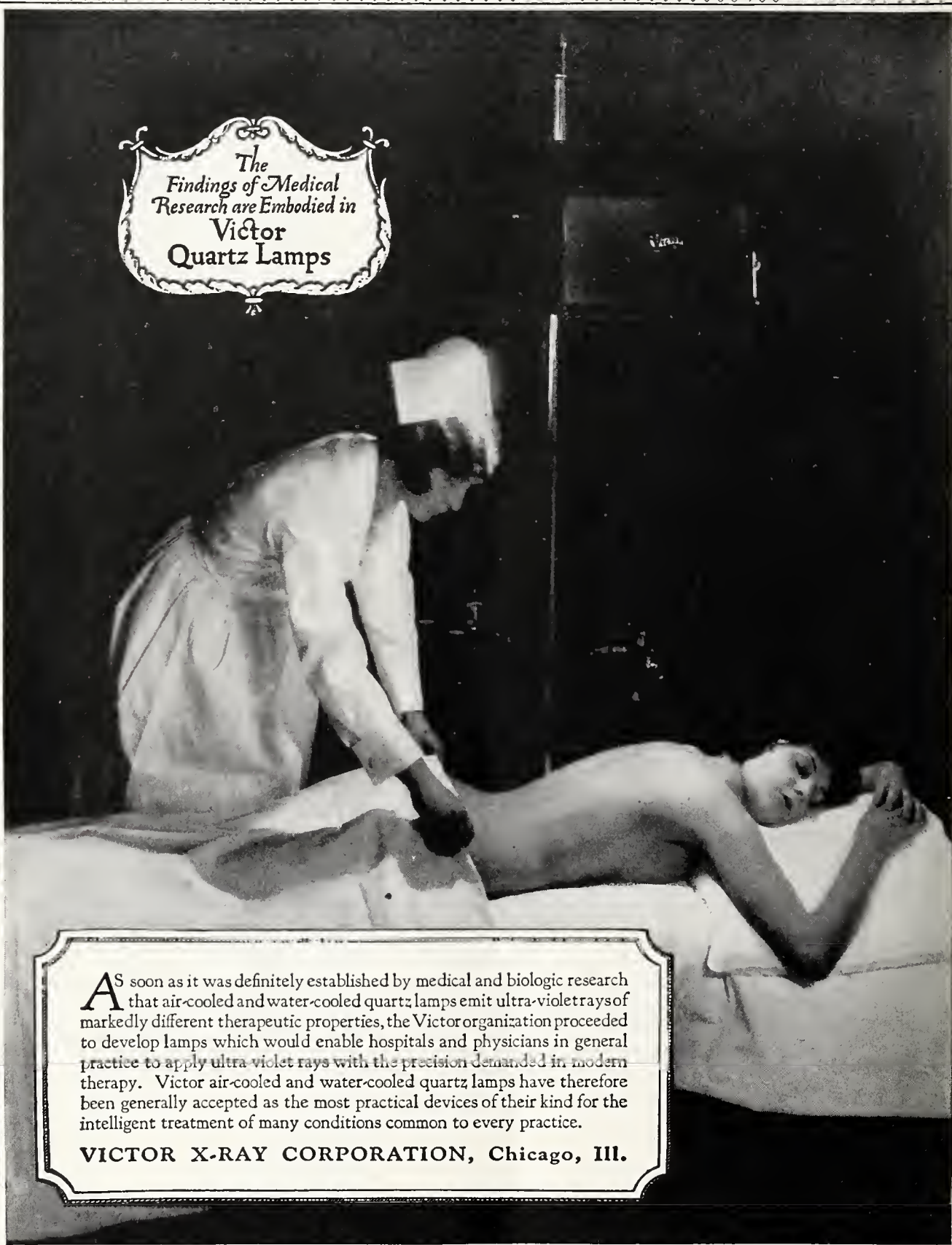
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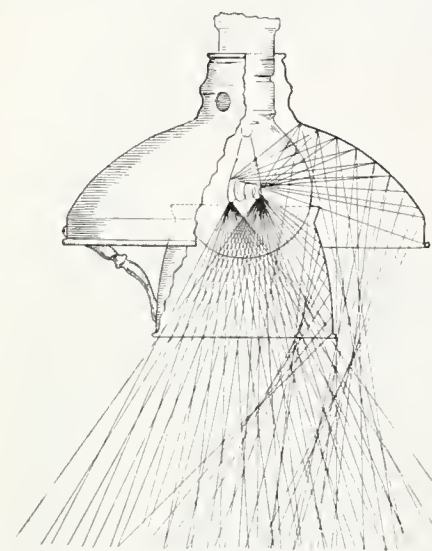
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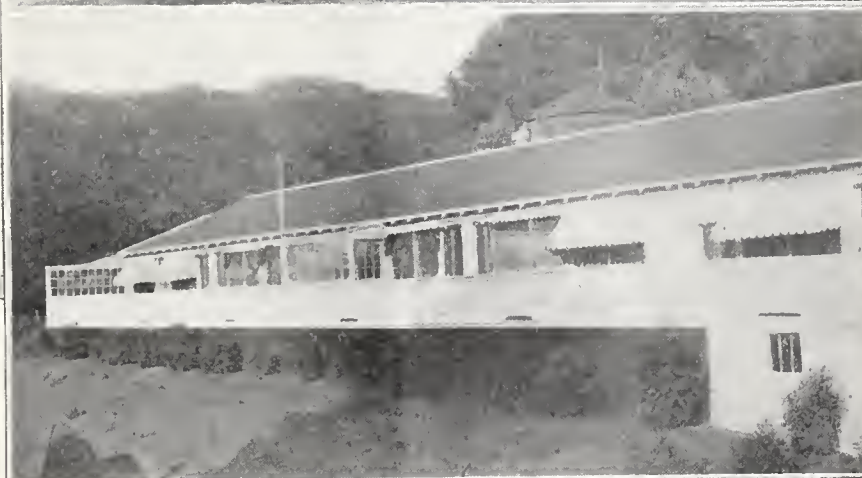
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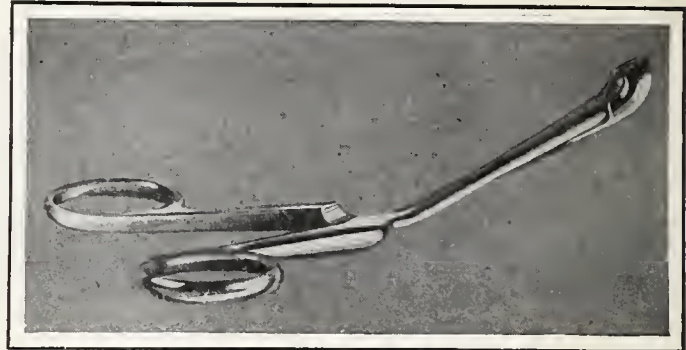
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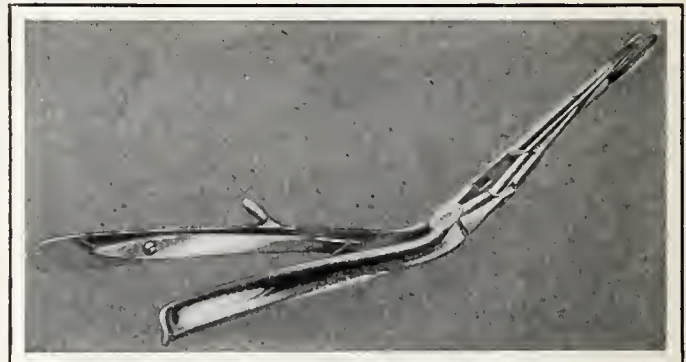


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Treatment of Cholecystitis

MILEY B. WESSON, M. D.

The Prostatic Median Bar, Complications and Treatment

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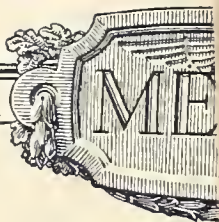
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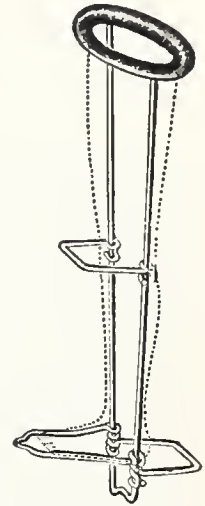
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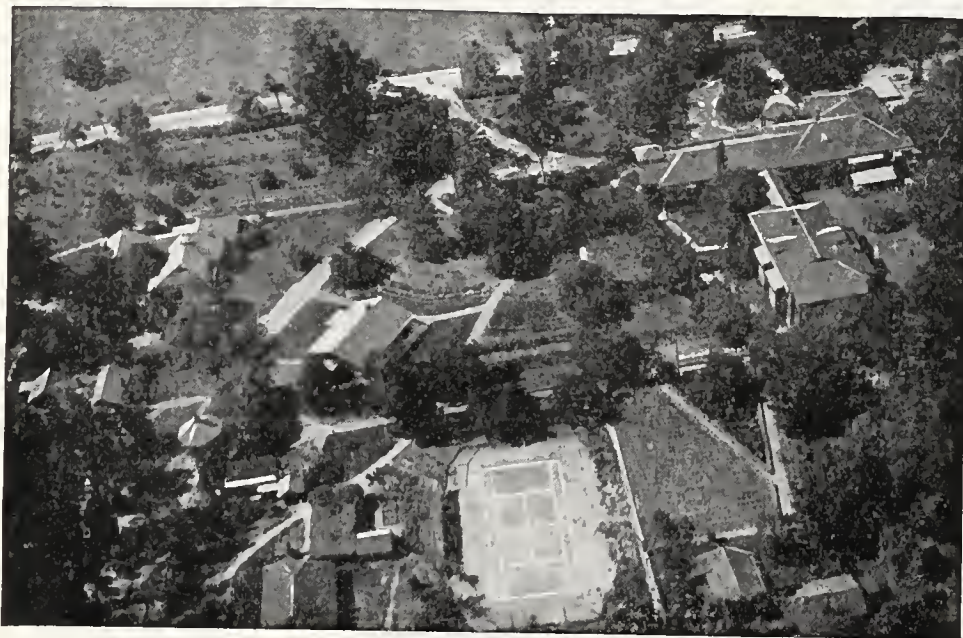
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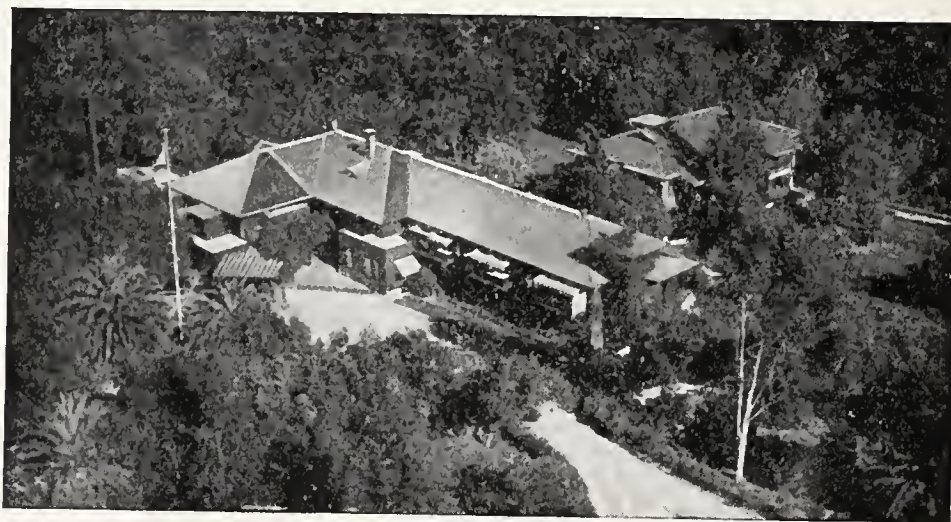
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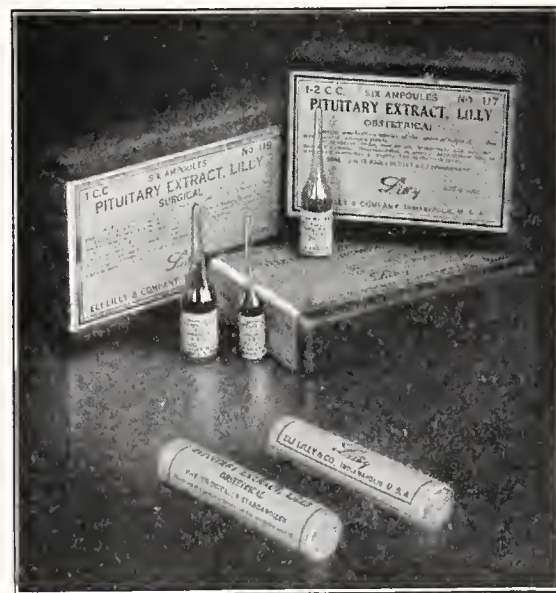
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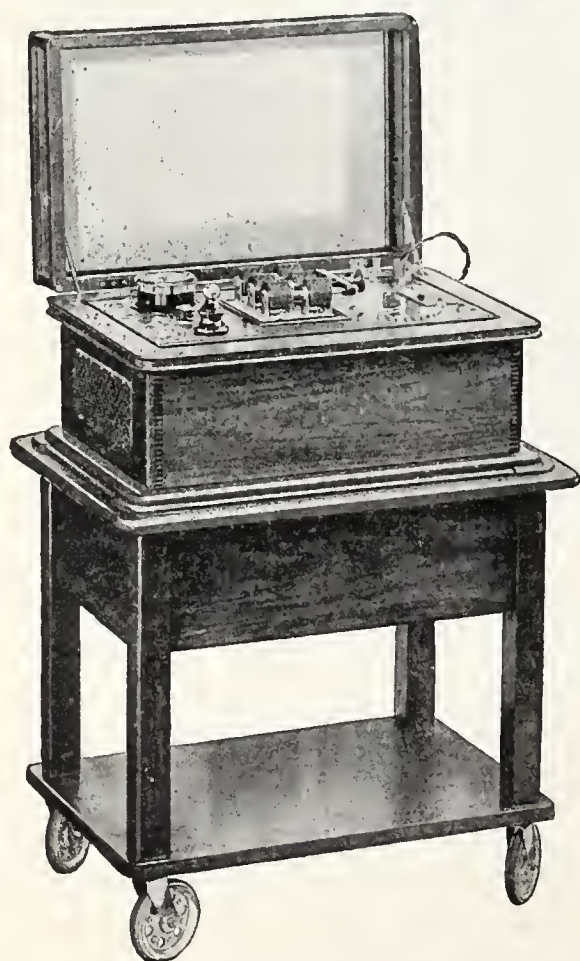
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TRUTH ABOUT MEDICINES

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(Abstracts from reports of Council on Pharmacy and Chemistry, A. M. A.)

Note—These do not represent all of the actions of the Council, but they do represent those remedies manufactured by firms who co-operate with California and Western Medicine in its advertising columns, and thereby with the physicians in California.

In addition to the articles enumerated in our last report, the following have been accepted:

Cutter Laboratories—Rabies Vaccine (Semple)—Cutter.

Hynson, Westcott & Dunning—Brom-sulphalein (H. W. D); Solution Brom-sulphalein (H. W. D).

Eli Lilly & Co.—Scarlet Fever Streptococcus Antitoxin (Unconcentrated); Scarlet Fever Streptococcus Antitoxin (Concentrated).

E. R. Squibb & Sons—Lentil (Allergen-Squibb).

Butesin Picrate Dusting Powder—It is composed of butesin picrate 5 per cent and sodium stearate 95 per cent. Abbott Laboratories, Chicago.

Iron Citrate Green (P. D. & Co.)—A complex ferric ammonium citrate, containing ferric citrate equivalent to 16 per cent of iron and ammonium citrate equivalent to 8.1 per cent of ammonia. For a discussion of the actions and uses of iron preparations, see New and Non-official Remedies, 1924, p. 165. Iron citrate green (P. D. & Co.), is intended for intramuscular and hypodermic administration. Iron citrate green (P. D. & Co.) is supplied in the form of ampules containing, respectively, $\frac{1}{4}$ grain, $\frac{3}{4}$ grain and $1\frac{1}{2}$ grain of the iron citrate green (P. D. & Co.). Parke, Davis & Co., Detroit.

Allergens (Squibb)—In addition to the allergens (Squibb) previously accepted, the following have been accepted: Bacillus Acne Allergen (Squibb); Bacillus Friedlander Allergen (Squibb); Bean (Kidney) Allergen (Squibb); Cauliflower Allergen (Squibb); Daisy Pollen

(Continued on Page 686)

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TRUTH ABOUT MEDICINES

(Continued from Page 684)

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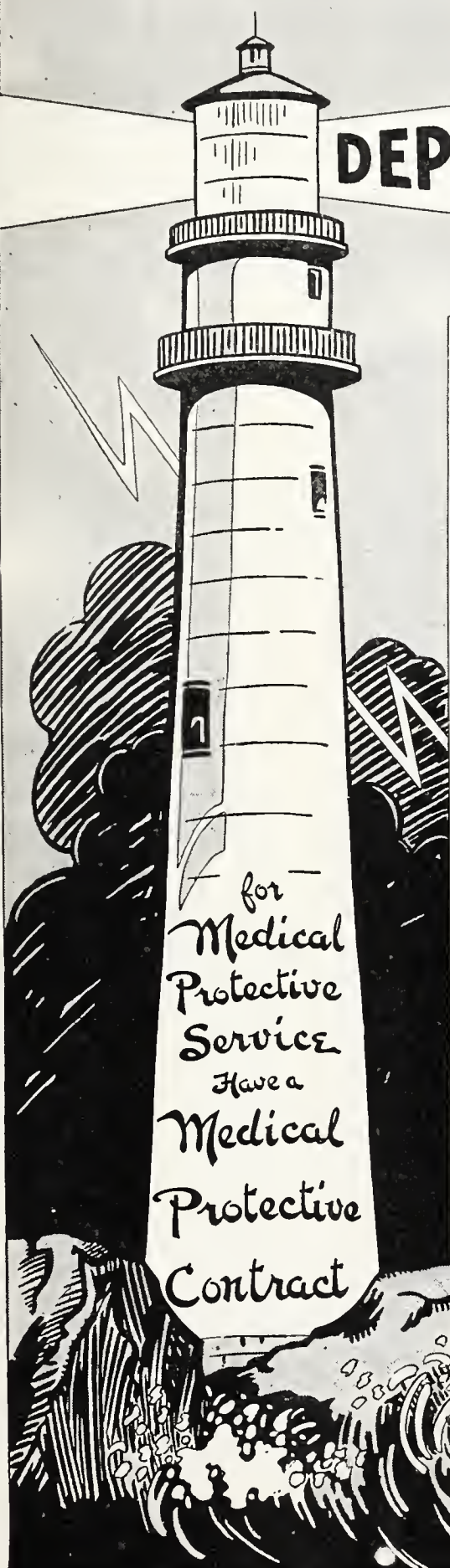
Group Allergens Diagnostic (Squibb)—In addition to the group allergens diagnostic (Squibb) previously accepted, the following have been accepted: Group Allergens (Squibb), Type V (Kidney Bean, Lentil, Lima Bean, Navy Bean, Pea); Group Allergens (Squibb), Type XIII (Frog Legs, Lamb, Rabbit, Sweetbread, Veal); Group Allergens (Squibb), Type XXIV (Corn, Golden Rod, Ragweed, Rye); Group Allergens (Squibb), Type XXV (Bacillus Acne, Bacillus Coli, Bacillus Diphtheroid, Bacillus Influenza, Bacillus Pertussis, Bacillus Typhosus, Gonococcus). E. R. Squibb & Son, New York.

Parathyroid Gland Desiccated (P. D. & Co.)—The exterior parathyroids of the ox freed from fat, desiccated and powdered. For a discussion of the actions and uses of desiccated parathyroid gland, see New and Non-official Remedies, 1924, p. 224. The product is supplied in the form of tablets containing 1-10 grain. Parke, Davis & Co., Detroit.

Iletin (Insulin—Lilly)—U-80, 10 cc.—Each cc. contains 80 units of Iletin (Insulin—Lilly) (New and Non-official Remedies, 1924, p. 152). Eli Lilly & Co., Indianapolis.

Protein Extracts Diagnostic (P. D. & Co.)—In addition to those protein extracts diagnostic (P. D. & Co.) previously accepted, the following have been accepted: Apricot Protein Extract Diagnostic (P. D. & Co.); Cauliflower Protein Extract Diagnostic (P. D. & Co.); Daisy (Ox-Eye) Pollen Protein Extract Diagnostic (P. D. & Co.); Daisy (Yellow) Pollen Protein Extract Diagnostic (P. D. & Co.); Friedlander Bacillus Protein Diagnostic (P. D. & Co.); Lentil Protein Extract Diagnostic (P. D. & Co.); Micrococcus Tetragenus Protein Extract Diagnostic (P. D. & Co.); Oak Pollen Protein Extract Diagnostic (P. D. & Co.); Paratyphoid Bacillus A Protein Extract Diagnostic (P. D. & Co.); Paratyphoid Bacillus

(Continued on Page 688)



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TRUTH ABOUT MEDICINES

(Continued from Page 686)

B Protein Extract Diagnostic (P. D. & Co.); Pine Pollen Protein Extract Diagnostic (P. D. & Co.); Streptococcus (Hemolytic) Protein Extract Diagnostic (P. D. & Co.); Streptococcus (Non-Hemolytic) Protein Extract Diagnostic (P. D. & Co.). Parke, Davis & Co. Detroit.

Group Protein Extracts Diagnostic (P. D. & Co.)—
In addition to the group protein extracts diagnostic (P. D. & Co.), the following have been accepted: Protein Extracts Diagnostic (P. D. & Co.), Group 8 (Bean (Lima), Bean (Navy), Bean (String), Pea, Lentil); Protein Extracts Diagnostic (P. D. & Co.), Group 10 (Cabbage, Cauliflower, Lettuce, Parsnip, Spinach); Protein Extracts Diagnostic (P. D. & Co.), Group 20 (Colon Bacillus, Gonococcus, Staphylococcus Albus, Staphylococcus Aureus, Staphylococcus Citreus); Protein Extracts Diagnostic (P. D. & Co.), Group 21 (Friedlander Bacillus, Micrococcus Catarrhalis, Micrococcus Tetragenus, Pseudodiphtheria Bacillus); Protein Extracts Diagnostic (P. D. & Co.), Group 22 (Pneumococcus Types I, II, and III, Streptococcus Hemolytic, Streptococcus Non-Hemolytic); Protein Extracts Diagnostic (P. D. & Co.), Group 23 (Typhoid Bacillus, Paratyphoid Bacillus A, Paratyphoid Bacillus B). Parke, Davis & Co., Detroit.

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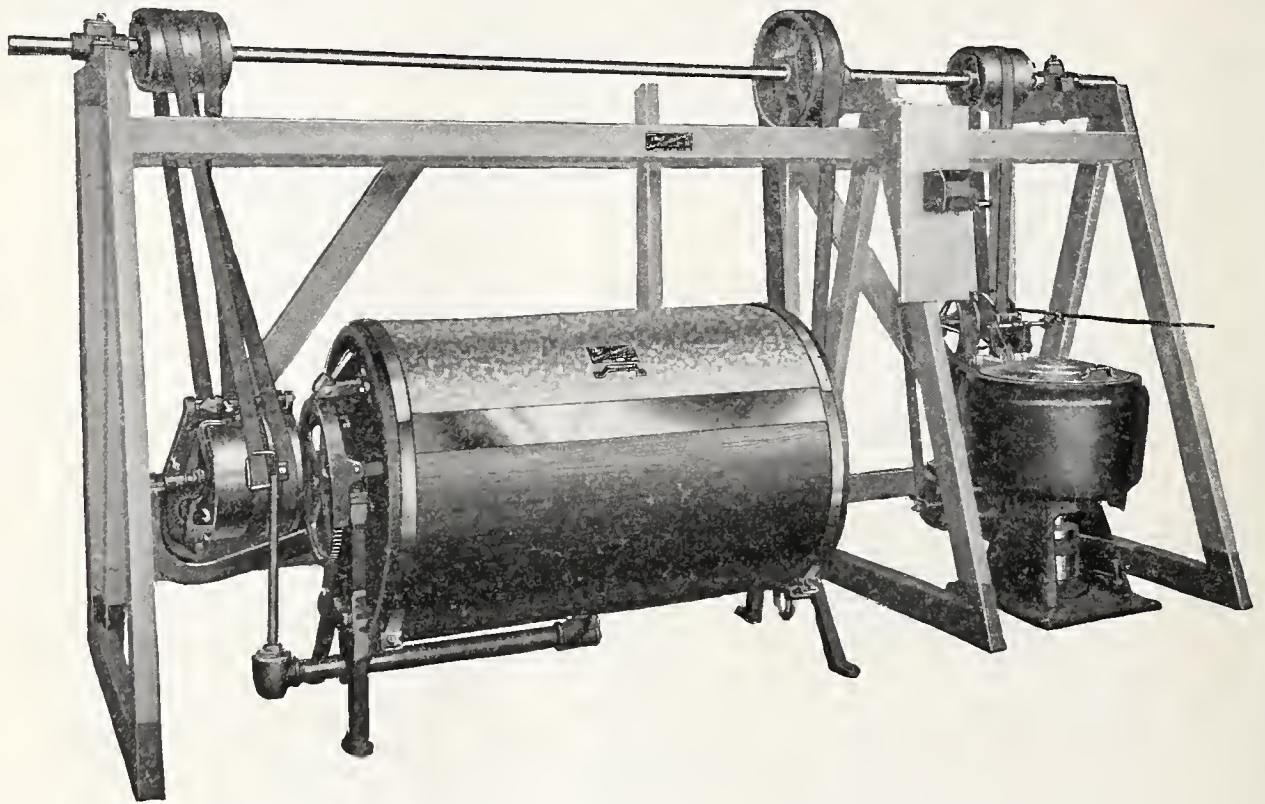
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BOOKS RECEIVED

All books received are promptly acknowledged in this column. Such acknowledgment is the only return California and Western Medicine feels obligated to render in return for the courtesy of the sender. Selected books believed to be deserving of comment will be reviewed solely in the interests of our readers. Our advertising columns are open to publishers of acceptable books for such further statements as they care to make.

Gynecology for Nurses. By M. J. Seifert, M. D., Attending Surgeon and Gynecologist, Columbus Hospital, Chicago; formerly Professor of Physical Diagnosis and Anesthesiology, University of Illinois. D. Appleton & Company, 1925. New York and London.

Diseases of Children for Nurses. Including Pediatric Nursing, Infant Feeding, Therapeutic Measures Employed in Childhood, Treatment for Emergencies, Prophylaxis and Hygiene. By Robert S. McCombs, M. D., Associate in Medicine at the Philadelphia Polyclinic; Instructor of Nurses at the Children's Hospital of Philadelphia. Fifth edition, thoroughly revised; octavo of 581 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, \$2.75 net.

Personal Hygiene Applied. By Jesse Feiring Williams, M. D., Professor of Physical Education, Teachers College, Columbia University, New York City. Second edition, revised; 12mo of 414 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, \$2 net.

Laboratory Diagnostic Methods—Pathological, Bacteriological, Serological and Chemical. A Manual for Physicians, Medical Students and Laboratory Technicians. By John A. Kolmer, Professor of Pathology and Bacteriology in the Graduate School of Medicine of the University of Pennsylvania and Pathologist to the Medico-Chirurgical and Polyclinic Hospitals; and Fred Boerner, Associate in Bacteriology in the Graduate School of Medicine of the University of Pennsylvania. D. Appleton and Company, New York, 1925.

Collected Reprints from the George Williams Hooper Foundation for Medical Research. The Department of

Research Medicine of the University of California Medical School, San Francisco. Volume VIII, 1923-1924; Volume IX, 1924-1925.

A Compend of Gynecology. By William Houghes Wells, M. D., late Assistant Professor of Obstetrics in the Jefferson Medical College; Assistant Obstetrician in the Maternity Department of the Jefferson Medical College Hospital, etc. Fifth edition, revised and enlarged by William Benson Harer, M. D., Instructor in Obstetrics in the University of Pennsylvania. With 167 illustrations. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut Street.

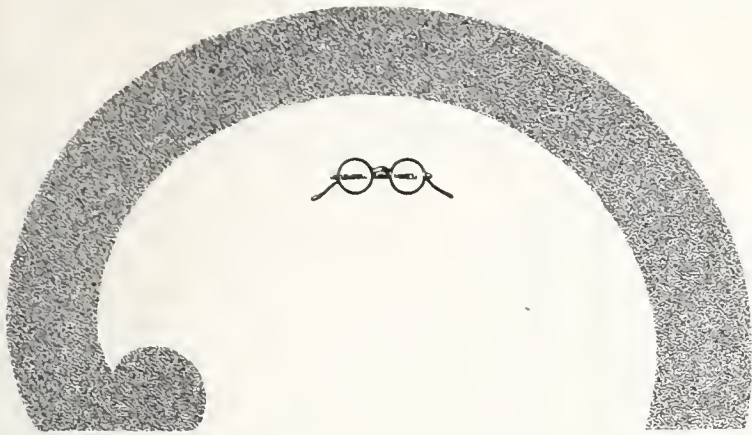
Clinical Features of Heart Disease. An Interpretation of the Mechanics of Diagnosis for Practitioners. By Leroy Crummer, M. D., Professor of Medicine, University of Nebraska. Introduction by Emanuel Libman, M. D., Physician to Mount Sinai Hospital; Professor of Clinical Medicine, Columbia University, N. Y. Paul B. Hoeber, Inc., New York, 1925.

Medical and Surgical Report of Roosevelt Hospital, New York. Second Series 1925, based on the work of the years 1915-1924, inclusive. Paul B. Hoeber, Inc., publishers, New York City, 1925.

Diet in Health and Disease. By Julius Freidenwald, M. D., Professor of Gastro-enterology in the University of Maryland School of Medicine, Baltimore; and John Rubrah, M. D., Professor of Diseases of Children in the University of Maryland, Baltimore. Sixth edition, thoroughly revised; octavo of 987 pages. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, \$8 net.

The Health-Care of the Baby. A Handbook for Mothers and Nurses. By Louis Fischer, M. D., Attending Physician to the Willard Parker and Riverside Hospitals; Chief Attending Pediatricist to the Zion Hospital of Brooklyn, etc. Fifteenth edition, completely revised. Funk & Wagnalls Company, New York and London, 1925.

In Terms of Advertising—Dorothy, 6 years old, was used to hearing more or less shop talk at home, both her parents having been at one time in the advertising business. Last Sunday she brought home from Sunday school a Golden Text. Her mother seeing something in her hand, asked what she had. Dorothy immediately replied, with a little shrug of her shoulders, "Oh, only an ad about God."—Everybody's Magazine.



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CALIFORNIA AND WESTERN MEDICINE

VOL. XXIII

JUNE, 1925

No. 6

SPECIAL ARTICLE

THE STATUS OF NEUROLOGICAL SURGERY— TODAY AND TOMORROW

By HOWARD C. NAFFZIGER, M. D., *San Francisco*

SURGERY of the nervous system, although one of the newer recognized specialties of medicine, already has made many valuable contributions to medicine, and has accumulated a large amount of literature.

Not every physician has the desire or the training to do neurological surgery, but there is much being done by special students of the subject of great value to all physicians.

It was with the object of bringing out the important developments in the specialty, and particularly the newer knowledge of value to all physicians, that Doctor Naffziger was invited to prepare this essay.—EDITOR.

NEUROLOGICAL surgery has emerged from its infancy to the age where it now makes more than a feeble outcry. Up to the time of the great war, it attracted the attention of but few surgeons. Since that time, and largely due to the experiences obtained in the war, an increasingly large number of well-trained men have devoted their attentions exclusively to it. In a considerable number of medical schools it has assumed its place as one of the major divisions of surgery. A large literature has grown up and a national society has been formed which is composed of men whose major interest is in this field. In this country particularly, the advances in this specialty during the past fifteen years have been remarkably great. These advances have been largely along physiological, diagnostic, and technical lines. It may be of interest to the physician who is not devoting particular attention to this field

to review some of the particular conditions and the considerations involved in diagnosis, treatment, and results. It seems safe to prophesy that the next decade will show remarkable advances in many of these lines.

INTRACRANIAL TUMORS

The physician, in thinking of the specialty of neurological surgery, is prone to think of brain tumors as being the particular condition most often seen. It is true that intracranial neoplasms represent the greatest problem in this field, and the most difficult conditions met. Of all organs, the brain, breast, and uterus rank together as common sites for tumors. In the whole range of cranial surgery, however, tumors represent only a part. Recognition of them occurs very much earlier than was the case a comparatively few years ago. During the past two years, at the University of California Hospital, not more than one or two patients have been received who were totally blind at the time of admission. This is a marked contrast to the numerous cases of total blindness common only a few years ago. It is not practicable here to go into a consideration of the various types of tumor pathology which are encountered. There is no pathological classification in general acceptance. It is sufficient here to consider intracranial tumors in two classes, the infiltrating growths, which are principally the gliomas, and the encapsulated growths. In the latter class one thinks particularly of the so-called dural endotheliomas (arachnoid fibroblastomata), the pituitary tumors and the tumors of the cerebellopontile angle. In a strict sense these are intracranial, but not cerebral.

GLIOMATA

The infiltrating growths are numerous, and the gliomas represent nearly one-half of the total number of the tumors. They constitute the most trying group, from the standpoint of both the patient and the surgeon. They are rapid in their progress and, being usually of the infiltrating type, are completely enucleable in only a few instances. Occasionally, radical resection can be performed. Under the gliomas may be included the gliomatous cysts and the cystic gliomas. The cystic change in gliomas is a favorable occurrence. It alters an apparently extremely serious outlook to one which is less grave, and is compatible with continued economic usefulness of the individual and a more or less indefinite span of life. It has not been long since the rather frequent cerebellar gliomas in children were considered a cause for deepest pessimism. A consideration of the results obtained in these cases, however, indicates that a considerable percentage of them, perhaps 20 per cent or thereabouts, pursue a favorable course after pressure effects are relieved at operation. In them the growth becomes entirely stationary, or so slightly progressive that

it seems stationary or a cystic change occurs. Freedom from symptoms over a three or five-year period is common.

PITUITARY TUMORS

The pituitary tumors are being recognized earlier, largely due to the interest and care of the ophthalmologist in carefully taking the fields of vision. Great strides have been made along technical lines in the handling of these conditions. Two main types of operative treatment have developed, namely, the transphenoidal route from below, and the superior route through a frontal or a temporo-parietal flap. The superior routes are, of course, the only ones practicable for the supra-sellar tumors, which are fairly common. In recent years there has been a considerable tendency for most neurological surgeons to favor this route also for the pituitary adenomata. It must be said, however, that there are but few operations in neurological surgery which give more satisfactory results than the transphenoidal operation in suitable cases. Those cases with more or less uniform enlargement of the sella and with no other neighborhood signs than defects in the fields of vision of one type or another are the ones usually selected. It is not unusual, however, for this operation to entirely relieve eye-muscle palsies which appear with the enlarging growth. These tumors are of slow development, and the relief obtained is immediate. Many of these cases have been followed post-operatively over a considerable number of years, without a return of any of their symptoms. One of the keenest pleasures is to witness the return of vision and the disappearance of hemianopsias. It is probably not generally appreciated that most individuals with pituitary tumors do not have acromegaly. The acromegalics are in a decided minority. The mortality from transphenoidal operations is low, certainly not more than 10 per cent,¹ and almost without exception post-operative convalescence is easy and rapid. The operative procedure itself places but very little tax on a weakened patient. All patients show the readily recognized signs of an enlarged sella turcica, as shown by the x-ray, and defects in the perimetric fields of vision which usually, at one stage or another, are of a bitemporal type. It is not uncommon, however, for homonymous hemianopsia to be found. The signs of disorder of the ductless glands, while usually present, are seldom the outstanding features of the case or the ones which bring the patient to the physician. Where the tumor has spread far above the diaphragm of the sella, as shown by marked effects on the third and sixth nerves or by pressure on one or another crus, operation by the superior route is necessary. This procedure, of course, permits of a more radical removal of the tumor, but is accompanied by an increased risk over the inferior route. It seems likely that with increasingly early recognition of the pituitary strumas, that the usefulness of the transphenoidal operation will be increased and the necessity for any other more formidable procedure thereby reduced.

ENDOTHELIOMAS

The dural endotheliomas or the arachnoid fibroblastomas, as they are more correctly termed, are among the most favorable types of intracranial tumor. It is not generally enough appreciated, and probably this is due to the unfortunate use of the term endothelioma, that these tumors are circumscribed, do not metastasize and do not recur after complete removal with a reasonable margin of the membranes from which they spring. Moreover, they are of slow growth, usually giving a history of years, and are most common over the vault and on the surface where they are accessible. The brain seems to stand slowly increasing pressure in an astonishing manner and even enormous growths, as one in our series, the size of an orange and weighing 220 grams, may be found without any manifestations of intracranial pressure, such as headaches or choked discs. Indeed they often cause so little disturbance that they may not be recognized until in some late stage they may so interfere with the cerebrospinal fluid pathways as to cause intracranial pressure. The late invasion of the overlying bones of the skull by these neoplasms and the recognition by the patient of a lump on his head as the first sign of tumor is well known.

TUMORS OF THE CEREBELLOPONTILE REGION

Of the tumors of the cerebellopontile angle, the acoustic tumors come first to mind, although this is not an uncommon location for endotheliomas as well as other types of new growth. In the recognition of acoustic tumors, their very slow growth is a characteristic feature and the chronological signs of tinnitus and deafness as the eighth nerve is increasingly involved, followed later by signs indicating pressure upon neighboring structures. Those most commonly involved are the fifth nerve with parasthesiae, numbness, and disorders of the sense of taste and of the seventh nerve with weakness or irritative signs. Pressure on the cerebellum is shown by faults in co-ordination on the same side of the body. In a large percentage of these patients some or all of these symptoms are present without the so-called classical signs of brain tumor, which are, of course, only signs of general rise in intracranial pressure, namely: headache, choked discs, and vomiting. By operation, relief from such pressure signs can be obtained. Complete removal of the growth can occasionally be accomplished. In the remaining ones, partial intracapsular enucleation is done.

Many of the tumors originating within the skull which are overlooked would be recognized, were one to always think of a tumor when they are dealing with any localized, but progressing lesion. Swelling of the optic discs as an indication of intracranial pressure from one cause or another, is widely appreciated. This one sign, whether it comes under the name of papillitis or choked disc, stands out as the most trustworthy and common sign of intracranial pressure. Sufficient experience with the ophthalmoscope to enable one to recognize this condition would save most of these cases from total blindness. Methods of localization of tumors as an aid to clinical neurology have received considerable attention.

DIAGNOSTIC AIDS IN LOCALIZATION

Pneumoventriculography, as introduced by Dandy, has received considerable attention, and is an unquestioned aid in the localization of tumors. It is a method, which, from the reports in the literature, involves a considerable degree of risk, but it is granted that the conditions for which it is done are ones which warrant taking such measures. Ventriculograms have been used in about eighty-five instances in this clinic. One fatality occurred after this procedure, but was due to a late hemorrhage. This procedure has added considerably to our diagnostic ability, but has not given a corresponding gain in the complete removal of tumors such as might be expected. The percentage of tumors which cannot be localized by methods of clinical examination alone has been variously estimated, and no accurate figures upon it are obtainable. It has been placed as high as 50 per cent (Dandy). It is probable that in 20 or 25 per cent an accurate localizing diagnosis cannot be made within a reasonable time without some other aid.

DISPLACEMENT OF THE PINEAL SHADOW

The following procedure, which has been developed in this clinic, is being published elsewhere. It has been of very real value and it involves no risks. In a large percentage of individuals, the pineal gland calcifies under normal conditions. In the lateral radiograms of the skull it is frequently seen. It is developmentally a true midline structure. When radiograms are properly taken in the anteroposterior position it can be determined whether this shadow lies exactly in the midsagittal plane or not. In cases with intracranial pressure, the shifting of the position of this gland can be utilized to great advantage. Any gross lesion associated with an increase in volume in the right cerebral hemisphere will cause this midline structure to shift, and the pineal shadow will be shown to the left of the midline. Likewise a shift to the right occurs with the gross lesion on the left side. When, however, there is a uniform rise of pressure within the skull due to a posterior fossa lesion or one at the base obstructing the cerebrospinal fluid pathways, there is an internal hydrocephalus. The dilatation of the two lateral ventricles is approximately symmetrical, and so in this instance the pineal retains its true midline position. Given an individual suffering from intracranial pressure, after the pineal gland is calcified, one is able to say whether he is dealing with a right cerebral or a left cerebral lesion or an internal hydrocephalus. This simple procedure greatly widens the diagnosis by x-ray and sufficiently localizes many of the otherwise unlocalizable lesions.

THE SPINAL CORD—DIAGNOSTIC AIDS

In the surgery of the spinal cord, several notable additions to our knowledge have occurred within recent years. It has not been so long since Sir Victor Horsley's first successful removal of a spinal cord tumor, in 1888.² Spinal cord tumors offer some of the most brilliant results seen in any field of surgery. Fortunately, most of these growths are benign. In the diagnosis of spinal cord compression in the absence of xanthochromia, Ayer's pro-

cedure of combined cistern and lumbar puncture has brought great certainty to our diagnosis. Combined puncture of the posterior cistern through the occipito-atlantoid region, if carefully performed, carries but very little risk, and with spinal puncture affords a ready index of the freedom of movement of the cerebrospinal fluid up and down the spinal canal. Alterations in pressure adjustments between these two levels, as shown by manometers attached to the two needles, gives striking evidence. Indeed, since, and because of the knowledge gained from the combined puncture, we are now in a position to obtain much more information from spinal puncture alone. It requires but little experience to note the rapidity with which changes in pressure occur in a manometer attached to a lumbar needle when the patient coughs or strains. Pressure upon the jugulars likewise shows a rapid change in the spinal pressure under normal conditions. Quantitative chemistry of the fluid obtained by cistern puncture, as contrasted with spinal puncture, gives added information. These diagnostic measures give reliable information as to whether there is or is not blockage of the spinal canal. For purposes of locating the level of the lesion, the use of lipiodol should be mentioned. This liquid, a combination of iodine in oil, is slightly heavier than cerebro-spinal fluid and upon introduction into the spinal canal, either by cistern or lumbar puncture, will gravitate to the level of the obstruction with the patient in the proper position, and the presence of the solution at this level will be shown by the x-ray shadow. It has been of value in giving accurate localization when a block is present. Its value is doubtful if no block can first be demonstrated.

CORDOTOMY

For the relief of intractable pain below the level of the upper extremities, cordotomy, or section of the anterolateral tracts of the spinal cord, as recommended by Spiller and Fraser, has come into use. While the applications for it are limited, it adds to our usefulness in certain most distressing conditions. In certain instances where the lease of life of the patient is manifestly short, it may be unwise to resort to a major operative procedure such as this.

ALCOHOL INJECTION

One will occasionally meet with such hopeless conditions as a complete paraplegia from metastatic malignancy to the spine, with terrific pain. When paraplegia is already complete, we have advised the injection of a small amount of absolute alcohol directly into the cord substance, by spinal puncture, just above the level of the lesion. The usefulness of such a procedure is, of course, very limited, but may serve an excellent purpose occasionally.

TIC DOULOUREUX

Certain neuralgias often demand the attention of the surgeon. Of these, the outstanding one, because of its frequency and severity, is tic douloureux. The diagnosis of this condition is usually simple. The pain most often first appears in the second or third divisions of the fifth nerve, later spreading to the first. Intermissions of months, or even years, are common. The characteristic pain is a terrific lanci-

nating, paroxysmal one of a few moments' duration which leaves the patient fearful and shaken, but entirely free from pain until the next one. There is rarely any continuous pain. Various types, which are comparatively infrequent, but which simulate true tic, have been described by Cushing. The group characterized by pain of this type plus marked contraction in the facial muscles of the same side is of most interest. These are not relieved by the measures which stop the pain in true tic. In true tic douloureux, alcohol injection of the second and third divisions of the nerve, and perhaps also of the supra-orbital branch, gives satisfactory, though temporary, relief and, in addition, confirms our diagnosis by showing that blocking of the nerve impulses will give relief. Neurectomies, when applicable, are of the same, but temporary value. It is, of course, a familiar experience to find that numerous other types of pain over the distribution of the fifth nerve area are not relieved by such a procedure. It seems worth while to emphasize the fact that operation, namely, section of the sensory root of the Gasserian ganglion, offers the only permanent relief in true tic douloureux. It does not seem to be widely known that properly conducted operations involve very slight risk, probably not more than 2 per cent. There are few of the major conditions in surgery in which relief is so necessary and in which the risk is so slight.

It seems unfortunate that there is not more familiarity with the clinical picture of this disease and the favorable results of treatment. The character of the pain is usually so distinctive that if it were more generally recognized much preliminary work would be saved. It is a rule for the patients to come after the extraction of all of their teeth and frequently with numerous operations upon the accessory sinuses, all of these things being done in a vain search for the cause of the trouble. There is likewise considerable misinformation as to the aftermath of the operation. The idea seems to be prevalent that facial paralysis and marked deformities are the rule. Facial paralysis is an infrequent complication and as far as we know is never permanent. The reason for its occurrence in occasional instances is not well understood.

OTHER FACIAL NEURALGIAS

Certain other types of facial pain seem to be associated with disturbances in the sympathetic system. Certain painful paresthesiae over the face are relieved by resection of the superior cervical sympathetic trunk.

Glossopharyngeal neuralgia, which is similar in character to tic douloureux, but in which the pain is referred largely to the throat in the region of the faucial pillars and to the ear is a condition less often encountered. It has been emphasized by certain of the French writers, and more recently by Doyle, Lillie, and Adson of the Mayo Clinic³ in this country. Its diagnosis can usually be made certain by the relief obtained by cocainizing the tonsillar fossa. Relief may be obtained by extracranial avulsion of the nerve or more permanent relief by intracranial section of it.

HYDROCEPHALUS

The treatment of hydrocephalus of infants or of the spinal deformities of infants associated with hydrocephalus still furnishes some of the most difficult problems. In certain types of hydrocephalus, the obstruction to the flow of cerebrospinal fluid may be localized and relieved. In a larger number the process is arrested.

HEAD INJURIES

In the treatment of head injuries, after reviewing the writings of surgeons early in the eighteenth century, and even before this time, one is inclined to feel that but little of value has been added to our knowledge of treatment. In the treatment of fractures of the skull with associated brain damage, the pendulum has swung from time to time from extreme conservatism to radical treatment, such as decompression for all, or nearly all. It seems to be the feeling of a considerable number of the conservative neurological surgeons today that the cases requiring operation are very decidedly in the minority. In the hands of those who are doing most of this work, the percentage of cases operated upon varies between 10 and 25 per cent. The basis of judgment for the cases needing operation is made not only upon the signs of pressure which are present, but upon whether or not they are progressing. The classical signs of acute intracranial pressure are well known. The most reliable ones are slow pulse, increased pulse pressure, and increasing stupor. These signs, however, are the ones presented by a normal brain which is reacting to pressure. The responses of a brain traumatized to various degrees and in various locations are bizarre. They do not always follow this clear-cut picture. It is in these cases that judgment is most difficult. These well-known signs, however, along with such aids as direct measurement of the spinal fluid pressure and observation of the eyegrounds in the more protracted cases, are helpful. In the acute traumatic cases, increased intracranial pressure is always due to an increased fluid content within the skull. This fluid may be present in the form of blood or an increase in cerebrospinal fluid, or through tissue edema resulting from the swelling of the contused brain. It is only by the removal of fluid that pressure can be relieved. The drainage of fluid by one route or another is the aim in any treatment. A decompressive operation which does not drain is usually ineffective. In addition to the removal of blood-clots and of subdural fluid accumulations⁴ by drainage through a small decompressive opening, there are other simpler methods which are of value. With large accumulations of free fluid, frequent spinal punctures are used. In true tissue edema, little or nothing is accomplished by such a procedure. The intravenous administration of hypertonic solutions of sodium chloride or Ringer's solution or the administration through the gastro-intestinal tract of magnesium sulphate, supplies other strings to the bow.

INJURY OF THE SPINAL CORD

Injuries of the spinal cord, with paraplegia or quadraplegia, are perhaps the most serious traumatic conditions with which one meets. There is the same

wide variation of opinion in regard to their treatment. Certainly, one can look back upon but few who have definitely been benefited by surgery. Injuries to the contents of the spinal canal below the level of the first lumbar vertebra are among the very favorable ones, and if taken in time much may be accomplished. All injuries of the cauda equina sufficient to give neurological findings below this level merit operative treatment. With the more common injuries just above this level, particularly those at the dorsolumbar junction, one is dealing often with a combined injury of the cord at the conus and an injury of obliquely placed fibers which go to make up the cauda equina. Often in these, little or nothing is accomplished with the cord injury. With the nerves going to the cauda equina, however, it may be possible to afford relief so that there is return of function through those which have their origin from a higher segment and yet are compressed at this point. A return of ability, even to flex the thighs, is of inestimable value to the individuals who are doomed to a hopeless paraplegia. It permits them to sit and even to carry on a certain amount of work. There seems to be no unanimity of opinion, or indeed any greater weight of opinion on one side or the other when comparing the advantages of operative against conservative treatment in injuries to the cord at a higher level. In the early stages it is usually impossible to differentiate between a complete physiological block and an anatomical interruption of the cord. Paralysis from continuing bone pressure is a popular idea with but little to support it. It is probable that the cord injury is an immediate destruction rather than one brought about by the continued pressure. Consequently, little can be expected in the way of operative relief. Compressions from blood clot are likewise unusual, and a suggestion of their presence can usually be obtained by spinal puncture. It frequently happens at operation, even in the presence of a complete paraplegia or quadraplegia, that the cord at the level of the injury appears normal to a casual examination. A small incision, however, into the dorsal columns of such a cord often shows that the entire gray matter is so pulped that it extrudes as a granular tan colored material. Injuries of the cord localized to a comparatively small area are sometimes seen. In these, the evacuation of devitalized material probably allows a greater degree of recovery. Even though most of the explorations are futile and discouragements are the rule, we feel that there are occasional, though rare, unquestioned benefits. A fair number of patients with cord injuries live for long periods. Existences under such conditions would no doubt make all of us wish that we had accepted any chance of benefit, however small. Lack of operative investigation in these patients usually becomes a life-long regret with them when complete paralysis persists.

BIRTH INJURIES

The birth injuries which have resulted in Little's disease or the cerebral spastics of one type or another, are a constant problem. In a few of them early operations are of enormous benefit. In the older children these conditions, many of them hope-

less, have been a fertile field for exploitations. Rarely at a late stage can they be benefited by any cerebral operation. Their lesions are destructive and developmental ones. In occasional instances where the process is well localized and where the spasticity has been increasing, or convulsive attacks have appeared, operative intervention may be advisable. Of work, that which has created the most interest is that of Drs. Royle and Hunter of Australia.⁵ It seems as yet too early to offer an opinion as to the final status of the procedures which are adopted by Royle, namely, sympathetic ramisection. The cases adaptable to this procedure are limited in number. It is not invariably easy to select them wisely. The operation can be applied only to those in whom a considerable degree of voluntary power is present. Royle's operation has provoked much comment, both favorable and unfavorable. There can be no doubt, however, but that certain very definite results are noted and that in certain of the cases, the procedure has been a decided advantage. It is an operation which permits such voluntary power as is present to be used, but it does not restore voluntary power.

PERIPHERAL NERVES

The surgery of peripheral nerves probably received more of an accretion to our knowledge from the experiences in the great war than any other phase of the surgery of the nervous system. It brought general appreciation of the fact that end-to-end suture of the nerves, without the aid of extraneous substances, was not only the ideal procedure, but was really the only worthwhile one. Autografts or homografts, while they are of great experimental interest and do permit of regeneration through them, do not add sufficiently to the functional improvement to make them worth while. The importance of early exploration and early nerve suture in doubtful cases was one of the most useful lessons. The long waits to determine whether or not regeneration is occurring have been disastrous and have removed the last chance for the patient to gain anything like a satisfactory result. It is probably not so much that regeneration will not occur when suture is performed late, but that the motor apparatus will no longer be in condition and cannot be kept in condition to receive it. While the importance of physiotherapy to prevent stiffening of joints and proper splinting to prevent overstretching of the muscles were of great value, it became obvious, on the other hand, that the time-honored electrical treatments and massage of muscle bellies did nothing to either hasten recovery or augment it. The experimental research of McLeod and his co-workers at Toronto entirely explodes the idea so long held of the usefulness of faradic and galvanic treatment of the paralyzed muscles.

The scope of neurological surgery permits that mention only can be made of these varied conditions.

Steady advancement on the amelioration or cure of numerous other conditions can but be mentioned. The difficulties in the treatment of brain abscess and how to meet them have received a great share of attention, the amelioration and cure of certain cases of meningitis have all been advances in the handling of acute infections of the central nervous system.

Peripheral nerve surgery in civil life has received attention in the lessening of certain forms of spasticities, in nerve sutures for facial palsy and for palsy of the recurrent laryngeal nerve.

Cervical operations upon the phrenic for intractable hiccup and for immobilization of the diaphragm in pulmonary tuberculosis are receiving consideration.

Resection of the various portions of the cervical sympathetic system or the pain in angina pectoris has been followed in numerous instances by striking relief. It is easily performed under local anesthesia. We have seen patients return to work after long periods of distress and incapacity. It is recognized that such a procedure can have no curative effect on the underlying pathology. Notwithstanding this, the measure of relief has been great enough so that the patients consider it highly satisfactory.

EPILEPSY

Mention should be made of the epilepsies. Certain of the focal epilepsies have a surgical lesion as their basis, and demand surgical attention. In the more common general convulsive states, the convulsions are but a single manifestation of a widespread brain affection. The immediate basis for the convulsions, whether it be circulatory, chemical or from some other cause, is as yet unknown. In such conditions the extreme plight of the patient supplies a field for the overenthusiastic operator. Some epileptics are said to have remained free from convulsions after having had their skulls fractured. Such operators may act only in the role of the traumatizing agents. In the present state of knowledge of the subject, our energies can best be directed toward a solution of the problem rather than to misguided surgical attempts to cure convulsions.

The range of neurological surgery has so widened, and the impetus in its advancement is so great, that the next decade should show many brilliant accomplishments.

The requirements in diagnosis, the character of preparation for such work and the technical procedures themselves are such as to merit specialization in this field. Men interested in it may question the advisability of selecting it on the score that it is too limited. Probably this has always seemed true in contemplating limitation to any specialty. The greater the number of well-trained individuals interested in the same problems, the greater will be the amount of work and the progress in it.

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SURGICAL TREATMENT OF DISEASES OF THE COLON

By C. E. PHILLIPS, M. D., Los Angeles, Calif.

I believe we can say that the cecostomy performed in the manner outlined furnishes us one of the best possible means of treatment of many of the severe pathologic conditions of the large intestine, sigmoid and rectum, because it allows us to treat them on the sound surgical principles of rest and cleanliness.

DISCUSSION by A. B. Cooke, Los Angeles; Emmet Rixford, San Francisco; George K. Knapp, St. Helena Sanitarium; Frank H. Paterson, Santa Ana; M. S. Woolf, San Francisco; Rea Smith, Los Angeles.

THE colon is an organ for absorption and a receptacle for waste. This dual function requires it to be resistant to the most virulent catabolic poisons and at the same time allow the products of digestion to pass readily. The limiting wall which stands between the living organism on one hand and substances capable of destroying it on the other, is the mucosa. In a state of health it permits the passage of water and nourishment, but obstructs the passage of the common substances deleterious to the organism. Certain accidents of nature occur which alter or destroy this function, and a diseased condition results. We may say, roughly, the severity of the disease depends on the disproportion existing between the pathologic factor on one hand, and the tissue resistance on the other.

The etiology of diseases of the colon can be divided into two general classes: predisposing and exciting. Certain conditions arise which predispose to colonic diseases. Many of these bring it about in a twofold way: (1) By lowering the resistance, and (2) by increasing the virulence of the attacking organism.

Probably the first predisposing factor that should be mentioned is stasis. The second is toxins arising from improper food, faulty digestion or decomposition. The third is systemic diseases interfering with the normal process of absorption and elimination. The fourth, anatomic anomalies, malformations, and distortions.

The exciting causes we may classify in order of their importance: First, bacterial and protozoic infections of the colon. Second, animal parasites. Third, catabolic poisons. Fourth, inflammations and new growths extending from adjacent structures.

PATHOLOGY

(It is not the author's intention to take up the subject of pathology of colitis except in a very general way.)

Pathologic conditions of the colon may attain any degree of severity, from a simple inflammatory condition which will recover spontaneously to a fulminating process leading to extensive destruction. When the latter takes place the faculty of tissue repair is lowered. Healing takes place, if at all, with the formation of scar tissue. First, this causes deformities by contraction and interferes with the normal function of the bowel. Second, the scar tissue does not possess the non-abrasive or the non-corrosive faculty of the normal membrane.

The result is that extensive ulceration heals with great difficulty, and when healing does take place

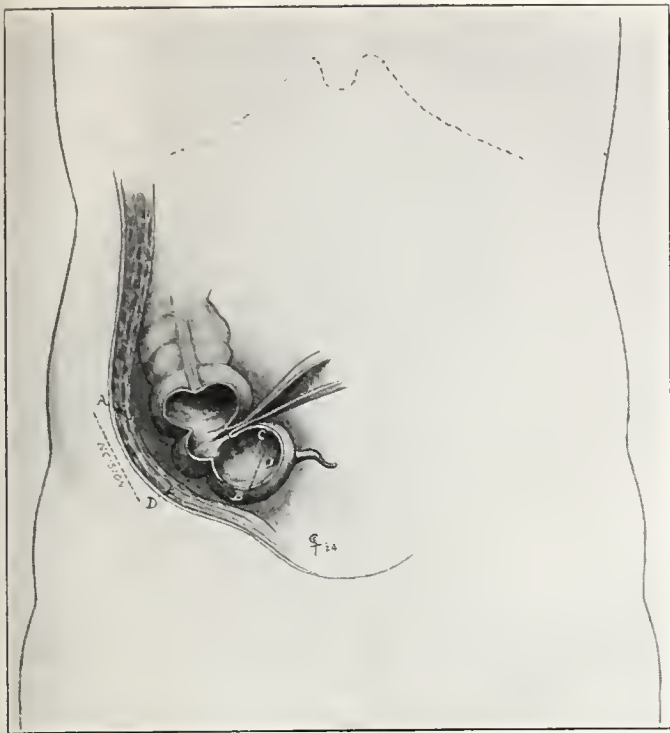


Figure 1.—Shows diagrammatically the position of the ileocecal valve, the caput coli, the appendix, and the part of the cecum (c-b) which is to be stitched to the abdominal wall at (a-d).

recurrences of ulceration are common. Lesions of the bowel may assume almost any form. Perforation from infection is very rare. We can roughly state the greater the destruction the more serious the condition. Hence, our effort should be to prevent extensive damage rather than repair extensive lesions after they have formed.

DIAGNOSIS

To determine the cause of the trouble is not sufficient. We must also ascertain the severity, progress, duration, and extent, before we can intelligently decide upon the treatment to be employed. There are certain aids in diagnosis which must not be overlooked. A careful physical examination, noting the systemic effects of the infection or growths; the x-ray; the proctoscope or sigmoidoscope; the laboratory examination of the excreta and serological tests, are the usual. In some patients an exploratory incision is advisable. From whatever cause the disease arises, a careful and exhaustive study should be made. An early and complete diagnosis must be made if the patient is to receive the maximum benefit from the type of treatment selected.

PROGNOSIS

Prognosis will depend upon: First, condition at institution of treatment. Second, the kind of treatment employed. No line of treatment will restore a colon whose mucosa has been extensively destroyed and from which destruction cicatrices and deformities have resulted. Even the most malignant infection, if treated early by the application of physiologic rest and surgical cleanliness, may be cured without sequellae. We should no more temporize with a destructive lesion of the colon than with a similar condition of the appendix or gall-bladder. While the immediate dangers are not so great in the former, yet if a large number were carefully

analyzed, the average morbidity in the severe colitis cases would exceed that of a like number in appendicitis or cholecystitis.

TREATMENT

The difficulty of treating diseases of the colon is apparent. The multiplicity of remedies implies their inefficiency. The two prime essentials for the treatment of infection anywhere are rest and cleanliness. The two prime essentials for treatment of colonic diseases are the same. The difficulty in attaining these conditions renders their application inadvisable except in those cases where failure to employ them may lead to disaster.

By medication and irrigation, direct treatment to the colon is carried out and drugs produce relative rest. Yet the impossibility of relative cleanliness without sidetracking the bowel is evident to all. Without freeing the bowel of irritating contents, rest is not always desirable. The urgency of treatment that will arrest disease process before irreparable injury has been done, is likewise self-evident. Under no circumstances should a patient be taken to surgery when satisfactory healing will take place by simpler means. On the other hand, a patient should not be permitted to reach a state where irreparable damage has been done without recourse to this means.

Let us lay down some general rules where surgery is indicated: (a) *Acute infections* of the colon which have not responded to the usual line of medical treatment and where the continuance of the disease threatens the life of the patient. (b) *Chronic infections* of the colon which have not responded to the usual treatment and which are so severe that a continuance may lead to stricture, malignancy or a serious interference with the general health. (c) *In neoplasms* of the intestine, where it is essential to prevent irritation by diverting the intestinal contents. (d) Where operative work on the large bowel is contemplated, a sidetrack is frequently desirable.

In contemplating an operation of this kind, we must take into consideration certain factors: The first is danger: The operation I shall describe is simple, can be done in case of necessity with a local anesthetic, requires but little time in its performance, and per se should have practically no mortality rate. The second is disability: While the patient with a cecostomy is not confined to bed, to the house, or prevented from attending to light business, yet its employment is sufficiently unpleasant to contra-indicate its use except under certain conditions. The third is nutrition: Nutrition is not seriously affected by sidetracking the entire large bowel. With a careful regulation of diet there is comparatively little inconvenience and even a rapid gain in weight may take place. The fourth is repair: A restoration of the continuity of the bowel is effected with ease when healing has taken place.

OPERATION

The site of operation is in the right iliac region. The object is the temporary sidetracking of the entire lower bowel. An incision is made through the skin as in the McBurney incision for appendectomy. The muscle fibers of the external oblique must be

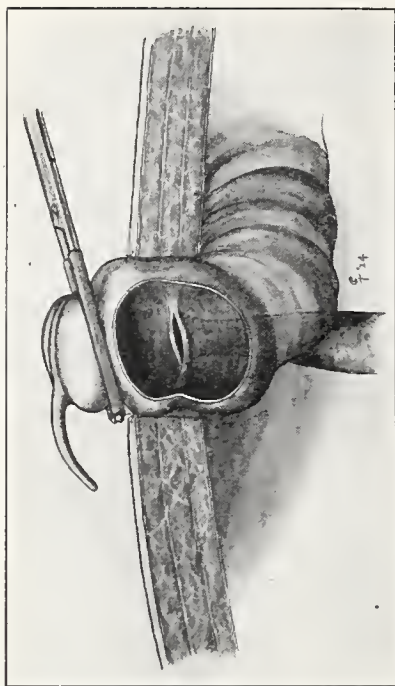


Figure 2.—Shows the selected portion of the caput coli and appendix, presenting through the abdominal wound: the ascending colon is fixed to the abdominal wall by a stitch to prevent a prolapse of the ascending colon and thus interfering with the protrusion of the ileocecal valve. The presenting portion of the cecum is grasped by forceps and the distal portion is to be excised.

more than separated. They must be cut obliquely so that a stricture will not form about the intestine when the partial prolapse occurs. The fibers of the internal oblique and transversalis are cut transversely, or, in other words, the oblique incision is carried through all the layers of the abdomen and extends for a distance of about two and one-half inches. The head of the cecum is brought up, and the portion selected for the opening is just opposite the ileocecal valve, starting about one-half inch from it and continuing around the end of the cecum for a distance of about two inches (Fig. 1). This portion of the cecum includes the appendix and longitudinal band extending to the appendix from the ileocecal valve. The parietal peritoneum is stitched to the visceral peritoneum allowing a fold of the cecum about two and one-half inches longitudinally and one and one-half inches vertically to show, including the appendix. This suture approximates the parietal and visceral layers of the peritoneum. It is put in carefully and must prevent leakage. Before the peritoneum is closed completely, another stitch is applied at the upper angle of the incision fixing the longitudinal band to the parietal peritoneum above the incision (Fig. 3), so that when the partial prolapse of the bowel occurs, the ilio-cecal valve will evert rather than the proximal part of the cecum. The closure of the peritoneum is then completed. The exposed part of the bowel (two inches in length and including the base of the appendix and wide enough to include the entire thickness of the intestinal wall), is grasped with a clamp (Fig. 2). A few stitches are taken to approximate the muscles and fascia to the bowel proximal to the bite of the clamp. Two or three mattress sutures are inserted through the skin and muscular layers approximating them to the cecum. The constricted portion is excised distal to

the clamp, so that when the clamp is removed the bowel opens. The wound is covered with petrolatum, and a dressing is applied over the clamp. On the following day the clamp is removed. The bowel opens immediately. Fluffed gauze dressings changed frequently take care of the discharge. There follows a slight prolapse of the ileocecal valve through the opening (Fig. 3). Stitching the cecum to the parietal peritoneum above brings the ileocecal valve through the opening, and we have a complete side-tracking of the entire large bowel. This prolapse of the ileocecal valve remains and thus cuts off entirely the fecal matter passing through the large bowel. The prolapse never exceeds the distance of an inch or so because the mass of the cecum is too great to extrude out of the rather small muscular opening. The small size and sphincter-like action of the opening likewise prevents a continuous discharge from the ileum. By a proper regulation of the diet, restriction to foods with small residue, and by taking liquids in small amounts at frequent intervals, bowel evacuations are limited to two or three a day. Irrigations and treatments to the large bowel can be carried on by flushing either from above or below. Flushing from below and having the flow come out the cecostomy opening lessens peristaltic action, thereby affording more complete rest. After trying various medicinal irrigations, we come to the conclusion that rest is by far the most important agent in practically all conditions requiring the operation. In the acute cases, continuous irrigations through the rectum will tide over many who would otherwise succumb to toxemia. Ulcerative conditions will heal most readily with rest and an occasional mechanical cleansing by flushing with plain water. With the patient relatively comfortable, a colostomy bag is applied which permits getting about in a fairly normal manner. The cecostomy is allowed to remain functioning until complete recovery or maximum improvement of the bowel has taken place. When we are satisfied, after careful examination, that healing is complete or maximum improvement has taken place, the continuity of the bowel is re-established.

CLOSURE

Anesthesia—A general or regional, but not local, should be employed. A careful cleansing of the colostomy opening, and of the skin about it, should be first performed. An incision is then made around the prolapsed bowel in the muco-cutaneous junction. The mucosa is liberated just sufficiently to permit suturing the edges with the mucosa inverted. This suture is continuous and put in with sufficient care to insure a tight closure. The suture material is some kind of antiseptic catgut. When the closure is complete the entire wound is thoroughly iodized, and then a debridement is performed by dissecting off all the iodine-stained tissue. Whatever infectious material was in the wound is thus fixed by the iodine, and its removal is insured by the excision. Following this the cecum is freed and the peritoneum opened. The cecum is closed by a second layer of sutures which further folds it in until normal peritoneum only is presenting. The restored cecum is

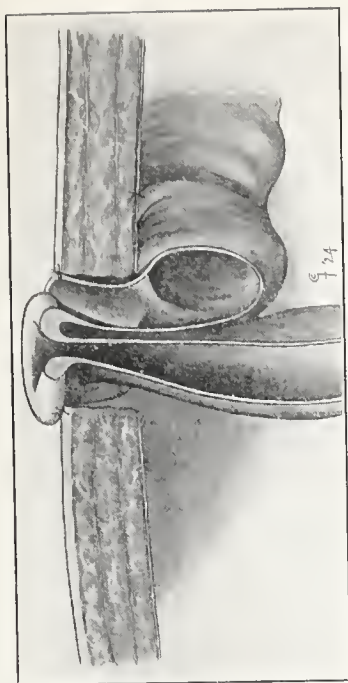


Figure 3. — Shows diagrammatically the ileocecal valve prolapsed and enlarged through the abdominal wall. The opening into the large intestine is just above the ileocecal valve.

dropped back into its normal habitat and the abdominal wall is closed by layer suture.

In conclusion, I believe we can say that the cecostomy performed in the manner I have outlined furnishes us one of the best possible means of treatment of many of the severe pathologic conditions of the large intestine, sigmoid, and rectum, because it allows us to treat them on the sound surgical principles of rest and cleanliness.

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DISCUSSION

A. B. COOKE, M. D. (Hollingsworth Building, Los Angeles)—Doctor Phillips' admirable paper directs our attention to an important and much-neglected subject. We are prone to regard affections of the colon as medical maladies, treating them as such oftentimes until damage has been done which even surgery cannot undo. It is undoubtedly true that early resort to the operative treatment described, in properly selected cases, would reduce both morbidity and mortality.

The technique of cecostomy as outlined by the essayist is clear and possesses the virtues of simplicity and efficiency. A feature of the utmost value is that it permits the ready restoration of the bowel continuity when the therapeutic purpose has been served.

I should like to mention the application of this operation in cases of intestinal obstruction. It is always desirable to relieve the obstruction in acute obstructive conditions by opening the gut as far proximal to the site of stenosis as possible, in order that subsequent more radical surgery may be performed in a relatively clean field. Cecostomy offers this advantage whether the causative lesion be located in ascending, transverse, or pelvic colon. I think this is an important point to bear in mind.

EMMET RIXFORD, M. D. (1795 California Street, San Francisco)—The technique described by Doctor Phillips for cecostomy is ingenious and would appear to have distinct advantages over the operation as ordinarily performed, particularly because, by virtue of prolapse of the ileocecal valve, practically complete drainage of the intestinal contents can be effected.

It is a question whether cecostomy will altogether supplant appendicostomy where it is desired to maintain an opening in the cecum for a long time for irrigating purposes. As a preliminary operation preparatory to removal

of the rectum for carcinoma or syphilitic stricture, I believe left inguinal colostomy is preferable in most cases because of the preservation of the colonic function of absorption of fluids, but it must be done with due regard to the amount of the lower bowel which it is proposed to remove.

GEORGE KNAPP ABBOTT, M. D. (St. Helena Sanitarium, Calif.)—Those surgeons who have given to surgical science the most lasting contributions have built their methods upon a careful study of normal and pathologic physiology. Nevertheless, experience is such a valuable teacher that one hesitates to express any decided opinion regarding new procedures.

Severe colitis, without ulceration, is so intimately bound up with pathology of other parts, or even with so-called nerve exhaustion, as to render it more largely a symptom or an accompaniment of other disease than a disease *sui generis*. Its cure is usually a matter of the removal of disturbing nervous factors or reflex nerve irritation originating in pathology of the appendix, pelvic adnexa, gall-bladder, focal infection, etc. The field for cecostomy would seem to be largely in ulcerative colitis that resists ordinary non-surgical measures. The importance of complete physiologic rest in the treatment of ulceration of hollow viscera has been well demonstrated in the surgical experience with duodenal ulcer. The success of gastroenterostomy depends upon the completeness with which the food current is diverted through the new opening. Severe or extensive ulcerative colitis yield to cecostomy and appendicostomy. Dr. Phillips' careful technic should give the former a recognized place in physiologic surgery.

FRANK H. PATERSON, M. D. (Walter L. Moore Building, Santa Ana, Calif.)—The value of cecostomy in the presence of such pathologic conditions of the colon as mentioned by Doctor Phillips has been gaining ever-increasing recognition since the work of Weir in 1902, preceded by a decade by the observations of Councilman and Lafleur and the subsequent work of Musgrave and Clegg.

The manifest benefits of this operation (and also appendicostomy) over all other forms of therapy in those intractable amebic infections so frequent among our veterans of the Spanish-American War who had seen service in the Philippines, gave distinct impetus to its employment in other forms of colon disease.

The technic devised by Phillips appears to possess advantages in the consequent position of the ileocecal valve which serves to cut off entirely the passing of fecal matter through the large bowel, thus enhancing the degree of rest to the latter structure which the operation was principally designed to accomplish. A further factor in its favor is that it does not preclude the possibility of irrigating the lower segment of the bowel either from above or below, should this be indicated. The ease of restoration of the gut to approximate its previous anatomic relations constitutes a third favorable element.

A review of a series of appropriately selected cases in which this technic had been utilized should prove a matter of considerable clinical importance.

M. S. WOOLF, M. D. (240 Stockton Street, San Francisco)—The procedure of Doctor Phillips for resting and cleansing the large bowel in certain types of colitis should prove a valuable contribution in treatment of this disease. I see many advantages in unloading the ileum by an opening which is large enough to evacuate everything and yet does not permit fecal contents to pass over the ulcerated surfaces. If cecostomy can be done, it will mean that the ileum is not affected and that the cecum itself is not diseased. There are, however, some patients in which both cecum and lower part of the ileum are the seat of ulcers. Before reading Phillips' paper, I was rather inclined to favor an ileostomy to divert the fecal current, but I see no reason why a cecostomy, with a prolapsing ileo-cecal valve, might not do everything that an ileostomy does, if the cecostomy does not involve a dangerous area. In addition, since the appendix may be made to protrude through the same opening as the cecum, one might give appendicostomy a trial before even entering the cecum. Lockhart Mummery favors an appendicostomy in these cases. Since Doctor Phillips read his paper, I have wished to perform his type of operation, but the only case that has come into my hands since that time had such evident signs of in-

flammation about the appendix and cecum that I was obliged to open the ileum.

REA SMITH, M. D. (1136 West Sixth Street, Los Angeles)—The technic of cecostomy as described by Doctor Phillips interests me very much. I have occasionally done a cecostomy in the ordinary way, usually in a hurry to relieve a complete obstruction lower in the colon, to be followed by a secondary operation. Cecostomy has proven a great benefit at the time of the secondary operation in keeping the gas pressure off the stitch-line, but it has been closed with difficulty.

It seems to me that the operation as described by Phillips can be done just as quickly as the ordinary procedure of stitching the cecum into the wound at its presenting point, and it gives a very much better intestinal drainage at the time it is needed, and is more easily closed afterwards. As a means of sidetracking the colon to provide rest in the treatment of ulcerative colitis, it is certainly a more positive procedure than appendicostomy or simple cecostomy, and I shall use it at my first opportunity.

DOCTOR PHILLIPS (closing)—I want to thank the men who have so ably discussed my paper. The operation is not offered as a cure-all for all gastro-intestinal ailments. The indications for its employment are clearly defined. My hope is that the procedure will be given a fair trial in cases where rest, drainage and disinfection of the colon are indicated. I am sure the procedure will be found as satisfactory in the hands of others as it had been in my own.

Simple cecostomy has been employed in certain diseased conditions of the colon for a long time, and it was in performing this operation that I found that some cases automatically sidetracked the large intestine, while in others only a fistulous opening resulted. In an attempt to analyze the results, the present procedure was devised and has proven very satisfactory in a large number of cases.

Morphin: Before and After Operations—A questionnaire sent out by M. A. Slocum, Pittsburgh (Journal A. M. A.), on the use of morphin before and after operations leads to the following conclusions: The surgical profession is distinctly not in accord regarding the use of morphin before and after operations. The reasons given, by surgeons in general, for not using morphin differ widely. It is a curious fact that one group of prominent men condemns morphin as definitely producing unfavorable symptoms, while another group advocates its use because it prevents these very symptoms. This questionnaire clearly establishes the fact that a majority of surgeons are in favor of morphin pre-operatively and post-operatively in practically all cases. At the present time there is less fear of using morphin in surgery than there was twenty years ago. Whether this should be a danger signal or whether it has come about because of advances in knowledge remains to be proved. An attempt should be made to set some sort of standard by which we can be guided in our use of morphin. While it is admitted that it is difficult to standardize the use of drugs in general, it is felt that morphin is of sufficient importance, and in general enough use in surgery, to merit at least a trial toward standardization. There seems to exist a vast field for research, animal and otherwise, in the therapeutics of morphin. It is true that there is a great deal known about the pharmacology of morphin. However, there is little mention in the literature of work done on animals regarding the effects of morphin on the kidneys, circulation, gastro-intestinal tract and respirations.

Needs More Study—Honey is said to contain all the essentials for animal life. The average quantity of water is 17.2 per cent; mineral salts, 0.75 per cent, and protein derived from pollen of plants, 1.8 per cent. The proportion of grape sugar and fruit sugar to the other solid constituents is ten to one. Honey contains 1.1 per cent formic acid and 0.3 per cent of mallic acid and 0.2 per cent of acetic acid. It is possible that honey contains all the vitamins necessary for life; it is the sole food of the bee.—Lancet.

TREATMENT OF CHOLECYSTITIS

By W. W. BOARDMAN, M. D., San Francisco
(From the Gastro-Intestinal Clinic, Stanford University Medical School)

No rule of thumb methods.

It is not primarily a question of medical as opposed to surgical methods.

Many factors, sociological and medical, have a bearing on the choice of treatment.

DISCUSSION by Walter C. Alvarez, San Francisco; Wade H. Walker, Long Beach; L. G. Visscher, Los Angeles; Charles D. Lockwood, Pasadena.

NO procedure as yet devised has given uniformly satisfactory results in the treatment of cholecystitis. As our knowledge of the physiology and pathology of the hepato-biliary system increases, we may anticipate the development of more rational and more successful prophylactic and therapeutic measures, but at present this knowledge is far from complete, and our efforts are, therefore, more or less empirical and unsatisfactory. In order that we may have as clear a conception as possible of our therapeutic problem, it will be well to briefly review some of the more recent additions to our knowledge in this field. First it is essential to bear in mind that the gall-bladder is not an isolated and independent organ, but that it is an integral part of the hepato-biliary system, and that factors influencing one part of the system may, and usually do, influence the remaining parts.

There has been much discussion regarding the function of the gall-bladder, but the work of Mann, Rous, MacMaster, and others has demonstrated that it is not essential to life, that it acts primarily to concentrate and store bile in the interdigestive periods, that it apparently acts to decrease the alkalinity of its contents, that it probably acts as a safety valve in the biliary system allowing rapid equalization of pressures, and that it has a mucous secretion.

It is this ability of the gall-bladder to concentrate the bile rapidly and to about one-tenth of its original volume that enables it, with a normal capacity of 50 cc., to store the large amounts of bile secreted in the interdigestive periods. The secretion of bile is continuous, and varies from 500 to 1500 cc. per day, but the excretion of bile into the duodenum is intermittent, occurring normally only during the digestive periods.

The excretion of bile is controlled by the sphincter of Oddi, which relaxes in response to the stimuli produced by digestive products in the duodenum. The resulting discharge of gall-bladder bile is apparently partially due to an active contraction of the gall-bladder as suggested by Meltzer, and partially to a passive emptying in response to the fall in pressure in the common duct. This emptying of the gall-bladder is always incomplete, so that even under normal conditions there is some gall-bladder stasis which may be greatly increased by various abnormal conditions.

Liver bile is alkaline in reaction, but the recent work of Drury shows that in dogs, rabbits, and from a limited number of observations in man also, the gall-bladder bile is acid-neutral, or very weakly alkaline. This decrease in alkalinity, which seems to be produced by the gall-bladder itself is, from Drury's work, of the utmost importance in preventing the precipitation of cholesterol, calcium carbo-

nate and calcium bilirubinate from a concentrated and static gall-bladder bile.

The secretion and composition of bile is largely dependent upon the composition of the portal blood which brings to the liver cells the products of absorption from the spleen, the stomach, the small intestine, and the proximal half of the large intestine. Bile contains four important groups of substances; the bile pigments, the bile salts, fatty materials, especially cholesterol, and the inorganic salts, especially calcium. The bile pigments are the products of hemoglobin catabolism; the bile salts are of obscure origin; cholesterol is apparently partly derived from certain body tissues and partly from certain foods, especially yolk of eggs, butter, cream, and animal fats. Under certain normal and abnormal conditions, the quantity of one or other of these bile constituents may be increased with a resulting increased tendency for precipitation to occur. As already stated, such precipitation seems normally to be prevented by the decreased alkalinity of the gall-bladder bile.

Infection of the gall-bladder is essentially an infection of the deeper layers of the wall, and not an infection of the mucosa or of the contained bile. The question of the mode of infection of the gall-bladder remains unsettled. Five possible routes have been suggested: 1. Ascending infection from the duodenum. 2. Descending infection from the liver by bacteria carried out in the bile. 3. Hematogenous infection. 4. Spreading infection by chance contact with some inflamed organ. 5. Lymphatic infection from a previously infected liver. The experimental and clinical evidence seems to indicate that the ascending and descending infections are infrequent in previously normal gall-bladders, but may be of considerable importance under abnormal conditions such as occur with stasis from obstruction, stones, or serious injury to the wall of the gall-bladder. The hematogenous route, as especially emphasized by Rosenow, has gained wide acceptance, and is of undoubted importance. Infection by chance contact with inflamed organs is of infrequent occurrence.

Graham and Peterman have recently advocated the lymphatic route from a previously infected liver. They call attention to the intimate lymphatic connection between the right lobe of the liver and the gall-bladder, and have demonstrated the presence of hepatitis in practically all cases of cholecystitis. This latter finding has been confirmed by Judd and others. From their experimental and clinical investigations, they conclude that: "In many cases, probably in a majority, cholecystitis represents a direct extension to the wall of the gall-bladder from a liver already inflamed. The hepatitis usually begins and is most marked in the interlobular or periportal tissues, and it is apparently due to infection brought to the liver by the portal vein, and more rarely perhaps by the hepatic artery. Pericholangitis then occurs, and because of the intimate anastomosis between the lymphatics of the intra-hepatic and extra-hepatic biliary systems, direct extension into the wall of the gall-bladder takes place as well as into the common duct and the pancreas. From the hepatitis, therefore, a cholecystitis, choledochitis, and pancreatitis can be understood to occur, if in the consideration of inflammations in this locality we apply

the well-known fact concerning inflammation in general, namely, that it extends by way of the lymphatics. We believe that the ideas expressed in this article explain more readily than any others heretofore offered the frequent and well-recognized association of biliary tract infections with lesions of the portal system (appendicitis, peptic ulcer, typhoid fever, suppurating hemorrhoids, etc.)."

After reviewing the evidence in favor of the various possibilities, it seems apparent that, in the study of the etiology of the individual case, each route must be given due consideration.

Finally, regarding the question of stone formation, we are almost totally lacking definite knowledge. It has been accepted that infection, stagnation of bile and increased concentration of one or more of the bile constituents, especially cholesterol, were apt to lead to stone formation. Of these, infection has been considered of prime importance, although it has been maintained that the single pure cholesterol stone might be formed in the absence of infection. Practically all stones form about a central nucleus believed to consist primarily of organic debris, usually of inflammatory origin, such as the various sediments present in pathological gall-bladders, clumps of bacteria, etc. However, practically none of these ideas have been subjected to experimental proof, and a careful analysis discloses many uncertainties. The recent work of Rous, Drury, and MacMaster seems to promise more definite information. They have demonstrated the possibility of stone formation in dogs in the absence of "influences to which many authors have accorded primary significance, namely, infection, stasis, and gall-bladder activity."

They observed the development of two types of stone: one, the calcium carbonate stone which was found to form only within and not upon the surface of organic debris which had been retained for some time, and apparently undergone changes favoring carbonate deposit, and they question "whether the active inflammation found in association with human carbonate stones may not tend to their formation by providing in inorganic debris a chemical nidus for deposition, while so interfering with the ducts that this debris is not voided as it would be under more ordinary conditions, but retained to undergo changes preliminary to carbonate deposition." The second was the mixed type, especially those containing much bilirubinate which form about special centers of deposition. These centers were formed from the abnormal bile secreted after liver injury of various types, and were composed of calcium carbonate and calcium bilirubinate, together with an organic scaffolding. In human bile in the absence of infection, they have found similar nuclei composed of calcium carbonate which in their impression are derived from the contents of abnormal gall-bladders and which undoubtedly act as centers of deposition.

Finally, they call attention to the fact that, although liver bile is quite definitely alkaline, gall-bladder bile in the dog, rabbit, and apparently in man, is less alkaline, neutral or acid in reaction. This change in reaction appears to be brought about by the activity of the wall of the gall-bladder and independent of its concentrating function. The importance of this finding lies in the fact that calcium

carbonate, cholesterol, and presumably bilirubinate, will precipitate from alkaline solutions, but not from acid. In other words, it seems probable that the development of the nuclei above noted and the growth of stones in the human gall-bladder may be dependent upon a failure of the gall-bladder, through one cause or another, to alter the reaction of its contents.

From this brief review, it is evident that much uncertainty exists regarding essential questions of etiological importance in the development and persistence of cholecystitis, but from it we may build up a working hypothesis to guide us in our therapeutic efforts. Thus, in cholecystitis we are dealing with an infection not only of the wall of the gall-bladder, but of the liver, the bile ducts, and the pancreas. The primary infection may have been an acute generalized infection, or a focal infection drained by the portal or systemic circulations. Infection once established may so alter the composition and reaction of the bile and the motility of the biliary system that conditions essential to stone formation are produced. Stones once formed, either secondary to infection, to metabolic disturbance, or to alterations in the reaction of the gall-bladder bile, favor the persistence of existing infection or the occurrence of secondary infection.

From this it follows that for the prevention of cholecystitis we must first seek and remove foci of infection at the earliest possible moment, rather than to await the development of complications.

Secondly, we must recognize the existence of periods of special danger such as occur during the later months of pregnancy; during and after the acute infections, especially typhoid; during and after inflammatory process of the large or small bowel. At these times we must try to overcome any tendency to biliary stasis; overconcentration of any of the bile constituents, especially cholesterol; any normal or toxic overstimulation of the liver by poorly balanced diets, overfeeding, irritating types of food and drink, and irregular bowel action, and finally by general hygienic measures, especially mental and physical rest, to as quickly as possible restore individual resistance.

Therapeutically, our indications are: 1. To recognize the inaugural symptoms of cholecystitis and to institute proper treatment before such extensive organic changes have occurred that the restoration of functional efficiency is rendered doubtful or impossible. 2. To prevent further infection of the hepato-biliary zone from primary areas of infection, either in the portal or systemic areas. 3. To prevent, as far as possible, the occurrence of liver injury by materials absorbed from the gastro-intestinal tract or elsewhere. 4. To prevent or correct metabolic disturbances which result in increased concentration of one or more of the bile components. 5. To eliminate the existing infection in the gall-bladder, liver and ducts. 6. To remove any mechanical irritation or obstruction in the biliary system. 7. And, finally, to build up the general body resistance.

How may these various objects be attained?

First, and of prime importance, is the crying need of earlier diagnosis. We must not allow our patients to go on for from five to twenty-five years

with diagnoses of "nervous indigestion," "flatulence," "dyspepsia," "biliousness," "auto-intoxication," "neurasthenia," and a host of other such meaningless terms and with equally aimless and random treatment, while the pathological processes are slowly progressing to such a point that at length we are forced to a realization of the true condition. Only too frequently this realization awaits the onset of some dramatic and often tragic surgical complication or the development of marked degenerative changes in other organs. There seems to be a natural hesitancy on the part of the profession to diagnose cholecystitis until forced to do so, and yet when we recall the frequency of its occurrence this hesitancy is difficult to understand. As Deaver says: "Certainly, not less than one in ten adults are at some time the victims of infective hepatitis or cholangitis and cholecystitis, which, for the most part, passes unrecognized as one of the forms of indigestion."

We cannot at this time go into the method of making an early diagnosis further than to state that a careful history is of prime importance and cannot be replaced by any other measure or group of measures. In a physical examination, the palpation of the gall-bladder region, with the patient in the sitting position in front of the examiner, with the palpating fingers of the right or both hands hooked under the right costal border, frequently discovers when the liver is depressed, both by position and by the inspiratory movement of the diaphragm, localized areas of tenderness not evident by the usual method of examination. The findings by the Lyons' test may be of value to the experienced worker, but as performed and interpreted by the average physician, nurse, or laboratory worker, are apt to be misleading. The recent proposal by Graham to render the gall-bladder radiographically dense by the intravenous injection of tetrabromophthalein may be of value in the exceptional case, but cannot be adopted routinely. Finally, we may suggest that, if the large group of cases now uncritically classed as "indigestion" of indefinite type were considered as cholecystitis until proven otherwise, fewer and less serious errors in diagnosis might be made.

Second. Accepting the diagnosis of cholecystitis, we wish to prevent, if possible, further infection of the hepato-biliary zone from any focus elsewhere in the body. To this end, teeth, tonsils, sinuses, lungs, genito-urinary tract, and intestinal tract must be carefully scrutinized and all the necessary measures instituted. Radicalism in this connection we feel is indicated.

Third. Recalling that the character of the bile is dependent upon the integrity of the liver cells and the composition of the portal blood, it is evident that we must endeavor to so regulate the gastro-intestinal function that the portal blood may be as free from toxic material as possible, and from overconcentration of any of the normal products of digestion. We have little actual knowledge of these processes, but it is clearly indicated to avoid poorly balanced diets and those with chemically mechanical or toxically irritating properties and to regulate bowel function by the diet if possible, or by proper laxatives if necessary.

Fourth. The correction of overconcentration of

one or more of the bile constituents is still to a very large extent beyond our power to control. In the case of cholesterol, however, there is evidence to show that, by decreasing the exogenous supply, we may decrease the amount in the blood serum and bile, and presumably thus decrease any existing tendency for it to precipitate out. The cholesterol containing foods are still not agreed upon, but the yolk of egg, cream, butter, and animal fats are most under suspicion and should, therefore, be restricted. The concentration of the bile salts and bile pigments may to some extent be controlled by overcoming any existing constipation, and thus preventing excessive absorption of these substances from the intestinal tract and their return to the liver. The question of dilution of the bile by abundant fluid intake rests on doubtful experimental ground, but is a thoroughly justifiable procedure. Recalling, however, the concentrating property of the gall-bladder, it is evident that prevention of biliary stasis is our most vital problem. If the influence of the acid reaction of the gall-bladder content in preventing precipitation of cholesterol, calcium carbonate and calcium bilirubinate is confirmed, it may eventually be possible to control this reaction by suitable drugs.

Fifth. The elimination of existing infection in the hepato-biliary system is the goal of all our efforts. We have little information regarding the frequency of spontaneous resolution of infections in this region, but, as has been said, it is undoubtedly true that infection here as elsewhere in the body, if not too severe or resistant is gradually overpowered by the forces of immunity. On the other hand, there is abundant evidence of the most remarkable persistence of many biliary infections with the resulting pathological changes in liver, gall-bladder, biliary passages, and pancreas. Probably the prime reason for the persistence of these infections is the intermittent and incomplete drainage of the biliary system, especially the gall-bladder, with the resulting "back pressure, stagnation and alternating distention and contraction, factors which in every hollow viscus are strongly hostile to the eradication of infection."

Reasoning from the general knowledge of the treatment of infection, four procedures suggest themselves: 1. Drainage. 2. Anti-bacterial drugs. 3. General and special measures to increase the resistance of the patient. 4. Extirpation of the diseased tissue.

Proper drainage with the relief of back pressure, stagnation and alternating distention and contraction will in suitable cases free the hepato-biliary system of infection, provided it can be maintained for a sufficient period of time.

Medically, our efforts to improve biliary drainage have until recently been most questionable, and consisted of: 1. The more frequent administration of food to call forth the normal stimuli. 2. Exercises. 3. The intake of large amounts of water. 4. The administration of so-called cholagogue drugs. There can be no objection to the use of the first three methods, but their effect on biliary drainage, especially in the presence of gross pathological changes, must be extremely slight.

As for the cholagogues, we now know that bile and bile acids are the only substances that decidedly increase bile secretion, although salicylic acid and

olive oil have a less definite effect. However, it must be borne in mind that our object is not primarily to increase the secretion of bile, but to hasten its elimination from the biliary system. It is, therefore, possible that the drugs usually spoken of as cholagogues, such as aloes, rhubarb, the mercurials, podophyllum, and nitro-hydrochloric acid act to decrease bile stasis by depressing the tone of the sphincter of Oddi. Another action of these substances which may be of value is the possible decreased concentration in the bile of the bile pigments and bile acids through their increased elimination in the stool. However, even combining the true and false cholagogues, the drainage of the biliary system is far from ideal, although at least temporary clinical improvement may follow their use.

The introduction of the Lyon-Meltzer method has given us a non-surgical method of draining the biliary system, which is a decided advance over our previous medical methods. This method consists of the introduction of a solution of magnesium sulphate directly into the duodenum, following which there is normally a return flow of bile, the first, or so-called "A" bile, being light yellow and coming from the ducts, the second, or "B" bile, being much darker and apparently coming largely from the gall-bladder, and the third, or "C" bile, being again light yellow and apparently coming directly from the liver. There has been much discussion regarding the relative merits and demerits of this method, but in properly selected cases there is no doubt that treatment is followed by decided clinical improvement which is associated with a corresponding improvement in the gross and microscopic appearance of the bile and, in some cases at least, an improvement in liver function, as evidenced by an improved phenoltetrachlorophthalein excretion. It must be admitted that this method, when applied two or three times a week, or even when the tube is continuously kept in place and the stimuli frequently applied, falls far short of complete drainage. On the other hand, it must be recognized that this method may be persisted in for relatively long periods, so that in cases uncomplicated by stones, adhesions or too extensive pathological changes, there may be a gradual return to more normal function and the eradication of existing infection. The objections to the method are that it is time-consuming, more or less disturbing to the patient, although very rarely to a decided degree, and that the results, especially in the advanced cases, are questionable. However, when results by the other methods of treatment are analyzed and it is recalled that this method carries no operative risk, it seems right to try it for a reasonable period in suitable cases before proceeding to more radical measures.

Surgically, biliary drainage has been obtained by various operative procedures, the majority of which connect the gall-bladder or ducts with the exterior of the body. In these operations drainage is maintained for from ten days to six weeks. This has been sufficient to eradicate the existing infection in a large percentage of the cases, but a return of symptoms has been so frequent that drainage operations have been largely superseded by cholecystectomies. Presumably, the failures have been due to too short a period of drainage in the presence of extensive tis-

sue infection or to a possible reinfection from some untreated focus.

Attempts to eliminate infection of the liver, gall-bladder and ducts by the use of anti-bactericidal drugs has as yet met with little success. Some have advocated the use of hexamethalamine, especially in association with the salicylates. However, as our present conception of the action of this drug is that it liberates formalin in an acid media, we should expect no effect upon infection in the tissues or the common duct bile, and only a questionable effect in the gall-bladder bile. Certainly, more convincing experimental evidence is necessary before accepting this measure.

The recent work of Young and his co-workers on the intravenous injection of mercurochrome and gentian violet opens up a promising field for investigation. They have apparently demonstrated striking anti-bactericidal effects for these drugs when injected intravenously in 5 mmg. per kilo doses. The mercurochrome was especially active in colon infections, the gentian violet in staphylococcus infections. We have demonstrated the presence of both these materials in considerable concentration in the bile in from 10 to 30 minutes following intravenous injection. It is thus evident that they are excreted by the liver, and it is not unreasonable to hope that they may favorably influence infections within the tissues, as well as in the bile. Experimental work is now in progress along these lines.

Much can be done by the use of general and special measures to aid in the reduction of existing infection in the hepato-biliary zone. First among these is mental and physical rest, combined with or followed by moderate exercise and heliotherapy. The use of autogenous vaccines prepared from the organisms recovered from the bile obtained by the Lyon method may be of value, provided such cultures do not represent mere mouth contaminations.

Finally, the reduction of infection by the surgical removal of infected tissue is a well-recognized and accepted method. However, as has been shown, in chronic cholecystitis we are not dealing exclusively with an infected gall-bladder, but with a diffuse infection involving the liver, ducts, gall-bladder, pancreas, and associated lymphatics. It is clearly impossible to remove all this infected tissue, and yet a partial removal without drainage of the remaining portion would hardly seem to meet the requirements. Yet this is what is apparently done when a cholecystectomy is performed, so that rather than being surprised that some cases are not cured after cholecystectomy, it would seem more logical to be surprised that any cases are cured. The facts of the situation seem to be about as follows: Infection once established in the hepato-biliary system persists because of poor drainage, the drainage of a diseased gall-bladder is by far less satisfactory than of the remaining parts of the system, and infection is, therefore, more persistent in the gall-bladder. Graham has shown that the gall-bladder can infect the liver as well as that the liver can infect the gall-bladder, and he believes that in chronic cases there is a vicious circle established. Thus, if under favorable conditions the liver has rid itself of existing infection, it may at a later time, under unfavorable conditions, be reinfected from the residual infection in

the gall-bladder or the process may be reversed. By the removal of the gall-bladder, we remove the most susceptible portion of the biliary system and leave the remainder of the infected system to rid itself of its infection as best it can. Clinical results indicate that this occurs in a fairly large percentage of cases. Why? Apparently, because in these the drainage of the remainder of the biliary system is sufficient to allow the natural processes of immunity to overcome the infection.

The success of these natural processes of immunity in overcoming the infection depends upon the virulence and extent of the infection, the resistance of the patient, but especially upon the amount and character of tissue change. The more extensive the tissue damage, the more persistent the infection. As for the factor of drainage, ordinarily the surgeon leaves this entirely to nature. After cholecystectomies, there is a dilatation of the extra hepatic ducts because of the resistance offered by the sphincter of Oddi. However, as the ducts have no concentrating function, this dilatation is not sufficient to care for the bile secreted in the inter-digestive periods and eventually an insufficiency of the sphincter occurs. Possibly the completeness of clinical cure depends, to some extent at least, upon the completeness of the sphincter incompetence and the resulting free drainage of the biliary system. Other factors which may hinder complete recovery after cholecystectomies are the narrowing of the ducts by adhesions, with the resulting tendency to bile stasis and also the persistence of infection in a dilated stump of the cystic duct, from which reinfection of the entire system may occur.

Sixth. If biliary stasis is the result of mechanical obstruction, either by stones or adhesions, surgical treatment is clearly indicated. Also, as the presence of stones, even in the absence of obstruction, favors the persistence or recurrence of infection and constantly holds a threat of acute surgical complications, their removal should be advised.

Seventh. General measures to increase bodily resistance have already been discussed.

CONCLUSIONS

What, then, is to be our plan of treatment in the individual case? First it is, or should be evident that there is no rule of thumb to be followed routinely, and also that it is not primarily a question of medical treatment as opposed to surgical treatment. We have these various measures at our disposal, and our worth as physicians rests upon the care and judgment displayed in the choice of methods for the individual case. Many factors, sociological as well as clinical, have a bearing on this choice. As a general plan, the uncomplicated case of cholecystitis, after a complete diagnostic survey, should undergo a period of careful medical supervision, during which time focal infections are radically removed, gastrointestinal function carefully regulated, diet supervised, rest, exercise and general hygiene insisted upon; drugs administered as indicated, where possible, non-surgical drainage of the biliary tract carried out and, in special cases, autogenous vaccines used. If, after a sufficient period, not of years, such measures have failed to remove the clinical and physical evidence of cholecystitis, or if after a period of

relief there is a recurrence of signs or symptoms, surgery, preferably cholecystectomy, should be advised, as it offers a greater likelihood of permanent relief and prevention of serious complications than is offered by further unaided medical treatment. However, following cholecystectomy, medical measures should again be instituted. On the other hand, cases of acute cholecystitis, or those complicated by recurring appendicitis, gall-stones, or extensive peritoneal adhesions call for surgical measures primarily, following which the above medical measures should be used.

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DISCUSSION

W. C. Alvarez, M. D. (177 Post Street, San Francisco)—Dr. Boardman has given a very good resumé of what can be done for a patient with cholecystitis. As he says, there are many cases in which, for various reasons, we will not advise or urge operation, and the problem then arises: what are we going to do in a medical way? I am afraid that I am not quite so sanguine as is Boardman about the value of the various forms of medical treatment. Some of them are based upon theories which it seems to me are unsupported by any definite studies, and the occasional success which we have with them in practice does not teach us much because the disease when untreated varies so markedly in severity from time to time.

Hence it is that I would never bother to put a patient on a cholesterol poor diet; in the first place, because its efficacy has never been shown; second, because I cannot prove that the patient hasn't a gall-bladder full of stones already; third, because so far as we know the presence or absence of stones is largely immaterial: it is the inflammation throughout the biliary tract which is the essential thing; fourth, because in order for it to be of any value the patient would have to live on such a diet for years or for the rest of his days; and fifth, because I would have no faith in his sticking to it. It is only the occasional man or woman who has enough faith, interest and moral backbone to do such a thing year in and year out.

Similarly, I never prescribe cholagogues because I cannot see how they can influence favorably an inflammatory process in the wall of a gall-bladder which is not demonstrably affected in any way by them.

As regards the Lyon technic: It was based on a physiologic misconception, and it has since been so abundantly demonstrated that the procedure does not drain the gall-bladder that it is hard to see why we should go on using it for that purpose. It may be that temporary increases in the flow from the bile ducts will aid these ducts in throwing off infection, but even then, I would like to have a little proof of the greater efficacy of the tubal over the oral administration of the magnesium sulfate before I spend hours of my time and much of my patients' money with the tube. Theoretically, the oral administration ought to work just about as well, and, practically, I have seen just as brilliant results with it as anything reported by Lyon—if results they were.

Wade H. Walker, M. D. (Pacific Southwest Bank Building, Long Beach, California)—I am delighted to have read this most wonderful paper, covering as it does the ground so thoroughly that it leaves but little for anyone to add.

Boardman is quite right. The gall-bladder walls are first infected, as a rule, instead of the mucous membrane, as is so often said. The gall-bladder has a most important function; that is, normally it secretes a mucus which dilutes strong, irritating bile on its way through the common duct to the duodenum, where it comes in contact with stomach secretions, pancreatic secretions, and aids in digesting food and preventing fermentation in the alimentary canal.

There is one point in Boardman's paper that I would like to criticize in my most humble way—that is, not to consider the gall-bladder as a reservoir for bile; it is a small oval-shaped sac, attached to the under surface of the liver, having a serous coat, a muscular coat, and a mucous membrane lining. Normally, a gall-bladder will hold

from one to one and one-half ounces; later on, after being infected, this same gall-bladder might be distended until it will hold a half-pint or more. For instance, in empyema of the gall-bladder I have seen them increase to the size of an ear of corn. In these particular cases the gall-bladder is diseased and has undergone pathological changes. Back to my starting point. A normal gall-bladder, with capacity of one to one and one-half ounces is not tankage space enough to accommodate all of the bile that is secreted normally by the liver. To the contrary, it will accommodate a very small per cent of the total output of bile at any one time, and what I mean to imply by this is, probably 1 per cent of the bile secreted by the normal liver is backed back by pressure and enters the gall-bladder for future use; there it comes in direct contact with the gall-bladder secretions, namely, mucus, is diluted, and later is emptied out through the cystic duct, into the common duct from which it came.

I remember quite well hearing Charles Mayo give a talk on infected gall-bladders, and what I have said in the preceding paragraphs bears out my experience in gall-bladder surgery, as well as what Mayo had to say in his discussion. He said that a great many surgeons objected to removing gall-bladders because it was a valuable organ when in a normal condition. On the other hand, after it became infected with la grippe germs, malaria or streptococcus infections, colon bacilli infections, etc., which destroys the mucous membrane that lines the gall-bladder or forms gall-stones, there is but little hope for a cure of such gall-bladders by a cholecystostomy.

A cholecystectomy was a little more dangerous to the patient at the time of the operation, but was well worth the cure effected in all the cases if operated in time, whereas those that were drained or had a cholecystostomy, 50 per cent of them had to be operated the second time.

We all know A. J. Oschner's opinion about draining gall-bladders versus removing gall-bladders. He says the gall-bladder is a very valuable organ and should be saved if possible, notwithstanding that a good many had to be operated the second time.

I have given you other men's opinion of the treatment of infected gall-bladder—the Mayo clinic and Oschner clinic—but that is not what you gentlemen want to hear. You want my opinion. Inasmuch as I am discussing this paper. I have a better right than most of the doctors have to discuss gall-bladder infections. I have operated quite a few, draining some, removing some, relieving some entirely; others had recurrent attacks, had to be treated medically, or have gall-bladders removed later. In December, 1913, I had my gall-bladder drained for a la grippe infection; had my appendix removed at same sitting. For seven months I had pleurisy, gall-bladder colic, indigestion, pancreatitis, and everything else a man could have pertaining to a gall-bladder infection; suffered the tortures of the damned and was unable to do a day's work in all that time. In July, 1914, I had my gall-bladder removed, on my feet in six days, all O. K. in nine days, went to work in September, and been well ever since.

I think the average surgeon should be conservative in his work, and should remove gall-bladders instead of draining them, because it takes a man of wide experience and with plenty of facilities to cure an infected gall-bladder by the drainage method. You hear some reputable physicians say they can cure gall-bladder infections by washing out the duodenum with the duodenal syphon. I believe that this is next to impossible.

Urotropin given internally in large doses is a panacea for thick and infected bile. It also will cause drainage tube tract to close more readily as an after treatment in cholecystostomy.

L. G. Visscher, M. D. (Westlake Professional Building, Los Angeles)—It is a pleasure to listen to a paper so completely covering the subject discussed in comprehensive sentences, stating definite indications.

May I be permitted to make a paradoxical statement of possible value? If drainage of the biliary system be the object, does it appear that a one-time drainage, as produced by an ordinary cholecystostomy for removal of stones, is insufficient. The usual time of drainage is from five to ten days, evidently fully inadequate to reach the proposed goal, and, aside from the removal of the stones, not productive of lasting benefit. Methods of cholecystostomy characterized by large gall-bladder incisions, or even by par-

tial removal of the gall-bladder, seem to be, in the light of this observation, of possible value.

If, however, the gall-bladder be removed, has it been demonstrated repeatedly, by those who have sufficient experience with the Lyon method, that over a period of from three to six months, no bile can be secured. This observation may be explained by the assumption:

First. That no storage facilities are left soon after the removal of the gall-bladder, these facilities, however, not only as to storage, but also as to bile inspissation, becoming established some months after the cholecystectomy in the form of dilatation of hepatic ducts and the formation of histological elements in the wall of these ducts, securing this inspissation.

Second. By the profound interference with the innervation controlling the relaxation and contraction of Oddi's muscle, leaving the muscle relaxed, the result being that the bile in continuous flow leaves the biliary system, whereby a prolonged continuous drainage of the bile passages is secured.

It gives me particular satisfaction, as an internist who loves to argue with surgeons, of recommending, in cases where thorough drainage is desired, the more radical operation of complete removal of the gall-bladder.

Charles D. Lockwood, M. D. (295 Markham Place, Pasadena, California)—This splendid paper is one of the sanest and most complete discussions of cholecystitis that I have ever heard. Every conscientious surgeon who has had a large experience with gall-bladder surgery has gone through an evolutionary process in his attitude toward the treatment of gall-bladder infections. In our early experience with gall-bladder surgery we rarely removed the gall-bladder, and I think most of the older surgeons will agree with me that our results were very satisfactory.

In looking back over my own work of the past twenty years, comprising about 100 operative cases for gall-bladder disease, I am sure that over 80 per cent of these cases were permanently cured by cholecystotomy. A recent review of some 300 cholecystotomies by Dr. Cullen of Baltimore reveals about the same number of satisfactory results. In view of these excellent results before the days of frequent cholecystectomies, and considering that these results were obtained in the most advanced and unselected cases, I feel that we should not commit ourselves to cholecystectomy in every case. There are cases of advanced liver and pancreatic infection in which I believe that gall-bladder drainage is still the operation of choice, even though it may be necessary later to do a cholecystectomy.

I think we are all agreed as to the advisability of cholecystectomy in hydrops, old thickened and shrunken gall-bladders, gangrenous gall-bladders, and certain cases of empyema of the gall-bladder, but I am sure there is still a place for conservative surgery in this field, and it requires the highest surgical skill and judgment to properly select these cases.

Doctor Boardman (closing)—In closing, I wish to express my appreciation of the kind comments of the previous speakers. However, I am a bit disappointed in Dr. Alvarez' remarks, but still feel justified in recommending in suitable cases, low cholesterol diets, bile salts, or the Lyon treatment.

As regards Dr. Walker's question of the storage function of the gall-bladder, I believe the recent work of Rous and MacMaster will thoroughly answer this.

Finally, let me again plead for an earlier recognition of chronic cholecystitis, followed by a period of systematic and sane medical treatment which, if unsuccessful, should be followed within a reasonable period by surgery.

"I have had three personal ideals: One to do the day's work well and not to bother about tomorrow; the second to act the Golden Rule as far as in me lay towards my professional brethren and towards the patients committed to my care; . . . and the third to cultivate a measure of equanimity as would enable me to bear success with humility, the affection of my friends without pride, and be ready when the day of sorrow and grief came to meet it with courage befitting a man."—Osler.

THE PROSTATIC MEDIAN BAR, COMPLICATIONS AND TREATMENT*

By MILEY B. WESSON, M. D., San Francisco

The obstructive symptoms of a small median bar and a large benign hypertrophy are the same.

When properly restricted to carefully studied, well-chosen cases, Young's punch operation is very radical and permanently curative.

A median bar once removed does not recur.

There will be no hemorrhages if (1) the operation is properly performed; (2) the patient is kept quiet; (3) water is forced, and (4) drainage is maintained.

Ten successful consecutive Young's punch operations are analyzed from the standpoint of untoward symptoms, their cause and management.

INTRODUCTION

ALL doctors, irrespective of their medical specialties, are interested in the subject of prostatism. Is it because they are all prospective operative subjects? Thirty per cent of all individuals past middle life have prostatic obstructions, though only 15 per cent seek relief from their symptoms. One-half of the obstructions consist of prostatic hypertrophy, benign or malignant, and the remaining 50 per cent are median bars. Drugs may temporarily relieve the symptoms, but eventually the services of a surgeon are required. In this special field the general surgeon is at a disadvantage. He can do a suprapubic prostatectomy as well as a trained urologist, but if the result is not good he can neither tell the reason why nor remedy the defect. Many surgeons have done cystotomies on patients, suffering with all the symptoms of prostatic obstruction, and instead of seeing an enlarged prostate gland have found a tight orifice and a small "fibrous prostate" which could not be enucleated, but had to be "cut out in pieces," with the result that the surgeon had a most trying experience, and the patient generally succumbed. It is here that the technically trained specialist possessing an extensive armamentarium of instruments and a high degree of mechanical skill in using them, acquired only by a prolonged and large clinical experience, is needed.

In preparing this paper a thorough review of the literature of the prostatic median bar was made, in order to ascertain why the punch operation that has proven so uniformly satisfactory in Hugh H. Young's hands during the past fifteen years has not come into universal use. A series of ten successful consecutive punch operations is analyzed from the standpoint of unusual symptoms and their management. Those cases that are ordinarily dismissed with the statement that "the patient recovered after a stormy convalescence" are here given especial attention. All the possible reasons for failure of the operation and the methods of avoiding disaster are elucidated.

HISTORY

The first description of the median bar and its treatment is found in the lectures delivered in 1830 by G. J. Guthrie (Fig. 1) before the Royal College of Surgeons in London. However, in 1850 Mercier,

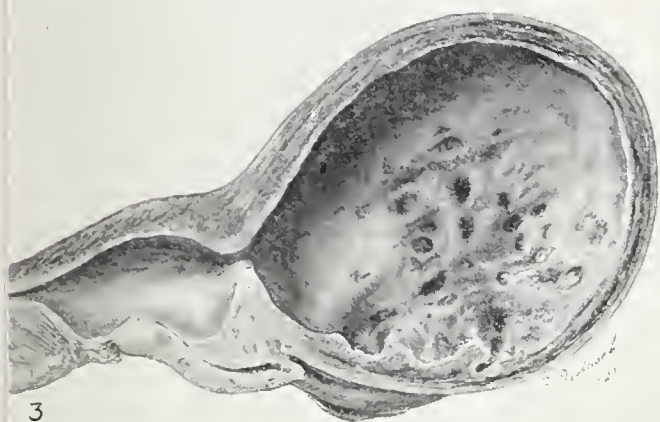
*Read at the Twenty-first Annual Meeting of the Nevada State Medical Association, Bowers Mansion, Nevada, September 13, 1924.



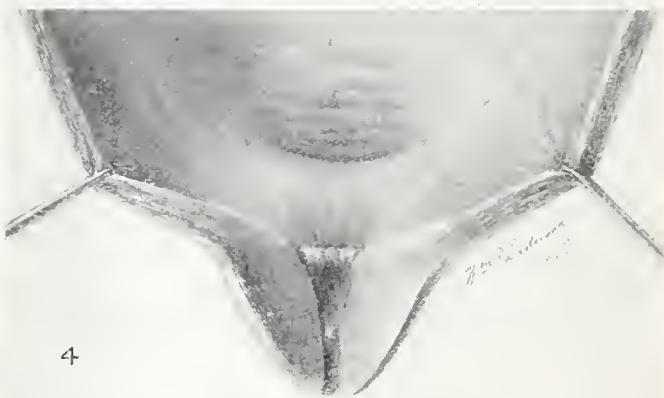
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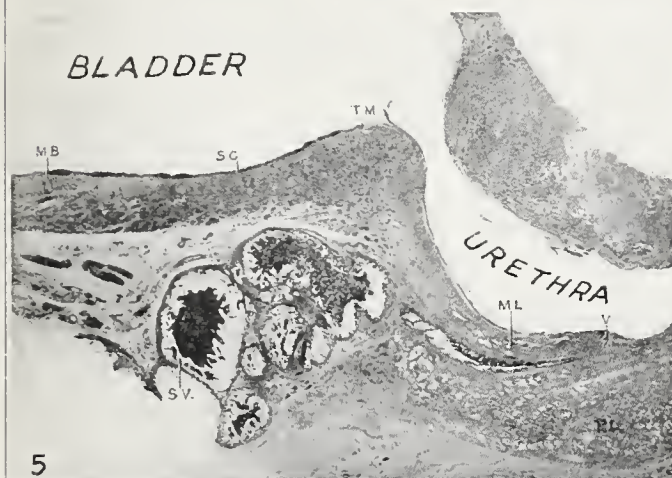
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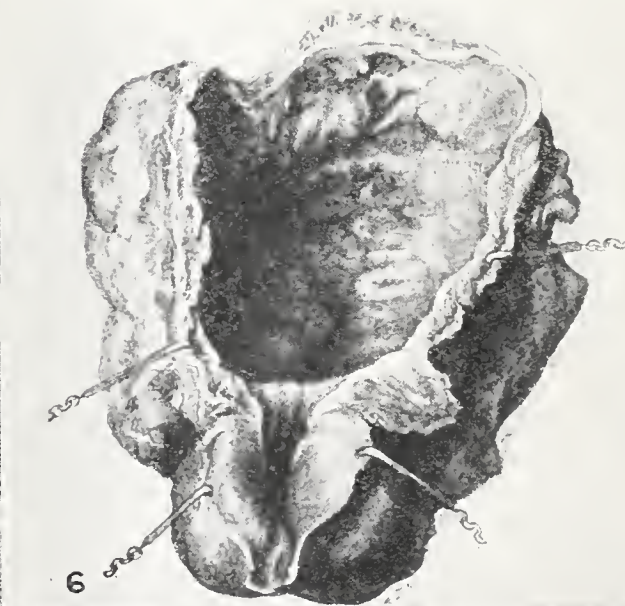
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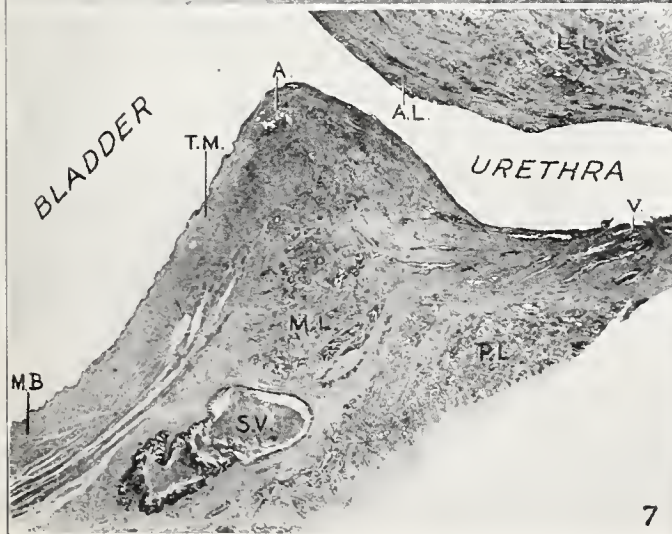
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1. The first median bar reported: "The examination after death showed nothing peculiar save the five pouches and the bar at the neck of the bladder formed by its elastic but now rigid substance, totally unconnected with the third or middle lobe of the prostate." (Guthrie.)

2. Normal vesical orifice—sagittal section of bladder and prostate.

3. Median bar with beginning undermining of hypertrophied trigon; marked trabeculation of bladder wall, and cellule formation.

4. Median bar, type I. (Young and Cecil.)

5. Microscopic sagittal section of fibrous median bar, type I.

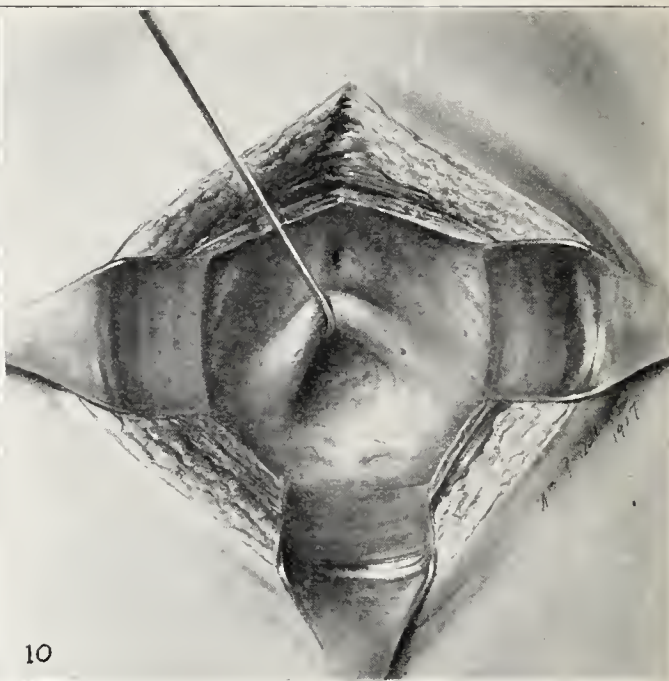
6. Median bar encroaching on vesical trigon and causing shortening and transverse creasing, type II. (Randall.)

7. Median bar in which glandular elements predominate over sclerosis—microscopic section, type III.

8. Isolated hypertrophy of subcervical gland, type IV. (Young.)



9. Large Albarran's lobe, commonly confused with middle lobe of prostate.



10. As the result of back pressure from a median bar there occurred a hypertrophied trigon, which functioned as a dam causing incomplete retention. Splitting the

trigon did not effect a cure, and neither did several punch operations, since part of the original obstruction at the vesical orifice persisted; however, a very thorough punch operation with many cuts resulted in apparently a permanent absence of residual urine. (Young and Wesson.)

who was a voluminous writer and very aggressive, was awarded a prize of 1500 francs by the French Academie of Sciences for the discovery of the median bar, and to this day is given the credit by all textbooks, the name of the real discoverer never being mentioned. Guthrie's descriptions are accurate, yet he was robbed of the credit due him, because of his gentle retiring nature and dislike of publicity. This latter trait, as well as his two operative procedures, is well illustrated by the following extracts from his book published in 1834: "The object is to divide the bar, dam, or stricture, with as little injury as possible to any of the neighboring parts. When these are sound, as far as can be ascertained, I recommend its being done by an instrument which Messrs. Everill and Mason, of St. James' street, have made at my suggestion, being an improvement on the central perforator or lancet of Mr. Stafford, which renders it capable of cutting on the side, and of being easily cleaned. Messrs. Everill and Mason wished to call it my instrument; but as I never claimed more in any instrument than the suggestion, leaving the mechanism entirely to the artist, I have begged them to take to themselves any or all the merit which may be due to it or them." His perforator or punch would not cut the dense fibrous bars, so he advised "in the very advanced stages of the disease, when the bar is fully formed, a small perineal incision should be made on a grooved director and the bar cut with a probe-pointed, strong, but narrow knife." Sixty-seven years later Fuller redescribed this method of cutting the bar, while Chetwood changed it slightly by using an electrocautery blade—a modified Bottini operation.

ETIOLOGY

Median bars are of two general types: (1) Congenital, and (2) acquired. Young found that the histories indicated that 5.6 per cent of his cases were congenital. In the first group are included the cases,

described by Englisch, of the congenital absence of the prostate, the hypoplasia of the gland first manifesting itself at puberty with obstructive symptoms. The majority of the cases occur secondarily to some inflammatory reaction. Ciechanonski believed that there was a deposit of fibroplastic material (connective tissue) which, if beneath the mucosa of the entire bladder, caused a permanently contracted bladder, below the bladder neck caused a contraction of the orifice, or in the prostate resulted in a small fibrous prostate; while Belfield looked upon the perivesicular infections as the source of the fibroid indurations of the base and neck of the bladder. The German schools teach that atrophy of the prostate occur from various causes, and that, because of propinquity, a sclerotic bar forms at the region of the bladder sphincter. However, it is generally agreed that the median bars are secondary to infections of the seminal vesicles and prostate.

Camaro of Milan, Italy, advanced a clever theory to explain the unaccountable cases; he thinks the sources of obstructions are prostatic adenomata so minute as not to be detected by the cystoscope, but only to be felt by the finger. Fowler has described small intraurethral projecting prostatic lobes which can be diagnosed only with a cystourethroscope. The theory of retention, due to atony of the bladder as taught by Guyon and Albarran, has long been discredited.

PATHOLOGY

A median bar (Figs. 2, 3) is an obstruction involving the posterior vesical lip, unassociated with changes of an obstructive character elsewhere in the prostate, bladder, or posterior urethra.

Great confusion of nomenclature has resulted from the introduction of clinical descriptions by surgeons. Randall, by his painstaking study has clarified the field and given us an accurate classification. He described four distinct types: (1) A narrow bar

(Fig. 4) made up of firm, dense sclerotic tissue, forming an abrupt angle with the lateral walls of the vesical outlet (Fig. 5); (2) a fibrous bar encroaching on the trigon rather than on the urethra with a shortening of the trigon, due to transverse creasing (Fig. 6); (3) a glandular bar with the hypertrophic process confined to the gland acini of the posterior prostatic commissure inside of the prostatic capsule and under the sphincteric muscle which raises the posterior vesical lip into a broad obstructing bar, unassociated with visible hypertrophic changes in the lateral lobes. It is a prostatic hypertrophy associated with inflammatory sclerosis (Fig. 7); and (4) isolated hypertrophy of a subcervical gland (Fig. 8), commonly called an Albarran's lobe (Fig. 9).

SYMPTOMS

The general symptoms are those of urinary obstruction and are the same as of hypertrophy of the prostate. If the urinary retention is not relieved there is failing health, with drowsiness, headache, gastro-intestinal disturbances and, eventually, nocturnal thirst.

Hugh H. Young, in a personal communication, states that an analysis of his 355 cases showed that in the punch cases pain was as prominent a symptom as was retention in the cases of hypertrophy. The symptoms for which he performed the punch operation were in their order of frequency as follows: (1) Frequency of urination, 82 per cent; (2) pain, 53 per cent; (3) difficulty, 50 per cent; (4) small stream, 42 per cent; (5) weak force, 40 per cent; (6) urgency, 25 per cent; (7) occasional complete retention, 11 per cent; (8) incontinence, 8 per cent; (9) sudden stoppage, 8 per cent; (10) complete retention, 7 per cent; (11) urination incomplete, 5 per cent. The painful symptoms are distinctly more frequent, more annoying and distressing than in prostate hypertrophy; not infrequently they overshadow everything else and the patient seeks relief on account of the irritation. The location of the pain was: (1) Urethral, 21 per cent; (2) bladder-neck, 18 per cent; (3) end of penis, 15 per cent; (4) perineum, 14 per cent; (5) suprapubic, 12 per cent. Sexual symptoms were practically negligible and occurred for the most part in patients past middle life.

There is no relation between the size of the obstruction and the amount of retention. The function tests show kidney impairment to be as great as in cases of prostatic hypertrophy, hence they must receive the same careful preliminary treatment as do prostatectomy cases. The worst complications (Figs. 10 and 11) are often secondary to small bars that have been overlooked.

DIAGNOSIS

Median bars must be differentiated from hypertrophy of the prostate, organic stricture of the urethra, papilloma, and spinal cord lesions. The history is of importance, and as a rule those cases above 55 years of age are suffering from hypertrophy, while the younger ones have bars. In Young's series one patient was 7, twenty were under 30, and five were over 80 years of age. Hematuria is common in benign prostatic hypertrophy and rare in median bars. In bars the prostate is of normal size and con-



11. Hydronephrosis (bilateral) secondary to a median bar.

sistency on rectal palpation. Sounds of large size often pass with ease, although a uniformly contracted, tight orifice may resist the passage of a very small one. When viewed through a suprapubic opening the vesical orifice may appear normal, but when an attempt is made to dilate it with a finger-tip there is found a tight thickened ring which offers a firm resistance. Since the introduction of the Wassermann reaction, spinal cord lesions have become of minor consideration. However, with the cystoscope, cases of tabs have been diagnosed where the serological test was negative.

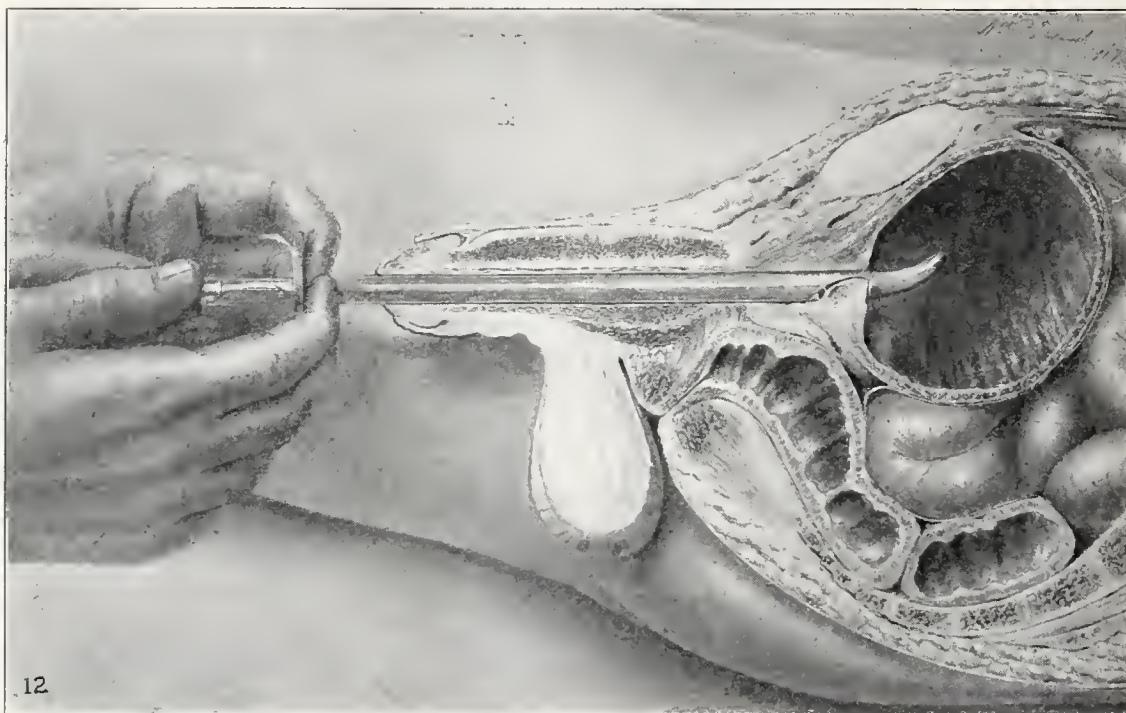
The diagnosis of a median bar is made upon four positive findings: (1) Residual urine; (2) trabeculation of the bladder wall; (3) slight lateral clefts, and (4), with the finger in the rectum and the cystoscope in the urethra, there is a distinct "jump" as the beak of the instrument, which is being gradually withdrawn, passes over the vesical lip.

OPERATION

Only four types of operation should be considered: (1) Young's punch; (2) cautery punch; (3) sphincterotomy, and (4) fulguration. The perineal and suprapubic procedures are unnecessarily mutilating and dangerous.

The punch method is, in principal, that described by Guthrie in 1830, but it remained for Young to perfect the instrument, define the group of patients suffering from obstruction at the vesical neck, to which the punch is applicable, and describe the method (Figs. 12-19) and results to be expected in types of cases. In 1909 he did his first punch operation, and the method, with very few changes, has become standardized. When properly performed upon selected cases, beautiful and brilliant results can be obtained.

The cautery punch devised by Young in 1911 and



12. Young's punch in operation. The outer tube has been withdrawn far enough to entrap the median bar in the fenestra, as indicated by a checking in the flow of the fluid. The hands of the operator are shown ready to push the inner tube home. (Young.)

popularized by Caulk in 1920, consists of a slow-burning, heavy knife in an irideo-platinum sheath. Hemorrhage is stopped by the heat, so that no catheter is required for the drainage, and the operation can be done in the office. Caulk has had no local or systemic reactions, although others have not been so fortunate.

"Sphincterotomy per urethram" was described by the late J. T. Geraghty in 1922, as a simple office procedure which was rarely followed by even blood-stained urine. The instrument is a modified Young's punch, the circular knife being replaced by a wedge-shaped concave blade, so that a single cut is made through the bar instead of removing a section. This is the method used by Guthrie, who, in describing his operation, said: "The knife being projected just as the instrument is felt to be passing the bar, will cut it; and if, after it has just passed into the bladder, it will be withdrawn, the little knife, in coming back, will enlarge the original cut. If the bar be thin or narrow, I have no doubt of the possibility of dividing it in this way without doing mischief; and in two cases in which I tried it, I have reason to believe the object was effected." I have not used the sphincterotome, but a personal communication from E. W. Beach (Sacramento) states that in a series of seven cases he found it very satisfactory and efficacious. In three cases he used no retention catheter, but in the remaining four cases it was necessary—one hemorrhage being so severe as to necessitate two blood transfusions.

Bugbee, in 1911, reported nine cases treated with the Oudin current one-quarter inch spark, direct contact, burning until the hydrogen bubbles ceased to form. Three to six treatments were required to cut the bar, and there was no bleeding and no retention.

Fulguration with the D'Arsonval current has been successfully used. However, the burns are deep and secondary hemorrhages tend to occur several

weeks after the patients are cured and have returned home.

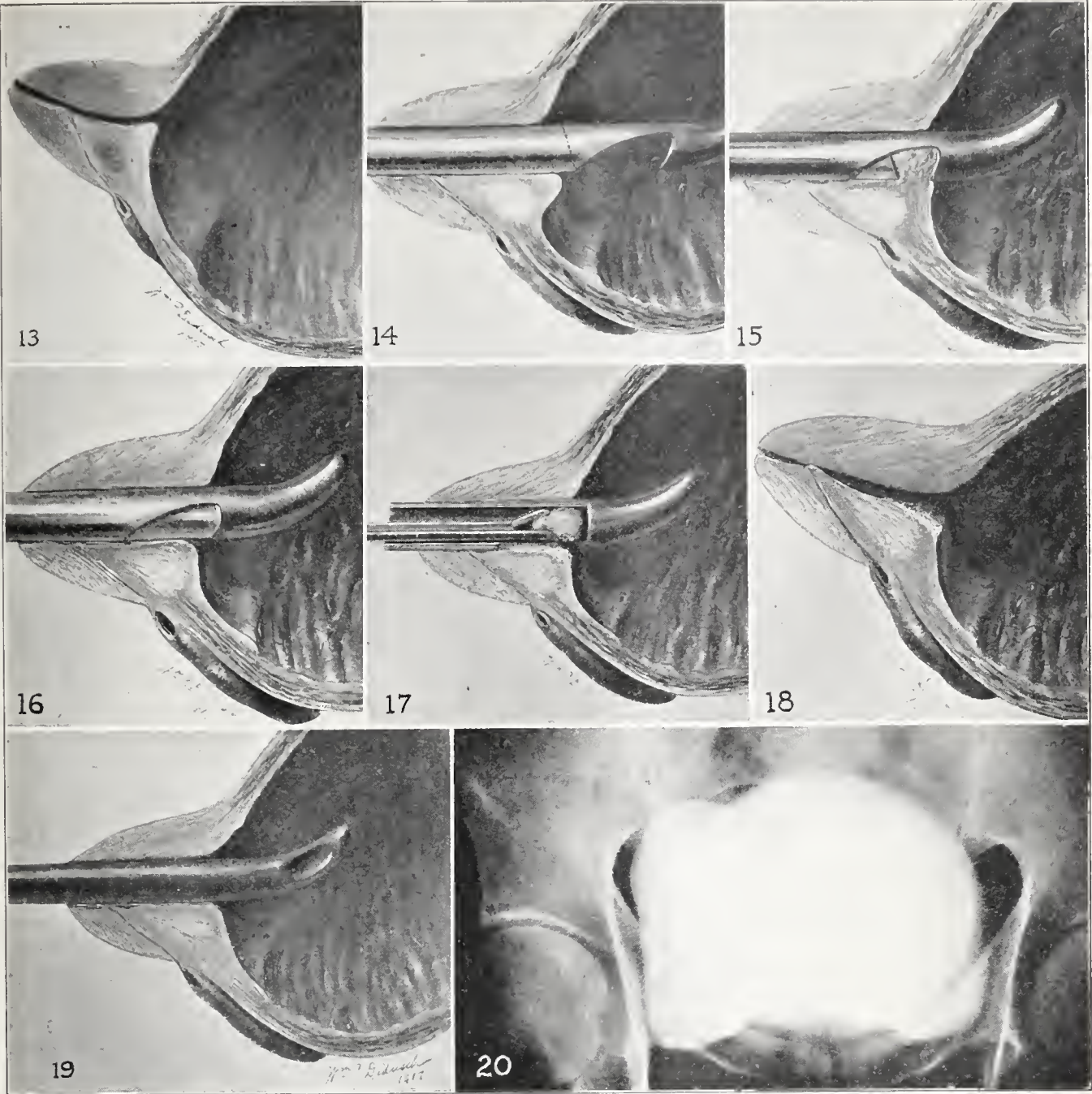
UNUSUAL SYMPTOMS AND COMPLICATIONS

A series of ten consecutive punch operations is analyzed from the standpoint of untoward symptoms, their cause and management. The operations were performed upon private patients ranging in age from 40 to 75, the average age being fifty-eight and one-half years. Although a history of gonorrheal infection was not elicited from each one, an examination of the prostatic and seminal vesicle secretion showed clumps of pus in every case.

The only anesthetic was an urethral injection of 4 per cent novocain, and in all of the cases the operation was painless. It was a routine procedure to have the coagulation time of the blood determined before operation, and to give a hemoplastic preparation in the operating room. In view of the recent report of the Council on Pharmacy and Chemistry of the American Medical Association, warning against the indiscriminate use of such preparations because of the danger of fatal anaphylaxis, this step will have to be guarded in the future. A hypodermoclysis of 3000 cc. of saline was given each patient upon the return to his room from the surgery, and a minimum fluid intake by mouth of 5000 cc. was maintained throughout his hospital stay.

Caffeine sodium benzoate, grains III (hypo), as a routine emergency order (to be given by the nurse) demonstrated its value in one case. The pulse rate of a patient with ventricular extra-systoles dropped to less than 40, and was barely perceptible shortly after his return from the operating-room, and, as sometimes happens, just as all the doctors had gotten out of call; a half-hour later when I saw him he was in perfect condition.

Four of the cases had large vesical diverticula. In two cases these were not removed, as the general condition of the patients did not warrant the risk,



13. Longitudinal section showing a typical median bar elevated above the trigon without enlargement of the prostate. (Young and Cecil.)
14. The punch instrument has been introduced well into the bladder and the inner tube drawn upward, thus opening the fenestra through which urine begins to escape. The median bar is seen depressed by the shaft of the instrument. (Young.)
15. The cutting inner tube is excising the median bar. (Young.)

16. The cut is completed and the section is in the tube. (Young.)
17. Sectional view showing the removal of the excised mass of prostatic tissue with the urethroscopic clamp. (Young.)
18. The completed operation. (Young.)
19. Drainage of bladder with a large catheter, 30 F coude, after removal of the prostatic bar or contracture. (Young.)
20. Cystogram showing two large diverticula, secondary to a median bar.

but in the other two, diverticulectomies were done. Young's suction method was successfully used in one case (Fig. 20), but failed in the other, as the pouch was attached deep in the perineum. In this case there was a complete retention, the residual urine being 1000 cc. The stones present (Fig. 21) were removed by means of a sponge stick; a retrovesical dissection was made and the sac (Figs. 22, 23) freed, except at its apex, invaginated and removed. The open punch operation, supplemented by an incision with a scalpel, was performed in both of these cases.

The number of cuts made in the routine operation varied from three to twelve; the first was made

posteriorly (great care being taken not to catch the hypertrophied interureteric ridge) and the punches ceased when the vesical orifice was fully dilated, as shown by the failure of the punch to engage. After three cuts, great care must be used, for, if the sheath is not firmly engaged, there is danger of it slipping just as the punch is sent home, and the cut will be made in the urethra. Swinburne reports the punch slipping into the pendulous urethra and hanging by a bent tooth, so that he had to do an external urethrotomy to remove it. Clipping off the verumontanum is not an uncommon procedure, and is undoubtedly responsible for the disturbances of sexual function which sometimes follow this operation. The

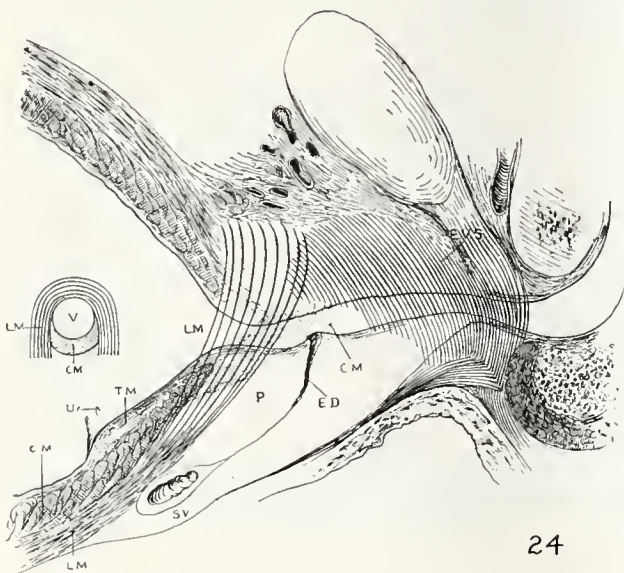


21. Median bar causing complete retention and a large diverticula. A catheter in the left ureter is apparently in contact with a calcified lymph gland; the second catheter points to the stones in the bottom of the diverticulum.

22. A cystogram that conceals the diverticulum, but exposes the calcified lymph gland.

23. A diverticulogram made by filling the bladder with air after the patient had voided.

specimen removed generally consists of fibrous tissue, smooth muscle fibers, and gland acini; but if the anterior bite is sufficiently deep it may get striated muscle (Fig. 24).



24. Schematic view of the muscle of the bladder orifice, showing how deep a cut would have to be made in order to include striated muscle fibers, E. V. S.

Just as important as the mechanical excision of the bar by the punch is the placing of the catheter. The tendency is to use too small a catheter and, unless specifically ordered, the dealers supply those with only one eye, and if this happens to lie against the trigon there will be no drainage. A 30 F. Coude catheter with two eyes should be used. If it is properly located and firmly fixed all hemorrhage will stop within a few hours. In this series, clear urine was passing in all cases in from two to twenty-four hours.

There was one secondary hemorrhage, because of a dull punch, the inadvertent use of too small a catheter (29 F.) and with a single eye, and some poor adhesive plaster that did not hold the catheter in position. The patient's urine was clear at the end of twenty-four hours, but because I had used a poorly sharpened punch which tore off a large piece of mucosa I thought best to leave the catheter an

additional twenty-four hours. During the night the catheter ceased to drain, due either to the single eye rotating against the trigon, or slipping into the prostatic urethra. A poorly trained orderly advised the patient to stand by the side of the bed and strain, which he did, and eventually he succeeded in starting a stream, but it was blood and not urine. When I saw him he announced that he was going to die, and confessed that he had come to the hospital expecting that result. The catheter was removed and a metal clot-aspirator substituted, but the oozing continued. Although his red blood count was 4,340,000, a blood transfusion was done because of his mental condition rather than his physical; two days later this was repeated. At the end of five days the urine was clear and the "clot sucker" was removed. He then developed a toxic delirium of a religious type, and became so violent that he had to be restrained. The patient had been trained as a priest, but became an agnostic; his attack was precipitated by the actions of his religious male nurse trying to reconvert him, and was ended three days later, when a priest, who was called after midnight, upbraided him for his "thoughtlessness in disturbing a Father's rest," and returning after daybreak continued the scolding. This brought back his old hatred for the Church, and at 8 a. m. he was mentally normal. He left the hospital fourteen days after operation, having gained twenty-two and one-half pounds. I might say in passing that I never knowingly operate upon a patient who thinks he is predestined to die from the operation.

Many of the commercial punches should not be used, as they do not fit snugly and tend to tear the tissue rather than cut. I use one given me by Dr. Young and made by his mechanic from non-rustable steel. It is routinely sharpened by an expert immediately before use. This instrument broke while in use in one case just as it became firmly engaged; in cutting through a very fibrous bar, considerable force was used and the flange became unsoldered from the sheath. With the aid of a pair of Lane bone-forceps and some strips of adhesive plaster, the shaft was held and the operation successfully concluded.

The urethral spheroids described by Fowler, I found in a man of 54 who also had a bar. The bar was removed, 60 cc. of residual urine disappeared, and a toxic man became active and alert.

Following the removal of the catheter, after the urine has become clear, there is no difficulty in voiding for several days; then there may be sufficient edema of the vesical neck to require catheterization. Great care must be used or a secondary hemorrhage will be started. A No. 18 silver catheter with a short beak is ideal. One of my patients developed a retention at night, and a new intern used a No. 12 silver catheter with a long curve, which penetrated the urethral mucosa and resulted in a suburethral infiltration. Atypical symptoms of pneumonia followed, and it required considerable search to find the cause of the rise in temperature and chills.

The patients cannot be dismissed as cured when they leave the hospital. The bar is gone, but not the symptoms. They require the passage of sounds, instillations, hydraulic bladder distensions, etc. The posterior urethritis and cystitis does not disappear along with the bar, and the patient wants relief from his symptoms. However, treatments should be postponed for six or eight weeks. Incontinence is an unknown complication.

SUMMARY

Guthrie noted that the punch operation was of little value in cases of benign hypertrophy, since the groove through the hypertrophy allows the adenoma to swell up into the opening. However, it has proven of great value in many cancer cases. Cases of retention, due to a complication of a median bar and a spinal lesion, may be cured by this method.

The punch operation, as perfected by Young, is not a palliative procedure, but is a radical operation, and when properly performed upon suitable cases is 100 per cent efficient. It is exceedingly technical, requiring a very painstaking preliminary study and close attention to details during and after the operation. It should never be performed in a hospital where there is not a careful enthusiastic resident and an efficient orderly.

Each case is a separate problem, and if watched closely, so as to anticipate complications, the patient will make a rapid and uneventful recovery and with a brilliant result. In the hands of a careless staff I can conceive of no operation with so many elements of potential danger. I have never seen a case of hemorrhage where I thought cystotomy was indicated, and Young states that he personally has never done a secondary suprapubic operation upon a punch case for hemorrhage.

In Young's series of 355 punch operations seven cases died in the hospital some time after the operation, but only one death was directly due to the procedure (a cut trigon). Even if all the deaths are counted, the mortality is less than 2 per cent. "One may, therefore, say that when we consider the age of many of these patients and the serious complications which were often present, the punch operation is indeed a very benign procedure."

CONCLUSIONS

1. The median bar and its treatment were first described by Guthrie in 1830.

2. The obstructive symptoms of a small median bar and a large benign hypertrophy are the same.

3. The disturbances of micturition in a man under 55 years of age are generally due to a median bar, while in older men they are probably due to hypertrophy.

4. When properly restricted to carefully studied, well-chosen cases, Young's punch operation is very radical and permanently curative.

5. A median bar once removed does not recur.

6. There will be no hemorrhages if (1) the operation is properly performed; (2) the patient is kept quiet; (3) water is forced, and (4) drainage is maintained.

7. The three common causes of hemorrhage are: (1) the tearing of the mucous membrane by a dull knife; (2) the use of a catheter with one eye, which results in straining because it is not properly placed to maintain drainage; (3) a catheter so small as not to fit snugly against the cut surface and thereby hasten clotting.

8. A slow blood coagulation time is a positive contra-indication for a punch operation.

9. In all cases of persistent hemorrhage or shock, transfusion is indicated before a cystotomy should be considered.

10. The cystoscopic diagnostic signs are: (1) Residual urine; (2) trabeculated bladder; (3) lateral clefts; (4) the "jump" felt by the finger in the rectum pressed against the slowly withdrawn cystoscope in the urethra as the beak passes over the vesical lip.

11. Ten successful consecutive Young's punch operations are analyzed from the standpoint of untoward symptoms, their cause and management.

12. The punch is a dangerous instrument in careless, incompetent hands.

N. B.—I desire to express my appreciation to Dr. Hugh H. Young and William P. Didusch for the use of their original drawings.

1275 Flood Building.

Making Our Remedies Safer—The American Pharmaceutical Manufacturers' Association recently adopted a "Declaration of Belief," which sounds a new and encouraging note: "We believe," says the Association, "that it is the unquestioned obligation of each and every pharmaceutical manufacturer: (a) To manufacture preparations only under proper conditions and of established value, pure and accurate in composition, and true upon, and to, their label; (b) to label, advertise, and merchandise such preparations only in a manner wholly free from misrepresentation of any kind, in complete accord with both the spirit and terms of the applicable laws, and in entire harmony with the highest standard of commercial morality and ethics."

"The trouble," believes the New York Medical Times, "is that the big cities are full of people who were intended in the phylogenetic nature of things to work in a simple way upon a small area of the earth's surface without any undue strain upon the brain or nervous system. Our industrial and profit-seeking civilization takes these peasants, schools them under painful pressure (for them), and then subjects them to a vocational grind that takes them nowhere, without even a pension at the end of the senseless gamut."

DEVELOPMENT AND RE-ESTABLISHMENT OF BREAST MILK BY USE OF DR. ABT'S ELECTRIC BREAST PUMP

A PRELIMINARY REPORT *

By EARL M. TARR, M. D., *Los Angeles*

Indications for and results obtained by the use of the pump both in developing and re-establishing breast milk. The importance of emptying the breast as a sure method of prolonging the milk supply is strongly emphasized.

Several illustrations.

Healthy discussion by A. J. Scott Jr., Los Angeles; Angus B. Cowan, Fresno; Clain F. Gelston, San Francisco; Robert G. Sharp, San Diego.

MY THEORY that the new-born infant is practically never able to completely empty a full breast and that a breast will function in direct proportion to the amount of stimulation which it receives, is reasonable and will eventually be accepted as a fact. When this point is definitely settled and its significance fully appreciated, more consideration will be given the mechanism of nursing and more infants will be given breast milk over a much longer period than at the present time.

Development of breast milk should begin THE DAY THE BABY IS BORN. There can be no question regarding the logic of this statement, and yet very few of us actually begin our real work until there is a definite shortage of food. To presume that the infant is going to be able to furnish enough stimulation to start a breast going properly and keep it functioning satisfactorily for seven or eight months simply means that *weaning* will automatically take place long before it should. It seems advisable, therefore, to study the infant at breast, and if he is unable to completely empty the breast at each nursing, then added stimulation may well be considered.

The late Dr. Sedgwick did more, perhaps, than any other one man to stimulate us to thought and action regarding the best means of developing and maintaining breast milk. Dr. Abt has always taught that thorough emptying of the breast at each nursing is absolutely necessary if we hope to keep the organ functioning adequately throughout the normal period of lactation. I believe that I am one of the first to specifically state that practically no new-born infant is PHYSICALLY able, during the first few weeks of life, to empty a breast, and that added stimulation should be given the breast *as soon as the baby is born*.

"Expression," as advocated and taught by Sedgwick, has been productive of amazing results, and thousands of infants have been saved because proper and sufficient food was made possible for them. Ulysses Moore, in his work in France and Belgium, and Portland Oregon, clearly demonstrated that development and re-establishment of breast milk was the most practical way to supply safe food for the starving infants under his observation. In private and clinic practice in this country, he insists that "all healthy mothers can keep their breast milk indefinitely if the breasts are properly stimulated."

The electric breast pump which Dr. Abt has per-

fectected will not, in my opinion, discourage the practice of hand expression. Indeed it will serve to lay the foundation and pave the way so that expression will be more generally practiced. This pump is a mechanical contrivance, electrically driven, and operates on the same principle as the milking machine used in the dairy. This electric pump will be found far more useful in the maternity division of the hospital than elsewhere, and I feel reasonably sure that it should be used there rather than sold to the mother for home use. Hand expression can be done by the mother after she leaves her lying-in bed, and will be found altogether satisfactory. Time will not permit detailed description of the pump. During the past year I have used it extensively and have studied results impartially. I must thank the obstetricians for their excellent co-operation without which even a preliminary report at this time would be impossible.

ADVANTAGES OF THE ELECTRIC BREAST PUMP

1. The pump is safe and easy to operate, and a breast may be emptied in three or four minutes.
2. One pump will do the work of six nurses.
3. Improper technique on the part of inexperienced nurses who practically never "express" properly will be largely overcome.
4. Engorged breasts, in which the nipple is short and difficult of manipulation, can be relieved or emptied quickly and without pain. The relief to the mother is immediate and complete.
5. Premature infants will be assured of their intended food, if the pump is used on the mother until her milk supply is fully established.
6. When used on the mothers in a maternity ward, an abundance of breast milk will always be on hand for delicate or premature infants.
7. The use of the pump will relieve mothers of the tedious, tiresome, and often painful method of hand expression which is still practiced in some hospitals by the sick mother at the request of her physician.
8. Breast stimulation can be started as soon as the baby is born, and once the mother realizes that her babe cannot give sufficient stimulation, she will readily see the logic of expression and will be eager to practice it after returning home.
9. Fissured nipples heal promptly when the pump is used and the infant kept from the breast for a short time.

IMPORTANCE OF PROPER MILKING TECHNIQUE

It is to be remembered that mothers are entitled to all the consideration we can give them, and their mental, as well as physical, comfort should be carefully planned. You will find, when you first use the pump, that in some patients curiosity, timidity, and actual fear will be encountered, and these conditions must be carefully eliminated.

Some of the important points in connection with successful use of the pump are as follows:

1. Assure the mother that the pump will not hurt when applied to her breast.
2. Allow her to experience the sensation of suc-

* From the Department of Research the Anita M. Baldwin Hospital for Babies.



Figure I.—Re-establishment. Dry breasts for nine weeks. Dr. Abt's electric breast pump used forty times before results were assured.

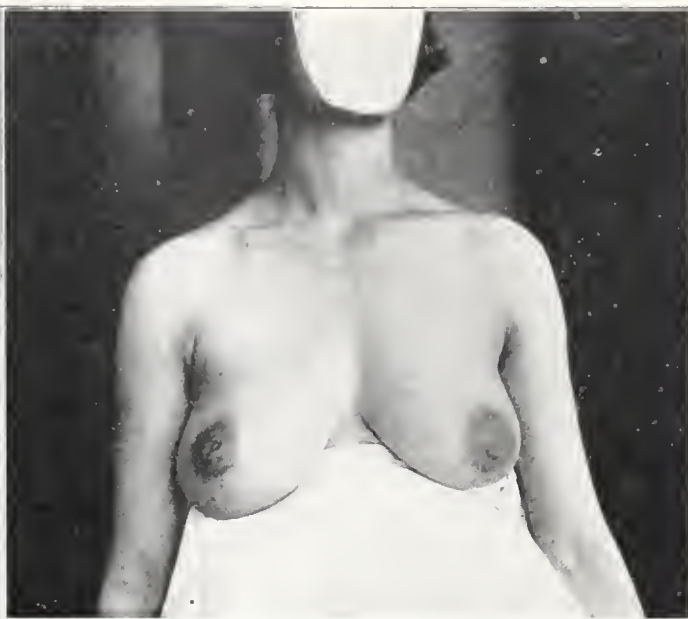


Figure II.—Same case one month later, at which time breasts were producing 20 ounces daily. Pump used 200 times.

tion by holding the shield over the palm of her hand. This will give her an exact idea of just how it will feel to the breast.

3. Always start with the suction at zero and very gradually increase. This is necessary to "draw out" the nipple and when slowly and painlessly done will avoid frightening the mother. As she becomes accustomed to the sensation, the vacuum may be increased.

4. Careful selection of a proper shield, or glass nipple, is essential. Long nipples require a larger shield than short nipples, and it is necessary to apply the shield to the nipple in such a way that the openings in the nipple do not come up against the sides of the glass shield. This would, of course, shut off the free flow of milk and would give discouraging results.

5. Forbid demonstrations on a patient until she is thoroughly familiar with the pump.

6. The container which is to receive the milk as it escapes through the rubber valve must be large enough at the mouth to allow the valve to empty freely. A clean medicine glass or a clean glass tumbler is satisfactory. The ordinary small-necked nursing bottle is the container we use.

DEVELOPMENT CASES—GROUP 1. SIXTY-TWO CASES

Sixty-two studies make up this group. Of this number, there were forty-eight spontaneous deliveries, one breech, one version, eight low forceps, and two Caesarian sections. The birth weights ranged from 5 pounds 3 ounces to 10 pounds 9 ounces, and the number of males happened to be exactly the same as the females. All of these babies left the hospital weighing more than their birth weight. (This is due, in part, to the fact that none of them were allowed to experience the usual "physiologic loss" for more than sixty hours). They were all given a 15 per cent carbohydrate solution until the milk flow was well established, were nursed at three and four-hour intervals, and were also given the milk obtained by pumping. No nursing period was for longer than

twenty minutes and, when possible, we kept them at the breast not more than ten minutes.

Among the mothers were four who had never been able to nurse previous children. In spite of their belief that it was utterly useless to attempt to develop milk, they all became excellent producers and went home with more milk than the infants could use. Three of the mothers gave a history of breast abscesses at previous times, and the breasts had been given up as worthless. All of these mothers developed quite all the milk they needed.

Thirty-six mothers were primiparae, and twenty-six were multiparae. Owing to the fact that they were the patients of several doctors, it was impossible to handle all of them the same. The pump was used not less than five times daily nor more than seven times, and it was used regularly from the *day of delivery to the last day in the hospital*.

COMMENT

The results were uniformly good. All breasts responded well, but some were slower than others. No sore breasts or breast abscesses developed. Primiparae, in this group, did a little better than multiparae, and I lay this principally to the fact that these women are often in a better physical state than women who have borne several children. This is by no means a rule, but simply an observation. Practically all of these patients have been under observation during the past six months. Clinic cases have been more difficult to follow than private cases, but those who have reported regularly have done better than we had expected. So near as we can learn from the data obtained, about 90 per cent of these babies have had breast milk throughout their first six months. We hope to follow these cases for another three or four months, and then draw our final conclusions.

RE-ESTABLISHMENT CASES—GROUP 2. SIXTEEN CASES

Naturally, the re-establishment of breast milk is far more difficult than the comparatively simple task



Figure III.—Development. Right breast nursed by infant. Left breast pumped with Dr. Abt's electric breast pump. Infant one month old.



Figure IV.—Appearance of breasts of primiparae after pump used two weeks to develop milk. First picture about like Figure I. Pump applied eighty times.

of its primary development. Most of the mothers in this group had been dry, or practically so, from two to nine weeks, and the electric pump was used, not because I consider it greatly superior to hand expression, but because it would do the work much quicker. These women are all difficult psychological problems and require careful management. The chief difficulty is that most of them refuse to believe that the dry breast can be made to resume function and this, of course, must be definitely settled in their minds before any results can be expected. Detailed directions regarding their daily mode of life and what is expected of them must be outlined and explained with considerable minutia. They are taught how to use the pump and are asked to report each twenty-four hours.

The shortest time necessary to re-establish milk in this group was nine days. This woman had been dry for five weeks. The pump was used six times in each twenty-four hours, and on the second day she got a few drops. This encouraged her, and the belief on her part that she was going to be successful was the best galactagog imaginable. She went right up to 16 ounces in the first week, and a week later was producing 22 ounces daily.

The longest time required to re-establish milk was thirty-eight days. This woman had been dry for ten weeks, but she worked the pump faithfully and on the sixth day was rewarded with a few drops of watery fluid. She had applied the pump just forty times during the week. Her production then became regular but very slow up to the twenty-eighth day, when she obtained 12 ounces in six pumpings. On the thirty-eighth day she got 21 ounces and kept this amount during the next four months.

SUMMARY

This is a preliminary report of my experience with Dr. Abt's electric breast pump in developing and re-establishing breast milk. At present I am encouraged and rather enthusiastic, and believe that the pump will prove exceedingly valuable in the maternity hospital. Certainly, it is worthy of trial be-

cause it does no injury to a breast and, in my experience, has helped develop and re-establish milk easier and more promptly than hand expression.

2007 Wilshire Boulevard.

DISCUSSION

A. J. SCOTT, M. D. (1501 South Grand Avenue, Los Angeles).—Doctor Tarr has presented his subject well. It takes an enthusiast to take a subject as this, and make it interesting and a stimulus to others to try. Doctor Abt has offered in this electric pump an easy as well as a simple method of milk expression. It would not be practical to use it in the home unless it could be rented from the physician, on account of the initial expense. It is a suitable piece of apparatus to use in any and all hospitals, but it must be used correctly to get results, and intelligently so as not to do damage, as is possible in the hands of an unskilled person. One nurse should have charge of the technique, and should do all the training of the nurses who use the machine. It is surprising what can be done in re-establishing or stimulating milk-flow. This machine convinces mothers, as well as doctors, that the new-born does not empty the breasts at feeding time.

It is not necessary to comment on the fact of the necessity of emptying the breasts to keep up the necessary milk supply. For the premature this machine is a great boon, for it does give him the so essential breast milk, and at the same time, the psychic effect on the mother is good.

We need among our obstetricians, as well as general men, more persistent and insistent teaching of mothers of the necessity of breast-feeding.

I have seen the result of this machine and have been well pleased, but my personal use of it has been very limited. The manual expression is used by me constantly, and I have had very good results.

ANGUS B. COWAN, M. D. (Fresno, Calif.).—The normal mammalian breast within certain definite limits will respond to the demands made upon it. The maximum output of milk is attained when the demand made upon the breast is greatest. A breast with an output of less than its maximum capacity may have the output increased when the demand is augmented. A breast with a capacity for larger output will automatically regulate the output to meet a diminished demand. An increased demand in itself will not cause an increased output in a breast functionally inefficient through other factors. Many such breasts exist.

The above seem to be established facts long known in the field of animal industry. Doctor Tarr's experiments give further proof of the wisdom of completely emptying the breast so that the maximum supply may be obtained. The contention that supplemental expression be adopted



Figure V.—Expressing milk from breast. With the thumb at upper margin of areola above and tip of index finger at areola below, a "together" movement is made which forces milk out of the ampoulae. Please notice that thumb and finger are properly placed and do not "hug" the nipple.

in all cases where the breast, after nursing has not been completely emptied, need not be conceded. Given a healthy vigorous infant and a breast that will functionally operate, it is held that sufficient stimulus to provoke a satisfactory output will be provided as the child grows older and his food demands become greater. This is well proven in Doctor Tarr's re-establishment cases. In the case of premature or delicate infants, where efforts at nursing are feeble, or in the case of mothers who give a previous history of having been unable to nurse their young, the point is well taken and such procedure held advisable.

The contention that supplemental expression should begin immediately after the birth of the baby needs additional proof before being attempted routinely. During the time of engorgement, when the breasts are swollen and painful, it would seem that utmost gentleness should be used, and further experiments are needed to prove whether it is better to begin stimulation at this time or await the period when the normal flow begins.

CLAIN F. GELSTON, M. D. (380 Post Street, San Francisco)—The great value of observations such as are presented by Doctor Tarr rests in the fact that a practical and easy method of stimulating the flow of breast milk is offered. The difficulties encountered in manual expression, in spite of the years of work of Sedgwick and his co-workers, have prevented a really conscientious effort on the part of physicians throughout the country to apply his teachings.

Proof is certainly no longer needed that it is essential that a breast be emptied for preservation of an appreciable flow of milk. The simple method, as devised by Doctor Abt, is a great step in popularizing a maneuver having the greatest of influence on preventive pediatrics.

ROBERT G. SHARP, M. D. (1000 Watts Building, San Diego, Calif.)—As a boy on a farm, I am sure that I earned more beatings for not "stripping" the family "Bossy" than for any other sin of omission. My father literally pounded this principle into me: "In order to maintain a good milk supply it is necessary to completely empty the udder at each and every milking." While in France with Sedgwick, he used to slap me on the shoulder and say: "Sharp, don't ever make the mistake of trying to stuff your mothers in order to make more milk. It only makes them fat and disgusted. Strip the breasts after each nursing, and you stimulate an increased milk supply." Again a principle was being pounded into me.

Now comes Abt with his electric breast pump and offers

the method de luxe for breast stripping. Dr. Tarr has clearly and forcefully set forth the uses and advantages of this breast pump. His contention that the premature and the new-born are practically never able to empty a full breast is undoubtedly correct. To these two types may also be added the weaklings and the lazy of whatever age. That we all recognize these facts and that we all agree with Tarr, is probably true. Is it not just as true that all of us are not at all times as diligent as we should be in our efforts to develop and maintain, and especially to re-establish an adequate supply of breast milk for the infant who cannot or will not develop his own? It is so often a useless struggle to induce the mother to strip her breasts after the infant has nursed, and so much easier to put the babe on a complementary formula which he likes, takes well, and upon which he commences an immediate gain, that we are too often prone to follow the path of least resistance. Along this line I wish to point out a real danger which we sometimes overlook, viz., too sweet a mixture. The best plan is to determine the sugar percentage in the mother's milk and then to keep the formula sweetness below this. The carbohydrate percentage may be added in a non-sweet form such as cream of wheat, cream of rice, rice flour or farina. For just as surely as the infant finds that he can get his milk sweeter or with less effort from the bottle, so will he follow the path of less resistance. He then becomes a lazy nurser.

Two very small points I would like to add to Tarr's excellent paper. First, that Dr. Abt's electric breast pump might well be placed in every pediatrician's office. Hardly a day passes but what some baby's milk supply should be analyzed. It goes without saying that the full breast should be completely emptied in the doctor's office by or under the supervision of a competent nurse. Second, that the pediatrician almost never gets the infant until the shortage of breast milk is apparent. Further in this connection, I would like to suggest that the time will undoubtedly come when the obstetrician will say to his patient, "I want you to decide upon the doctor that you are going to have for your baby, so that when baby arrives you can call him immediately." Then will we be able to stimulate breast-milk production to the best advantage.

DOCTOR TARR (closing)—This most excellent discussion of the subject convinces me that the vital matter of maternal nursing is not being completely left to the mother. It has been our experience that nursing mothers actually require most careful supervision. You cannot simply tell them to go home "and nurse their baby." The electric breast pump which Abt has given to us enables the attending physician to educate the mother, while she is still in her lying-in bed, along the proper lines of milk development. The warning sounded by Dr. Sharp is most timely and should be remembered whenever a formula is prepared for a nursing infant. Each day we listen to mothers who complain that since the baby was given a bottle, in addition to the breast, the breast has been slighted. I might add that the early giving of broth and well-seasoned soup stock to the nursing infant sometimes creates a disgust for food so bland as breast milk.

I wish to make my position absolutely clear regarding the matter of "expression." This procedure should never be relegated in favor of the pump Dr. Abt has devised or any other mechanical contrivance. The pump has now been modified in several respects, and hand-driven pumps are being made which sell for much less than the electrical pump. The rental plan may eventually be worked out, but the fact remains that each mother can take her two hands with her at all times, and when she has mastered the simple technique of "expression" she will have little need for a pump of any description. In the office of the pediatrician and in the maternity department of the hospital, the pump, in my opinion, can be used to best advantage. To insist that a mother, three or four days post-partum, should spend her energy in "expression after each nursing" does not appear logical to me. If a pump is not at hand, and if the services of a nurse are not to be had, the matter may safely be left until the mother is able to sit up comfortably.

Dr. Cowan is correct in his statement regarding my contention that breasts should be given added stimulation as soon as the baby is born. So far as I am aware, this

bold statement of mine has not appeared elsewhere, but my observations for the past several years and considerable experimental work have led me to the conclusion that the time to begin preparing the first meal for the baby is the day the mother becomes pregnant. We all encounter mothers to whom the act of nursing is decidedly repulsive. They cannot bear to have anything touch their nipples, and had their peculiar condition been studied and corrected during pregnancy, there would have been less to regret after the baby came. *There is but one way to insure the speedy solution of the infant-feeding problem. The family doctor delivers and directs the feeding of 85 per cent of all babies born. Let us detail him with a sane and practical plea that he teach all of his mothers the art of "expression" and when he has learned to talk breast milk to all of his mothers from the time they come for their first examination until the baby has a few teeth, then and only then may we hope, as pediatricians, to have time for a more careful study of some of the other preventive measures which must naturally occupy most of our attention. The family doctor should deliver babies and he should direct their feeding, but he should pay decidedly more attention to the matter of teaching preventive medicine to mothers than to the modification of cow's milk.* The electric breast pump can be used by him to wonderful advantage, and he will soon learn that breasts that are always emptied after a feeding will continue to function for a much longer time than those left quite to themselves. Dr. Scott has followed our work very carefully, and his conclusions agree with ours. The main thing is to *empty the breast*. In some instances the pump can scarcely be dispensed with, but "hand expression," routinely practiced, should be our constant teaching.

LENGTHENING THE QUADRICEPS TENDON FOR STIFF KNEE

By GEORGE J. MCCHESENEY, M. D., *San Francisco*

An operation entailing no risk to important structures, which presents no especial difficulties and will give a flexion range sufficient for all practical purposes in life, and which gets rid of an ugly tiring limp and a position of the limb which is always awkward and in the way, as in sitting in a street-car.

The operation requires three weeks in bed, after which the patient can be up and about on crutches, and would permit a return to light work within three months.

Pertinent discussion by Harold D. Barnard, Los Angeles; George Rothganger, Oakland; Leonard W. Ely, San Francisco.

THIS procedure, described first in the *Journal of Orthopedic Surgery* by Bennett in September, 1919, with two cases, and again in April, 1922, with six cases, has filled a long-felt want, particularly in industrial surgery. It does not seem to be as well known and popular as it should be, however, and hence, with an experience of five cases, I have ventured to come before you to plead its more frequent employment.

To briefly review the anatomy involved, we find the rectus femoris superficially and the crureus deeply in the midline, merging with the internal and external vasti, as they all come down to the patella. They unite so intimately in the lower third of the thigh, that pathological adhesions of one muscle cause restriction of motion in all, and that even, with adhesions in the upper third of the thigh, as occurred in two of my patients. The crureus is especially important, as it is in intimate contact with the bone in all its course. The question of the capsule naturally arises. My experience coincides with Bennett's. It can be disregarded, even the superior pouch. In all my patients there were soft, rustling tearings of cap-

sular adhesions, as the joint flexed only after sufficient work was done upon the tendon. In no case was there an effusion or pain in the joint afterwards, and the capsular adhesions did not re-form. As Bennett says, the knee-joint adhesions are entirely comparable to the ankle-joint adhesions following a long-standing equinus deformity due to calf muscle contractures. The real pathology is then above the joint. Again, anatomically speaking, there are no important nerves or vessels in the operation area.

We are all acquainted with the stiff knees following fractured femurs, with sepsis, either operative or due to the initial trauma, and with the joint uninvolved. Knees will resist motion, however, when sepsis has been absent, but when operative procedures have caused adhesions of the muscle to the bone, or when prolonged immobilization and disuse of the quadriceps have caused a simple resistant contracture without operation, quite analogous to the calf muscle contractures causing a foot-drop deformity. In the latter condition, achillotomy, or, better, a lengthening operation is done as a routine, and the same should be done to the quadriceps and completely supplant the blind and dangerous attempt to manipulate the knee in an attempt to regain motion. We have then three general pathologic conditions, causing stiff knee.

First. Adhesions of muscle to bone, following sepsis, usually an osteomyelitis, mild or severe, complicating fracture.

Second. Adhesions of muscle to bone or to muscle, following operation, but with no sepsis.

Third. Resistant contracture of the quadriceps with no adhesions, due to prolonged immobilization, as for joint disease.

THE OPERATION

A long median incision is made from the patella up the thigh to the middle third. The lateral margins of the rectus and the capsule of the joint are exposed. The rectus and the crureus beneath are separated from the vasti by deep, lateral incisions connected above. The whole is dissected free from the femur, and remains attached to the patella only, like a tongue. If with moderate force the knee then does not flex, it means that the vasti are still holding and the lateral incisions must be deepened. Bennett does not emphasize this point, but I have found it very important. In my worst cases the vasti were cut laterally a staggering amount before the joint flexed with the rustling tear of intracapsular adhesions. When the joint flexes, the tongue of rectus and crureus is sutured with kangaroo, silk, or chromic gut (I prefer the latter) to the adjacent vasti, and the usual closure of the superficial tissues is made. When much lateral cutting of the vasti has been done, there are rather marked depressions or sulci, which will give rise to dead spaces unless pressure padding is made with the dressing to obliterate them.

The knee is put up in plaster, in a position of 90 or 100 degrees flexion for three weeks, after which the anterior half is cut away and gentle passive motion is made for a week, with splint replaced at night. In the fifth week active motion is begun, and increased in amount as time elapses. The cast should be worn at night for eight weeks altogether.

It takes an indefinite time for complete extension to be regained. Bennett says a year for severe cases. I find the personal equation a marked factor, and with energetic stretching exercises, three to four months should be ample to regain power of extension to within 10 degrees of normal, actively, and completely normal, passively.

Recently one of the two first cases done by Bennett five years ago and reported by him in his original article, was examined at a meeting of the Industrial Section of the San Francisco County Medical Society. We found still lack of complete active extension by 10 degrees, but full passive extension and no disability. The man was scarcely conscious of the limitation and had practically perfect use of the limb.

Weight can be borne in five to six weeks, at first with crutches, but they should be discarded at about the eighth week.

My first case is the most interesting of the series, in that it was done for stiffness following old tuberculosis of the knee. The disease began in 1908, was treated conservatively by Doctor Harry Sherman and myself with plaster-splinting from 1910 to 1914. Weight-bearing was permitted in 1916, and in 1921 he presented himself with a painless joint permitting full extension and a flexion of 55 degrees. The patella was freely movable, the condyles not normally rounded, but there was no bony block to flexion, attempt at which caused pain in region of the patellar ligament. The boy was a machinist and was willing to undergo the operation and take the risk, in order to obtain better knee action. There had been no active disease for ten years, so the risk of lighting up the disease seemed fairly slight.

At operation in July, 1921, the quadriceps was lengthened, and flexion to 120 degrees then obtained with rupture of capsular adhesions, using only moderate force. Much greater force before lengthening the tendon accomplished nothing.

Subsequently, the course was uneventful. There was no flare-up, but, from fear of this, active motion was resumed very cautiously. He resumed work as a machinist six months after operation, and was seen three months later, when he had 90 to 95 degrees of flexion, and lacked 20 degrees of full extension. Two and a half years later I found the same range of flexion and 15 degrees restriction of full active extension. He had been working full time as a machinist at the Union Iron Works for two years.

This case is comparable to Bennett's seventh case, which was done for stiff knee following a septic arthritis. His case also had no flare-up. He lays down the opinion that the operation is permissible if all active joint disease has disappeared.

Case No. 2—B. T., aged 58, was my most unfavorable patient in age, condition of limb, and final result. A fracture of the upper third of the right femur received in September, 1920, was plated. Plate and splint were removed in six weeks. Naturally, angulation occurred. Was re-operated in March, 1921, for the angulation, and wore plaster and Thomas splints for five months thereafter. I saw him in April, 1922, when he had an active flexion power of 30 degrees, and full extension. Union in the fracture was solid, with marked outward angulation and a shortening of six inches. A month's physiotherapy and active bending exercises gained only a few degrees, and as he desired more flexion in his trade of plumber, operation was accepted, and done in July, 1922. Following the operation, there was considerable oozing, a trouble Bennett had in several of his cases; the healing was delayed, and with it active motion, as a result of which, when last seen by me in November, 1922, he had only 45 degrees of flexion or a gain of only 15 degrees. The mediocre result here was partly due to his lack of co-operation and disobeying orders, when active motion could have been practiced.

Case No. 3—D. C., aged 30. Left knee stiff after compound fracture middle third of femur, followed by several sequestrectomies and plaster splints for eight months. This happened three years before I operated in October, 1922, at which time he had a few degrees of motion, and a recent sinus in the fracture area following the exfoliation of a crumb of bone.

At operation, much of the vasti had to be cut away and there resulted a slight gape in the lower end of the incision, but healing was otherwise uneventful, motion regained, and a follow-up letter was answered a year later, in which he stated that his range of motion is almost normal, his strength in the limb and consequent comfort quite normal.

Case No. 4—G. D., aged 44. Compound fracture upper third left femur in November, 1920. Wired. Wire and sequestra removed, angulation ensued. Under treatment about one year.

Seen by me in December, 1922, and 30 degrees of motion found in joint, in spite of vigorous efforts on part of patient to gain more. He would sit on a table with block and tackle attached to foot leading to pulley behind, and cord coming forward on which he would pull, but with no result.

Operation done in December, 1922, and right angle flexion obtained, which, however, he had to fight to keep, but succeeded, as was shown at examination one year later.

Case No. 5—H. M., aged 22. Fracture of left femur, middle third, in November, 1921. Open reduction by writer same month, beef bone plate and screws applied. Union delayed, Wassermann two plus, and hence was in plaster spica five and a half months. Union eventually solid, good position, no suppuration, but flexion range of 30 degrees only. After six months of physiotherapy, more anti-luetic treatment, vigorous active exercise efforts, etc., the range of flexion was no greater, and operation done in December, 1922. Here again the vasti had to be cut freely before the joint flexed with rupture of a considerable amount of soft intracapsular adhesions, perhaps due to a luetic arthritis. There was no post-operative flare-up, however, but extension was recovered with some difficulty, as there was a chronic arthritis, probably luetic, with fat pads anteriorly for some months. He worked hard at the exercise treatment, and in March, 1923, had 115 degrees flexion, with three to five degrees loss of extension only.

SUMMARY

An operation entailing no risk to important structures, which presents no especial difficulties and will give a flexion range sufficient for all practical purposes in life, and which gets rid of an ugly tiring limp and a position of the limb which is always awkward and in the way, as in sitting in a street-car.

The operation requires three weeks in bed, after which the patient can be up and about on crutches, and would permit a return to light work within three months.

More radical cutting of the quadriceps would give flexion well beyond a right angle, but at the expense of much slower recovery of full extension, and hence is not advisable.

By the clinical findings at this operation, it is easily seen that resistance to obtaining a useful flexion where slight flexion power already exists is due almost exclusively to damage to the muscle and not to joint adhesions, hence manipulations of the joint are useless, in that force sufficient to stretch or tear the quadriceps is dangerous and should never be employed. This accounts for the almost universally poor or tragic results following attempted manipulations of the knee.

The subject of bony ankylosis of the knee is, of course, outside the scope of this article, but an

arthroplasty of the joint should never be attempted without careful consideration of the condition of the quadriceps muscle, as it can easily be seen that the Bennett operation may have to be done to obtain useful motion after the arthroplasty has been completed.

Furthermore, a chronic arthritis can develop from too prolonged and vigorous attempts at flexing the knee due to the constant strain and pull upon the patellar ligament. The pain is always felt in this region and not at the site of the adhesions or in the course of the quadriceps, consequently attention is wrongly directed to the joint as causing the restricted motion and not to the real cause above.

519 Fitzhugh Building.

DISCUSSION

HAROLD D. BARNARD, M. D. (2417 South Hope Street, Los Angeles, Calif.)—I do not believe that Dr. McChesney needs to be worried about the popularity of the operation of lengthening of the quadriceps tendon as advocated by Bennett. Obviously, because of the indications and contra-indications for the operative procedure, the occasion to use it presents itself in a very small percentage of patients, even in the practice of those who interest themselves purely in this type of work.

It is my opinion that the rationale and the practical applicability of this procedure is already well established—at least among that class of surgeons who are most often confronted by this particular type of problem. The personal equation associated with the after treatment of this procedure is extremely important. The after treatment is accompanied by a considerable amount of pain, and the reaction of the individual patient towards this pain is in direct proportion to the speed with which the maximum amount of function as an end-result is obtained.

I would also warn against the application of this procedure in arthritic patients, even of a very minor type. The end-results obtained in one of our cases in which there was a very moderate amount of arthritis were rather disappointing, and this failure to obtain a better result in this case was unquestionably due to the underlying arthritis, even though, as previously stated, it was of very light grade and was duly weighed and recognized, discussed and considered, prior to the adoption of the surgical procedure. Even the permanent loss of the final 10, or even 15 degrees, of full extension actively, is of very minor importance and of no particular consequence to the patient, and is not to be compared to the satisfaction to these cases of the additional arc of flexion obtained.

When applied to properly selected patients, this operation has come to stay.

GEORGE ROTHGANGER, M. D. (4501 San Pablo Avenue, Oakland)—It is a pleasure to read what Dr. McChesney has accomplished with the Bennett operation in those all too frequent cases of stiff knee attendant upon fractures of the femur. The success of his first case, while not due to fracture, is especially brilliant and must be a great satisfaction to him. The second case shows the limitations of the procedure, and the fourth and fifth the difficulty in holding the flexion secured by operation.

The causes of stiff knee should be held in mind by all of us treating fractures of the femur. The most common of these, in the reviewer's experience, is prolonged immobilization to secure union, the delay being usually due to lack of apposition of fragments and much less frequently to sepsis.

LEONARD W. ELY, M. D. (Stanford University Hospital, San Francisco)—Dr. McChesney is to be congratulated upon the results of his work upon a class of patients who ordinarily occasion a great deal of worry and trouble. It is always most annoying to be confronted with this stiffness of the knee after treating a fracture of the shaft of the femur, but personally I should hesitate to resort immediately to a Bennett operation until I had tried milder measures. However, I am ready to admit that these so-

called milder measures are not without their danger. I allude especially to passive motion. Sometimes, under ether, without too much force, the knee may be flexed a few degrees. Apparently, in some instances at least, these first few degrees are very important, for after motion has once been started thus, the patient himself can gradually extend his range. One other point—always be sure that the knee-joint has not been fractured at the same time as the shaft of the femur.

METASTATIC BONE CARCINOMA

By LYELL CARY KINNEY, M. D., San Diego

The clinical course of metastatic bone carcinoma is not consistent with the pathology.

Extensive metastasis with pathological fractures may occur before the primary growth is recognized.

Bone metastasis is not more painful or disabling than any other bone lesion of similar location.

Bone metastasis may be latent for months or years.

Bone metastasis may occur many years after surgery without local recurrence or enlargement of any lymphatic chain.

Symptoms and disability may fluctuate without relation to the progress of the disease.

DISCUSSION by W. O. Weiskotten, San Diego; W. L. Huggins, Los Angeles; Henry Snure, Los Angeles; W. Edward Chamberlain, San Francisco; Maynard C. Harding, San Diego.

THERE are many inconsistencies in the course of bone metastasis. The insidious onset, lack of disability, latent periods, and fluctuating symptoms make it hard for the physician to accept the diagnosis, and that diagnosis is often seriously questioned during the course of the disease. Also the roentgen examination reveals two widely different types of invasion that are confusing and at times difficult to differentiate from other lesions.

Probably the majority of slow-growing carcinomas give bone metastases. Schmorl estimates that 34 per cent of all carcinomas show gross metastatic bone lesions or microscopic deposits in the bone marrow. Kaufmann states that 70 per cent of carcinomas of the prostate and 50 per cent of carcinomas of the breast show bone lesions at autopsy. Bumpus has found 30 per cent of bone metastases in all cases of carcinoma of the prostate at the time the primary lesion was discovered. Jolly and Frankel report bone lesions secondary to practically all forms of carcinoma. The majority of metastases follow carcinoma of the prostate and breast, malignant adenoma of the thyroid, and hypernephroma. As Moore states, true carcinoma of the thyroid rarely metastasizes. Metastasis from rapidly growing visceral tumors is rarely found in bone, probably because of the short duration.

The usual location of metastases from the breast are: ribs, spine, femur, ilium, skull, and humerus. It is not uncommon to find all of these bones involved if the patient lives long enough. The lesion from the prostate reaches first the pelvis, lumbar vertebrae and femur, then, occasionally, the scapula and clavicle. A metastasis in the scapula is usually prostatic in origin.

The pathology of bone metastasis depends upon the primary lesion. If the original tumor is rapidly growing, with little stroma, the metastasis will be a rapidly destructive lesion and the bone will melt away before it. In the long bones the growth starts

in the marrow and expands in all directions, completely destroying the cortex or adjacent cancellous structure. In the vertebrae the destruction is an irregular, honeycomb absorption with irregular edges and leading to triangular compression. There is no new bone production; the process is purely destructive and the bone is replaced by translucent mass.

In contrast to this, if the original carcinoma is slow-growing or one having a large stroma content, the metastasis will show very little destruction and be accompanied by reactive sclerosis in the involved bone. The metastatic emboli may be too small to be demonstrated and the reactive inflammation throw down a chalky envelope that gives irregular increased density to the entire bone. Recklinghausen describes this type of metastasis as a carcinomatous osteitis. There is no formation of new bone with bone architecture, but calcium deposits surround minute cellular metastases to limit their growth. There is no cortical or periosteal thickening, but a diffuse irregular sclerosis. This osteoplastic type of bone metastasis is early and extensive in carcinoma of the prostate; the chalky appearance of the spine and sacrum being almost pathognomonic of prostate origin. However, it occurs in 14 per cent of breast metastasis and may come from any slow-growing carcinoma, whatever the origin.

The two types of metastasis may occur together in the same bone, or, as in case No. 2, there may be a destructive lesion in the humerus and an osteoplastic involvement of the pelvis. The osteoplastic lesion may break down as the disease progresses and the tumor outgrow the reactive osteitis, producing a massive translucent destruction. Case No. 7 presented a typical osteoplastic metastasis in the pelvis, and one year later showed a typical osteoclastic destruction of the wings of the ilia.

The diagnosis of bone metastasis may be very difficult. Primary round-cell sarcoma presents a picture identical with that of osteoclastic carcinoma. The sarcoma is more frequent in the epiphyses, occurring below the elbow and knee in young patients, while the bone carcinoma is situated near the nutrient canal above the elbow and knee, and usually has a demonstrable primary lesion.

Paget's disease very closely simulates metastatic carcinoma from the prostate. Both may show the same chalky, white density of the spine and sacrum. The differentiation is made by search for primary lesion in the prostate or the typical bone picture of osteitis deformans in the extremities or skull. Paget's disease is a true proliferating osteitis; the architecture is destroyed, but again laid down in long longitudinal striae with proliferating periosteal bone and thickening of the cortex. Carcinoma does not give new architecture or periosteal proliferation. Carmen points out the difference in the lumbar vertebrae which are widened and flattened in Paget's disease, but retain their outline in osteoplastic carcinoma. Paget's disease is never localized to the pelvis, and the pathognomonic signs in the skull are usually present at the first examination.

Hypertrophic spondylitis should give no difficulty in diagnosis, for the thinning of the disks and the bony bridging form a sharp contrast to carcinoma which is limited to the bodies of the vertebrae.

Syphilis of the pelvis shows dense uniform sclerosis with cortical widening and periosteal thickening that differentiate it from the irregular granular density of osteoplastic carcinoma.

The clinical course of bone metastasis bears no relation to the severity or progress of the disease. There are usually rheumatic pains and, if the spine is involved, radiating pains. Frequently spontaneous fracture is the first evidence of metastasis. There may be extensive bone lesions before the primary tumor is recognized.

Case No. 5 showed destruction of the lamina of the twelfth dorsal vertebra, and Case No. 6 presented complete destruction of the body of the fourth lumbar vertebra before the patients knew they had a breast tumor. Likewise, there may be an extensive involvement of the entire bony pelvis, or even a fracture of the neck of the femur, with trivial urinary symptoms arising from a primary lesion in a small prostate.

The pain is usually increased on motion, and in carcinoma of the spine it is not relieved by the recumbent posture; but bone metastasis may not be more painful or disabling than any other bone lesion of similar location and extent. Occasionally there is no pain preceding spontaneous fracture.

Bone metastasis is at times latent for months or years. Case No. 2 presented the worm-eaten structure and triangular compression of the twelfth dorsal vertebra secondary to breast carcinoma and had localized pain not relieved by position. After two years the patient is sitting up and there is very little change in the appearance of the vertebra. Case No. 8 enjoyed a symptomless interval for eight years after the amputation of a breast, and now shows a typical carcinoma in the head of the adjacent humerus. Case No. 1 developed a spontaneous fracture in a painless metastasis of the humerus following a carcinoma of the jaw thirty years previously.

Bone metastasis may occur without enlargement of the lymphatics draining the primary tumor. Case No. 4 was followed through a metastatic carcinoma after a breast amputation. There were no demonstrable glands at the time of surgery. Twenty months later a metastasis appeared in the twelfth dorsal vertebra and the wing of the left ilium, later involving the pelvis, both femora and humeri, ribs, cervical spine, and skull. At no time were there any palpable enlarged glands or local recurrence.

A most striking feature is the fluctuation of symptoms independent of the progress of the disease. The patient just mentioned had intervals when she could turn with comfort and use her limbs, in spite of the progressing destruction of pelvis, dorsal and cervical vertebrae. Hollis Potter reports a woman patient who walked into his office two years after the discovery of a spinal metastasis. Case No. 7 was examined a year ago at the hospital, showing an osteoplastic metastasis in the pelvis, sacrum and lumbar vertebrae. He was helpless, bedridden, and suffering intensely. Last week he walked into the office, claiming that he was free from pain and desiring to check the diagnosis. The examination showed complete destruction of the wings of the ilia and extension of the metastasis.

In conclusion, the clinical course of metastatic bone carcinoma is not consistent with the pathology:

1. Extensive metastasis with pathological fractures may occur before the primary growth is recognized.
2. Bone metastasis is not more painful or disabling than any other bone lesion of similar location.
3. Bone metastasis may be latent for months or years.
4. Bone metastasis may occur many years after surgery, without local recurrence or enlargement of any lymphatic chain.
5. Symptoms and disability may fluctuate without relation to the progress of the disease.

1831 Fourth Street.

DISCUSSION

W. O. WEISKOTTEN, M. D. (First National Bank Building, San Diego)—We have been accustomed to look on any form of carcinoma as a progressive disease which does not remain quiescent, but which has a tendency to destroy life within a few years. Dr. Kinney's statement that certain forms of metastatic bone malignancy may remain inactive for years and in some instances actually show an improvement in the clinical symptoms is interesting and explains the cases which have been given a roentgen diagnosis of metastatic carcinoma and later improved to a degree which made the original diagnosis questionable.

In a general way we may assume that practically all bone carcinoma in the female has its primary focus in the breast, because pelvic carcinoma in the female rarely metastasizes. In the male the primary lesion in practically all patients is in the prostate or tongue. Theoretically, bone malignancy should be easy to recognize if one considers the cardinal points in differentiation of bone tumors, but, as a matter of fact, atypical forms of bone metastases in their early stages make a final and conclusive roentgen diagnosis oftentimes difficult. The very patients who two years after diagnosis walk into the laboratory for a check-up, make us wonder whether the original diagnosis was correct.

W. L. HUGGINS, M. D. (Pacific Mutual Building, Los Angeles)—Dr. Kinney's paper is a timely contribution to the study of the cancer problem. The percentages quoted are somewhat of a surprise, as I have seen very few cases of bone metastasis. This moment I recall two, following carcinoma of the breast. One occurring in the spine and the other in the tibia, both within a year following radical operation of the breast and without local recurrence in either case. Undoubtedly, there are more of these metastatic cases than the average surgeon realizes, and suspicious cases should have a careful study.

HENRY SNURE, M. D. (1501 South Figueroa Street, Los Angeles)—I was much interested in Dr. Kinney's report of a carcinoma recurrence of the jaw after an interval of thirty years. Recently, in looking up the literature on recurrence, I found only one report of a recurrence after thirty years; this was a case of breast carcinoma. Two other instances of late carcinoma recurrence were cited, one of the rectum after twenty-one years, and one of the tongue after eighteen years.

Dr. Kinney's opening remarks regarding difficulty of differentiation of the types of carcinoma suggest to me that if the roentgen ray societies would take up the study of carcinoma along the lines of the Committee on Registry of Bone Sarcoma of the American College of Surgeons in the cases of bone sarcoma, we would soon be able to improve both our diagnosis and prognosis of these trying cases. Close co-operation with our pathologist will be our greatest aid.

W. EDWARD CHAMBERLAIN, M. D. (Stanford University Hospital, San Francisco)—I was much interested in Dr. Kinney's statement concerning Paget's disease, that it would not be found in the pelvis without evidence of involvement elsewhere in the skeleton. Doubtless, that would be true if tissue examinations were possible. But

we have had the experience, in more than one patient, of making a careful roentgen examination of the entire skeleton and finding evidence of Paget's disease in the pelvis only.

Kinney has emphasized the remarkable inconsistency between the progress of the growth in metastatic bone carcinoma and the patient's symptoms. This has an important therapeutic application. We must not be too quick to ascribe a lessening of symptoms to a certain therapeutic procedure. A certain cancer vaccine, now known to be valueless, was enthusiastically sponsored by careful and honest surgeons some years ago. Much misplaced enthusiasm resulted from coincidental pain remissions in some of the spine metastases which are to follow breast cancer.

MAYNARD C. HARDING, M. D. (Electric Building, San Diego)—Having been associated with Dr. Kinney in several of the cases which form the basis of his excellent paper, I can bear witness to the very widespread and often symptomless metastases which his systematic roentgenography revealed. I have been especially impressed with the number of iliac lesions.

We all speak confidently of metastases occurring after five to twenty years' freedom from the original carcinoma. In view of the known progressive course of the disease, and of its unknown causation, we might well let ourselves think of such metastases as being possibly fresh attacks. Such a conception will at least fit in better with the newer theories about cancer.

Leisure—For What?—In a thoughtful and thought-provoking discussion of this always timely subject, George W. Alger (Atlantic) says many things of use to physicians in their daily lives and practice: "The main contribution of the automobile to the happiness of a growing leisure class, says the author, 'is that it furnishes a new way of transforming an otherwise unbearable leisure into a mode of motion, with gasoline performing the function of a soothing syrup for grown-up children. . . . When we learn to classify men as inferior or superior by what they do with their leisure, we shall attain, among other results, a new angle upon race prejudice and perhaps find a new solvent for the heretofore insoluble. . . . A civilization that creates a leisure which it cannot rationally use may well be in greater danger of destruction than one that has no leisure at all. A civilization that bores its beneficiaries is perhaps even worse than one that overworks its slaves. . . . The great problem before us today is to create a civilization that does not degenerate under leisure. This can be done only by setting in operation forces making for a culture that recognizes, as no civilization since the fall of Rome has been required to do, that leisure is and must be a means and not an end; that its true value is measured by what we do with it—by whether it lifts us or lowers us in the great world of intangibles, the world not of material, but of spiritual values.'"

Pathetic—Dr. C. Hilton Rice, Jr. (Scientific Monthly), thus characterizes the spoiled child: "To change the feeding habits of the child requires the changing of the parents' habits of dealing with their child. For a child that is allowed to eat anything that it likes, and at any time it likes, is almost invariably a spoiled child, and the spoiled child is a difficult case to deal with. If a child gets off wrong, if he acquires dislikes for essential foods, these habits are likely to become fixed and permanent so that his whole future is affected. If ever there is a time when the firm hand of discipline needs to be used in the training of a child it is in this early irresponsible age when the child is tasting his adventurous way through the lists of foods that make up the human diet. . . . The longer a child has been on a one-sided diet, the stronger become his food prejudices and the more difficult it is to hold him to a balanced ration. It seems as though his tissues and organs become specialized, as it were, to certain kinds of foods, and always there is the old subconscious pull of habit that drags him back to his old ways of eating. That is why it is so difficult to feed the older child whose habits of diet have become fixed."

THE CHINESE HERBALIST AND THE MEDICAL PRACTICE ACT

By C. B. PINKHAM, M. D.,

Secretary California Board of Medical Examiners

As far back as runneth the mind of man has the Chinese "herb doctor" been a problem in California. We do not believe that there is a remote possibility of passing any legislation that either will effectively stop these Chinese herbalists from operating or put an end to their advertising, unless there be an unbelievable change of attitude in public opinion, an awakening of the lower courts and enforcement officers in many localities to a keener sense of civic responsibility in law administration, and more manifest co-operation evidenced by a change of policy on the part of some of our papers as to the type of advertising accepted for publication.

WE HAVE read with growing interest the article on page 330 of the March issue of CALIFORNIA AND WESTERN MEDICINE, where, in commenting on the Chinese herbalist situation in California, the Board of Medical Examiners is invited to supply some facts which may explain why the Chinese herbalists are permitted to advertise as they do in the daily papers. It is self-evident that the question should be directed to the advertising manager of each paper, for through him all advertising contracts are executed. A newspaper will not print any advertisement unless a contract had been signed and the "copy" had been submitted to the advertising department for publication.

As an example of the difficulties encountered in attempting to stop illegal advertising on the part of Chinese herbalists, we will relate a recent instance. Not long since the attention of the Board of Medical Examiners was called to such advertisements as "Dr. Chow," "Dr. Woo," "Dr. Lau Yit Cho," etc., and we thereupon undertook to exact compliance with the law by charging a specific herbalist with illegal use of the prefix "Dr." At the preliminary trial a charge of using the prefix "Dr." cannot be sustained unless the *advertising solicitor* will identify the defendant Chinese as the one who signed the advertising contract, frequently an impossibility, as the Chinese attendants (both translator and doctor) in the herbalist's office change frequently, or at least they change their names. Seldom will an herbalist give the same name when arrested on a second charge of violation of the law. Without identification of the defendant Chinese as the one who signed the advertising contract, the prosecution collapses.

An advertisement of a Chinese herbalist recently appeared in at least one of the San Francisco papers, reading: "If you are sick, come to us and have us give you a *scientific diagnosis* that will tell you absolutely the true condition of your whole system." This advertisement contradicts the usual court defense of the Chinese herbalists who, when charged with violation of the Medical Act, testifies that he did not "diagnose" but acted in the capacity of a storekeeper selling rice, tea, and sometimes herbs. At the preliminary hearing of the Chinese herbalist, whose "firm" used the above advertisement, the investigator for the Board of Medical Examiners, who, by the way, fully understands Chinese, testified that he understood the conversation carried on between the interpreter and the Chinese (doctor) herbalist,

who asked what pain the patient had, whether heart, back, or stomach, that the interpreter asked a fee of \$12, was paid \$5, and when asked for a receipt, gave the witness a small piece of card with a number on it, telling him to return. On the second visit the Chinese (doctor) herbalist placed the patient's hands on a pillow, felt the pulse, and said "She got a bad cold."

The advertisement mentioning the "scientific diagnosis" quoted above *was not admitted in evidence at the trial because the advertising solicitor testified he could not identify the defendant Chinese as the individual who gave him the advertisement.* This case is now under consideration by a police court magistrate as to whether the evidence submitted is sufficient to hold the defendant Chinese for trial.

The Better Business Bureau, which stands for honesty in advertising, should interest themselves in advertising of this nature, particularly when the statement is made that a "scientific diagnosis" will be given. Our investigators report that the "scientific diagnosis" made by the average Chinese herbalist consists in feeling the patient's pulse, looking at his tongue, and asking some questions as to his condition. It is then customary to brew some concoction for the patient to drink, some often given him to take away, and he is told that treatment will cost \$10 to \$12 per week, payable in advance.

CALIFORNIA AND WESTERN MEDICINE, May, 1925, page 617, in an editorial, "What About These Law Violators," quotes the above-mentioned advertisement, reading: "Come and have us give you a scientific diagnosis that will tell you absolutely the true condition of your whole system" (Chan & Kwong—Chan & Chan), with the comment, "If this isn't flagrant disregard for law, what is it? Why are these law violators not punished?" As a result of the activities of the Board of Medical Examiners this illegal advertising was recently corrected. The records of the Board of Medical Examiners show we have been most active in presenting to the courts throughout this state what we consider as irrefutable evidence of violation of the Medical Act on the part of many Chinese herbalists.

A certain Oakland Chinese herbalist, referred to as "Dr." in his newspaper advertising, when recently brought to trial on a charge of violating the Medical Practice Act, *displayed letters patent from Washington, showing he has been issued a patent on his name, thereby claiming legal authority to use the prefix "Dr."* despite the prohibition of such prefix by the California law. Legally this had no bearing on the case and properly should not have been permitted presentation in court.

The system under which preliminary hearings are held differs in various localities. The city charters of Oakland and Los Angeles permit a trial *by jury* in the police court, whereas in the majority of California cities and towns the preliminary hearing of one charged with law violation is held either before a justice of the peace (if the community be small) or before a police judge in the larger cities, such as San Francisco. After the evidence has been submitted the judge takes the matter under advisement, dismisses or holds the defendant for trial.

Considerable time invariably elapses between the

filing of the complaint and the first or "preliminary" hearing of the charges before the justice of the peace or police judge. This delay is often due to the congested condition of the court calendar; however, not infrequently the hearing is put over time and again at the request of the attorney for the defendant, who hopes as a result of long delay that the witnesses for the prosecution will have disappeared. In the instance of a trial (not an herbalist) recently completed in the Oakland Police Court, our Investigation Department reported that practically two and one-half years had elapsed between the time of arrest and the time of trial of said violator. During this period of delay seventeen postponements were reported. After the defendant has been held for trial in the Superior Court, again ensues a more or less extended delay, frequently occasioned by the attorneys for the defendant. The longer the trial is delayed the greater are the possibilities that witnesses for the prosecution will have disappeared.

The records show a surprising number of dismissals in the lower courts. Reference to the 1921 annual report of the Board of Medical Examiners (page 35) shows that during that year fifty-four Chinese herbalists were charged with violation of the Medical Practice Act in Northern California and twenty were dismissed (about 38 per cent); while of fourteen arrested in Southern California, only one was dismissed.

The legal report of the board is printed in each issue of the directory, which makes possible a complete check on all phases of our enforcement work.

An article, "The Problems of Enforcement," page 13 of the 1920 annual report of the Board of Medical Examiners, reprinted on page 231 of the 1921 directory, explains some of our difficulties.

Assembly Bill 440, introduced by Mr. Ed. Smith, which occasioned so much comment during the 1925 legislative session, had possibilities in effecting some modification of existing conditions and it has been suggested that a satisfactory conference bill might have been drawn, but we can foresee no legislation that will "close up" the Chinese herbalist.

Perchance a few Chinese herbalist cases reported by our Legal and Investigation Department may prove of interest.

A certain Chinese herbalist not far from San Francisco was reported by our former special agent to have passed him "protection money" in plain sight of a police officer, who promptly arrested the Chinese. The case was dismissed, *the judge holding that inasmuch as said investigator was not a sworn officer of the law, the giving of money for protection did not constitute bribery, nor was it an offense.* The law was thereafter amended so that special agents of the board are now sworn officers of the law.

A Chinese herbalist who gained considerable notoriety during the past legislative session was arrested January 5, 1925, in a neighboring city. The case was continued until May 8, 1925, when the case was put over to September 15, 1925. Commenting on the situation, our special agent on May 9, 1925, reported that list of witnesses was sub-

mitted to the district attorney on February 28, 1925, and return made May 7 (the day before trial) showed only one of the four witnesses could be found; that this information was conveyed to the representative of the board "twenty minutes before the case was called . . . the jury had been summoned . . . although the witnesses were not obtainable. . . ."

Some time ago our investigator reported the arrest of a Chinese herbalist in a northern county. A search of his premises netted abortion instruments, admittedly his, and he confessed practicing medicine. Conviction.

A certain well-known Chinese herbalist in a Northern California city, prominently involved in the recent legislative controversy, had at his office door for many years an ornate brass sign reading, "Physician and Surgeon—Eye, Ear, Nose and Throat," until after many attempts he was finally convicted by the legal department of the Board of Medical Examiners. This conviction was sustained by the higher courts, and he then paid a fine of \$500 and spent four months in the county jail.

It is reported that this wily Celestial for years has retained each new district attorney as his *personal* attorney. Newspaper reports relate he "has been fined heavily in the federal courts and justice court for selling drugs illegally." He has also been charged with performing illegal operations. Prosecution of this individual has been surrounded by unbelievable difficulties.

If space permitted we could relate many other instances to show that the Chinese herbalist is not the asserted innocent storekeeper selling only tea, rice, and occasionally some herbs.

An illuminating article narrating the operation of the Chinese herbalist was published in the *Dear-born Independent* of August 9, 1924. Therein is stated that the Chinese medical system was founded in 1578 and has not been changed since. "For 346 years Chinese 'doctors' in China and abroad have followed this book (Pen T'Sao) without changing their drugs, their compounds of those drugs, or their methods of medication."

"Diseases in China," by Jeffereys and Maxwell, relates "To become a physician a Chinese states to his friends and neighbors 'I am a physician.' This is the limit of required preparation. The Chinese doctor's diploma is a more or less handsome sign-board, which announces his determination to the neighborhood."

The *China Medical Journal* 38:679, August, 1924, recites that Chinese physicians are mostly purveyors of superstition, excepting a small group of those trained abroad or at home in modern medical science. Ancient customs embrace or condemn views quite opposite to Occidental standards. Most native Chinese physicians rely on few remedies which may be of value, but the composition is a closely guarded secret.

EDITORIALS

THE FIFTY-FOURTH ANNUAL SESSION, CALIFORNIA MEDICAL ASSOCIATION

We had hoped to publish in this issue something about the session of the California Medical Association held in Yosemite, May 18 to 21. This we are unable to do because we *must go to press on schedule* and were not able to secure enough advance material to make the June issue interesting about convention matters. The July issue will carry what we can get of news, presidential, section chairmen, and other general addresses. Also, we hope, the proceedings of the House of Delegates and Council.

THE CHINESE HERBALISTS AND THE MEDICAL PRACTICE ACT

Particular attention is invited to the article under the above title by C. B. Pinkham, executive officer, California Board of Medical Examiners, published on page 737 of this issue. Doctor Pinkham tells a disheartening and discouraging story of a matter that is a disgrace to California. We get a peep into conditions that read like tales of other bootleggers; some "slants" that indicate with clarity what mercenaries will do for money and how they can and apparently do reach far into our social structure for support that they must have to successfully carry on their nefarious practices *in violation of law*, and also at the expense of public health and welfare.

Why is it that these bootleggers and traffickers in health can, and do, not only violate the law openly and flagrantly, but boast of it and invite other victims in paid space in some of our newspapers daily? Doctor Pinkham indicates an answer and how it works. What a spectacle it is that a "*Doctor Yun*," or some such name, may secure "letters patent" from the patent office of our national government and then introduce this legal document in defense of his violation of the laws of California designed to protect the health of our citizens!

The bureau of the patent office at Washington is under Secretary Hoover. We would like to see this practice put up to him, having confidence that, if in his power, it would be discontinued. The practice of federal bureaus of nullifying and overriding state laws by executive action of some political clerk or other creature is not as popular in Washington as it once was, and we have every confidence that in so far as lies in his power our fellow Californian, Secretary Hoover, will not encourage the creation of "doctors" by "letters patent."

Doctor Pinkham's illuminating comment upon the practices of some of our lower courts explains much. Such publicity ought to be followed up, giving names and dates. CALIFORNIA AND WESTERN MEDICINE will be glad to publish enough of such facts from month to month to eventually arouse the interest of some worthwhile civil organization genuinely concerned with practical problems of public welfare. Doctor Pinkham, we regret to note, appears to feel that in our various references to "herbalists" and other unlicensed persons who practice medicine in California in violation of law,

but nevertheless with an apparent cast-iron immunity, we are criticizing the Board of Medical Examiners. Nothing is further from our intention. All the members of the board are educated doctors of medicine and most of them members and officers of the California Medical Association, and therefore part owners of CALIFORNIA AND WESTERN MEDICINE. We are aware of some of their difficulties, but we do invite them to use CALIFORNIA AND WESTERN MEDICINE more fully and freely, as has been done in the present instance, in keeping their problems before our physicians, other health agencies, and through them, the general public. Such publicity reaches far and it will reach farther as time goes on. It is the only available method by which physicians can widely show their sound position and active interest in this important plan of public health and even decency.

No, Doctor Pinkham, we are not after you or our other friends who are members of your board. All doctors pay, and most of them willingly, a special tax to carry on your work. If a light step upon your toes produces such illuminating discussions of an important subject as your present article, and such can be obtained in no other way, other bruises may prove salutary.

We want to work with you in a common cause—not against you; but most important, we want to work.

HOW PHYSICIANS' SERVICES ARE MADE AVAILABLE TO THE PUBLIC

Once upon a time a young lady made herself and her surroundings as attractive as she knew how or could afford and then waited for some young man to become interested in her. Most young physicians obtain their start in practice by an analogous method. It is said that modern young women are adopting more progressive tactics, and there is an element of considerable magnitude developing among physicians by which they also will become more active in getting started in their life work. Some of these methods will be considered in subsequent articles, but first it is well to look into the old-fashioned way a little more closely.

The vast majority of people still consider it their personal privilege to select their life partner, their physician, and their dog. Many and divers attempts have been and are now being made to restrict personal liberty upon all three points. If any of them makes progress enough to arouse general interest, there will be a reaction that will make prohibition enforcement look like a tea party.

Not only do most people believe that their selection and method of compensating their physician is a private and personal matter, but the vast majority of physicians agree with them. While this method often means lean years for the young physician, it nevertheless is part of the charm of the profession, and it is an important element in the romance of medicine and the sanctity of the relations that surround and guard the patients.

Young physicians always have, and probably always will, object to the sacrifices most of them make during the hard, lean years while they are making personal friends and converting them into

professional friends and patients when medical services are required. Most older physicians look back upon these years without regret and with a realization of all they meant in self-discipline, self-analysis, increased study, hospital experience, and the development of the capacity for human understanding and sympathy that proves so necessary in their work.

In other days, when part of the medical student's training consisted in an apprentice service with an older physician, many of the first and difficult lessons were learned by precept and example. Nowadays the student spends his days in laboratories and hospitals, where every activity is part of a well-organized whole; where patients are often "cases," and problems are red ink and black-ink notations on "case records." The modern method undoubtedly produces a more scientific physician and one more competent from that standpoint. But modern education leaves him with more serious problems than had the young graduate of a few years ago. He is trained to rely upon laboratories, x-ray, and many other expensive and complicated devices for diagnosis and treatment. He finds it difficult to practice medicine without them, and he cannot afford to buy them. Even many of the hospitals, particularly in smaller communities, are without these accessories, and the young graduate has a hard time readjusting his methods to meet the actual conditions of life.

The greatest problem of the young physician is to fit himself into the social, economic life of the community, and particularly to fit his professional personality into things *as they are*. In this, the art and personality of medicine, the modern young physician has a much harder time than his colleague of a few years ago who learned these lessons from his preceptor while serving his apprenticeship.

MEDICAL ORGANIZATIONS ASSUME LEADERSHIP

County and state medical associations here and there are establishing clinics and otherwise taking steps to put medical leadership actually into effect. We have been saying this should be done for about as long as medicine has been a profession. The doing of it is another matter, but if the sporadic attempts are well planned and well supported, there is a chance that educated physicians might again take a more influential place in the practice of personal and public health.

In some places county societies have started and are operating their own clinics for the care of the economically and socially insolvent. In other places they have established co-operative plans with other health-promoting organizations, whereby the medical society fixes policies and furnishes the physicians, while the co-operating public health board or other organization supplies the funds and the clerical and technical assistants who operate under the supervision of the medical society. In Illinois, for example, according to Doctor H. M. Camp, secretary of the State Association (Bulletin A. M. A., April, 1925), this movement is attaining interesting proportions.

What medical society will be the next one in line?

Medicine in the Public Press

The "Fast Way to Health"—"Dr. Frank McCoy, 'noted dietitian and diagnostician' of Los Angeles, was brought to San Francisco by the San Francisco Bulletin," says that paper, "to give a series of lectures for its readers, free, on 'how to reduce' and also how to travel the 'fast way to health' on the proper combination of foods and correct physical culture exercises. The lectures began Friday, May 15, 'on the ART of reducing.' The lectures were much advertised as open to everyone—both men and women—without any 'charge whatever.' Come and bring your friends," advise the headlines.

On the illustrated half-page, telling about what this "noted doctor" can do, we note of entertaining value to physicians that "Dr. McCoy says that *no matter what the original cause of the goiter may be, the cure is always possible through the use of the fruit fast*. This treatment removes the thickened material from the blood, and the circulation carries it off. The thyroid decreases in size and sometimes disappears entirely, but if the size does not entirely diminish, the load is taken off the heart and the circulation is improved." There is plenty more just as entertaining and (?) reliable.

The Ideal of Child Health—An editorial in the Woman's Home Companion, under this headline, says in part that: "There is a doctor in New York who gets a fee of \$15,000 a year just for guarding the health of a millionaire's children. He calls twice a week, plans their diet and their exercise, and catches any small ailment before it can become serious. If the children fall ill, he treats them. The idea, however, is to keep them well. This is worth \$15,000 a year to the millionaire, and it would be worth as much to every parent. But few can afford even a hundredth part of that sum for a physician's care. *For a small fraction of it—or \$1.50 a year—the readers of this paper (Woman's Home Companion) get once a month the advice of experts on child health.*"

The italics are ours. Such cheap medical service is entitled to have italics.

Modern-day alienists are creating the impression that to be insane is not really a reflection upon one's intelligence.—Birmingham Age-Herald.

"Wrong-Headed Zealots"—Under this heading the New York Herald-Tribune says, editorially: "The foes of medicine calling themselves the Citizens' Medical Reference Bureau touch the extreme of nonsense in objecting to the proposed statue of the dog Balto because he made his glorious trip to Nome on a nefarious errand, carrying antitoxin to diphtheria sufferers. They seem to think that Balto is an eminent bacteriologist. The protest is only a grotesque play in the campaign to harass physicians in their winning fight against a deadly disease."

"The wrong-headed bureau seizes this occasion to spread the impression that diphtheria antitoxin is a failure. It practically represents Dr. William H. Park, director of the city's laboratories, as having admitted as much. Dr. Park, of course, has said no such thing. No physician in the country is more convinced of the wonderfully efficient results of antitoxin and of the value of immunization by means of toxin injections."

"Use is made of the statistics of Willard Parker Hospital to prove a high rate of mortality from diphtheria. The anti-medical bureau stresses the 35 per cent of mortality among children under 3 years old at the hospital from 1919 to 1923. It omits to mention that in the years before antitoxin was administered the rate was 80 per cent. Nor does it explain that a great many of the cases are received by the hospital in an advanced stage, when antitoxin is all but powerless. Prompt treatment is essential."

"Before antitoxin came into use, the death rate from diphtheria in New York City was 150 per 100,000 of population. Thereafter, in 1898, it was reduced to 54. With some fluctuations, it was reduced in succeeding years to 22 in 1919, when the immunizing vaccine became

available. It declined in 1923 to the low mark of 9 per 100,000. The life-saving potency of antitoxin applied in time and the protecting virtue of the preventive injection are facts abundantly proved. Let no mother or father for an instant credit the assertion of persons who hate physicians and all their works that the modern treatment of diphtheria is of questionable value. It is indeed one of the great triumphs of medicine. Were every parent instructed, one of the most dreaded diseases of childhood might ultimately be subdued.

"It is sorry business for any organization, however sincere, by deceptive use of figures and the garbling of statements of a public health official to try to cast doubt where none exists on the efficacy of antitoxin and of immunization against diphtheria."

The Ubiquitous "Sunday Supplement"—Doctor, was your sense of humor or your enjoyment of the ridiculous sufficiently elastic to permit you to read in a recent Sunday Supplement how cockroaches act as "Carriers to the Carrier" of the "cancer germ"? Some article that! and as for the illustrations, Oh boy! The trouble with fake stuff of this character is that some people not officially rated as especially "moronic" believe it, as is attested by letters of inquiry. The chief reason for this alleged scientific article is to promote the use of "roach powder" as the "only way" to get rid of these "bugs that bring us cancer."

"Baby Congress and Health Exposition" Under Medical Auspices—Newspapers have given much space to a national baby congress and health exposition sponsored by the Illinois Medical Association. It is said that "the congress has the support of the American Medical Association and the Chicago Medical Society, whose officers, with those of the Illinois State Medical Society, are in supervision."

Some 14,000 babies and many older children and adults attended the exposition, which was "in no sense a beauty show, but strictly a health show. All things related to health found a place in the exhibits, and no exhibits of disease found a place on the exhibition floor."

Provisions were made for a complete physical examination of all persons by a staff of 765 members of the Illinois Medical Society.

This looks, at this distance, very much like medical leadership in action.

Public Schools for Babies—The Metropolitan press of an Eastern city recently gave prominence to a movement—or a gesture—to provide public schools for babies—"nursery schools." It seems that some of the uplift organizations, after repeated "conferences" and much "research" have arrived at the conclusion that the "only way" to properly prepare oncoming generations to meet adequately the rough and tumble of life is to take the babies away from their "incompetent mothers" and "unsanitary and unhealthy home environment" generally, and place them in specially designed public schools. In fact, the "Infant School Society" already have several of these schools in operation. They are apparently modeled closely after those that have been featured as part of the health activities of socialistic centers in Europe.

Publicity As a Health Asset—"Experience has shown," says the Ohio Health News, "that the wider the spread of publicity, the less the spread of disease in any neighborhood epidemic; that the more concealment is tried, the longer the disease lingers; that other means of communication exist whereby news, especially bad news, travels rapidly, and generally badly distorted; that plain facts about local health conditions should always be given the public."

Spoofing the Press—Medical editors, who have an opportunity to see all they care to see of the "News Release" about health and welfare, are at first amazed and then become thoroughly disgusted with the stupid tommyrot that government bureaus and other propagandizing agencies and persons have the temerity to try to get pub-

lished as "news" or as "scientific data." For example, the Census Bureau gives us the interesting and useful information that in America some 187,000 babies died last year between birth and one year of age, and that over half of these died during the first month of life. Another government bureau, after what was no doubt an expensive "survey," then takes the Census Bureau figures and their own "findings" and turns them loose, ready to print as "news." This alleged news contains statements that are about as much news as is a statement that cough is a symptom of tuberculosis. Some of the statements that they apparently consider news are:

"A thorough knowledge of the causes of infant mortality is the first step toward their complete control." What an erudite statement!

"The pathological causes of infant deaths must be reported on death certificates by the physicians in attendance. But the analysis of infant mortality, if it is to be thorough, must be carried beyond the pathological cause to antecedent and predisposing causes and casual factors." (Italics ours.)

Among the causes of infant mortality which this bureau feeds out as "news" are:

"Seasonal conditions influenced the mortality rates."

"Factors relating to the physical condition of the mother also influenced the mortality rate."

"First-born children had a slightly higher mortality than second-born."

"The mortality rate was highest for infants born within a short interval (within approximately one year) after preceding births."

"Mortality from all causes was much higher among twins and triplets than among other babies."

"Mortality among the exclusively artificially fed babies averaged between three and four times that among the exclusively breast-fed."

"Housing congestion, employment of the mother away from home, and low earnings on the part of the father, were other very important factors influencing the infant death rate."

Facts, yes, but already so well and widely known that they have about as much news value and are about as dramatic as the Ten Commandments.

The London Spectator offered a prize of five pounds for a four-line epigram on "The Modern World." The prize was awarded for the following quatrain:

Science finds out ingenious ways to kill
Strong men, and keep alive the weak and ill—
That these a sickly progeny may breed,
Too poor to tax, too numerous to feed.

Daddy Long Legs begins to have scientific value as applied to human beings, according to "release material" from certain universities to the press. Editors and news writers have gotten quite a "kick" out of the statements of "professors" that the length of the leg is proportionate to brain and mind capacity. Quite encouraging to men of the Lincolnesque type, but, as one editor says, what about the "Little Mac," the Harriman, and the Grant types. Then what about the long-shanked Africans? When it comes to the anthropological indexing of the female shank, Oh Boy! who would not like to be a "professor"?

"Big fleas have little fleas
Upon their backs to bite 'em;
Little fleas have lesser fleas,
And so ad infinitum."

This is about all of the news value that is left of the two-day front-page story about the fellow who "discovered" that even germs have parasites. That most all living things are both benefited and pestered by parasites and symbiotic associates has been known for generations. That this biologic phenomenon extended further than was demonstrated was no new doctrine. That a step, a useful step, forward in determining this phenomenon, as well as its significance when applied to some living things of microscopic size has been taken, is important. However, many, many hours of hard study and countless experi-

ments must yet be made before the road will be interesting or the work important to the average reader.

"Glandular Cure for Arthritis Claimed," reads the headline in one newspaper, and "Gland Tests Restore S. F. Derelicts," says another.

These and other headlines in other papers display a story that reads like—entirely too much like—a fairy tale:

"Gland transplantation, one of the foremost achievements of modern medical science," says one paper, "is to be credited with another series of almost miraculous cures as a result of experimental work carried on at the San Francisco Relief Home." . . . "Working under the direction of Dr. William C. Hassler, city health officer, for the last two years, Doctor Justin McCarthy has been so successful that he was able to state, in an interview today, that in more than 50 per cent of the arthritis cases treated the sufferers have found almost complete relief from pain." . . . "There have been any number of cases of inmates, bedridden and tortured for years by arthritis, who have been altogether relieved of pain," continues the interviewer. "Numerous Relief Home patients who have vainly tried every other remedy—milk injections, vaccines, and all the usual internal and external remedies—have been completely relieved."

If this story is even approximately true, most physicians will regret that the facts were not first released to scientific bodies of physicians. If the story is not true, the usual harm will follow. By the way, which particular kind of the several known types of arthritis of different causes and the others about which we do not know much will this new gland rejuvenation method cure?

Science or Sex Muckraking?—Some time ago we noticed a sex muckraking story about 1000 unmarried college women. The report claimed to show, as a result of a "confidential questionnaire," that many of them had, to paraphrase Kipling, "learned about men from him." A large number of these women admitted also, according to the report, to have played up and down the scale of abnormal sexual practices. The report contained nothing of special interest, nor that could be interpreted as surprising information to physicians, but psychologists and the general public seemed to get quite a "kick" out of the ramble through the fields of its salaciousness.

Now (Mental Hygiene), we have the second part of the story, dealing this time with 1000 married women of college and near college education grade. There are more of the same sort of figures and tables that tell of the sexual vagaries of the victims. Much of the effort of the "surveyors" appears to have been devoted to establishing what, if any, relation exists between the feelings engendered by masturbation and other self-inflicted sexual practices and those due to normal sexual intercourse. The average wholesome, clean-minded, non-medically educated person, after reading these reports, will want to take a bath.

The published conclusions from the extensive and expensive *survey* are about as sterile as any we have read for a long time.

Walter Camp died suddenly just after completing an article for a magazine, telling how simple it was to secure and maintain a status of the "pink of condition."

The death, thus dramatically, of the world's most aggressive "positive health," "live as long as you please" faddists, has been followed by a perfect orgie of controversy among physical culture faddists as to how it could possibly have happened.

Many newspapers are devoting considerable space to discussion of this subject by intelligent writers. The following abstracts from a series of such articles appearing in the Brooklyn Daily Eagle deserve notice. The author, Thomas S. Rice, says that "for many years physicians and other experienced observers have been calling attention to the dangers in much of the advertising propaganda for the immediate undertaking of daily, and more or less violent, exercise by those who have been inactive since boyhood or early manhood. *It is a serious menace to longevity, unless the individual who responded to the advertising limited himself strictly to what is recommended by a competent physician after thorough exami-*

nation, and with his recommendations carried out under the eye of a scientifically trained director.

"So vast has become the volume of reckless advice emanating from retired boxers, wrestlers, strong men and the like; and so many persons are enthusiastically going in for 'physical culture' without first consulting a physician, that it would seem a word of warning might well be issued by the daily periodical press.

"Has the cult of physical culture, carried to extreme as it now is being carried, done more harm than good in the way of shortening instead of prolonging human life? Observation extending over a number of years long ago convinced me that the professional exponents of physical culture are shortening the lives of thousands of valuable men and women. Issue will be joined by those who insist upon everybody keeping himself or herself fit by taking physical exercise every morning or evening, according to a schedule. They will urge that regular exercise is absolutely essential to those who wish to escape an early demise.

"We will agree that a certain amount of incidental exercise is essential, but we also believe that the physical culture exercise, especially for those who have not had previous training for many years, is a menace to longevity. Walter Camp's own death before he reached the sixty-seventh milestone will need a lot of explaining. . . . Physical culture adopted by middle-aged persons whose work has been more or less sedentary since boyhood, or early manhood, is an exceedingly dangerous undertaking for those who would wish to reach three score and ten. The extra strain upon the heart and arteries brought about through systematic physical exertion by those whose hearts and arteries may be said to have become 'set in their ways,' must inevitably have its effect, but very, very few physical culture enthusiasts, except in the best gymnasiums, make their warning clear to those whom they are so eager to proselyte.

"Anybody may set himself up as a physical culturist. Not only that, he may advise his clients, or whatever he may choose to call them, to pursue a course that must inevitably shorten their lives, and no check at all may be placed upon him.

"Any boxer, wrestler, football player, runner, shot-putter, etc., who has passed out of competition is privileged to open a gymnasium and tell the world that he is capable of giving fit instruction to all comers, regardless of their present apparent health or their past history. . . . Innumerable 'professors' are giving what they fondly call 'physical culture lessons' without requiring the applicant with fee in hand to consult a physician, and every such 'professor' should be suppressed.

"Many of the 'professors,' mostly those in the larger towns or cities, propose, but seldom compel, examination by a physician—and in a large percentage of cases it may be safely asserted that the examination has absolutely no effect upon the 'professor' or the client, in regard to the amount of exercise the client takes. The 'professor' may suggest that the client go easy for a while, or knock off for the day, but if the client asserts that he is feeling extra fine and wants to put in another hour of handball or handling the weights or the pulleys, does the 'professor' stop him for fear that the client may overstrain his heart? Not to any large and appreciable extent. . . .

"As a rule, the 'professor' not only refrains from checking overly ambitious or enthusiastic clients, but actually encourages them to speed up and prolong their exercise. No malice is intended. The 'professor' really believes he is helping the client by encouraging him to work briskly and frequently, and the more conscientious the 'professor,' the more harm he may do when his gymnasium is open to all comers of all ages.

"How frequently is a complete health history of the client obtained, reactions tested, urinalysis and blood examination made, and a careful series of tests and observations upon the client after violent exercise recorded as guides to future work in the gymnasium? Very rarely except in the big universities, and there the material is composed of boys or young men, with few or no middle-aged or elderly men in the problem."

The Brooklyn Eagle and Mr. Rice are rendering a fine and far-reaching service by such intelligent consideration of an important health subject. The practice of medi-

cine under the elastic title of Physical Education is just now the most widely promulgated cult. Like others, it is destined to be shortlived, and the shorter, the more lives spared. There is a legitimate field for physical education, but it is a comparatively narrow one and properly includes neither the practice of medicine on the one hand, nor the promotion of glorified sports and play on the other.

"Health Specialists" as "Go-Betweens"—There are interesting connections between some of the alleged health, beauty, dietetic, home economics, and similar columns and the freak advertising pages of some of the same publications. If you are interested in knowing about these connections, write and ask some of these alleged experts where and how to secure the things and the services they recommend. You are already more blasé and more completely disillusioned than most people ever get to be if you don't get some "kicks" out of some of your answers. Try the "radium products" promoting group; any of the "special" food or other group promoters and see what you get.

Rockefeller's Five Rules of Health—He follows as nearly as possible these health rules prescribed by his physician:

1. Don't worry.
2. Don't acquire overweight.
3. Drink three quarts of water every day.
4. Exercise.
5. Sleep in fresh air.

What Will We Do If We Should Get it?—William H. Welch, in an interview on his 75th birthday, is widely quoted as saying that "Heredity is a prime factor in determining the age to which a man should naturally live. There is reason to suppose that the span of life is inherited by definite laws."

Even the certain number of years that science can add to the human life, provided the individual works hard enough and constantly enough, brings added problems for society to solve, and, as Doctor Welch says, "longer life implies a certain measure of prosperity and of thrift. It also implies a higher popular intelligence."

About Birth Control—George Bernard Shaw says, according to the New York Times: "If people regard reproduction as an obscene subject, or a funny subject (and they are usually the same people), there is nothing more to be said: nothing remains but to live them down, and to be particularly careful meanwhile not to waste time, life and money in appeals to the law, which is always fifty years out of date. . . ."

"The shock I received at about 6 years of age, when, without any warning, I went into our drawing-room and saw a woman without a crinoline, probably produced a complex which psychoanalysts may be able to trace in my works to this day."

Havelock Ellis philosophizes thus: "'Birth Control,' indeed, and its substitutes—especially the latter—have been in active operation ever since birth began to take place on the earth, and even earlier, from the commencement of animal life. That is why it is possible to look at this question as one having an evolutionary meaning. . . ."

"A single oyster, if all its progeny survived, would speedily accumulate, it is estimated, a heap of shells eight times the size of the world. Even a pair of elephants, the slowest of all animals to breed, would in much less than a thousand years produce 90,000,000 elephants. . . ."

"The methods by which population is consciously or automatically controlled, and increase limited, are numerous. They fall into two groups, the first acting before conception, by decreasing fertility, and the second after conception, and indeed throughout life by increasing elimination."

Dr. Corrado Gini—"By means of special care and treatment, the weak and degenerate are, among modern civilized nations, saved from the selective action of nature and placed in a position to live and multiply."

Edward M. East—"Widespread rationalization of parentage will aid greatly in cutting down maternal and infant mortality, will effect a reduction of congenital defectives, and will lower the frequency of many diseases."

STIMULANTS, DEPRESSANTS, HUMOR

WHAT THE EDITOR HEARS ABOUT THE HISTORICAL NUMBER (MAY) OF CALIFORNIA AND WESTERN MEDICINE

Extracts from Letters and Other Messages

"It had to be good to stand out among a long series of excellent issues."—E. N. Ewer, President C. M. A.

"Better than I expected, and that is saying much."—John H. Graves.

"A splendid idea well carried out."—John Galloway.

"A finished example of highly pleasing and effective team work between editors and contributors."—James W. Ward.

"Not only our editor but our contributors are getting better all the time."—C. D. McGettigan.

"It does not contain enough about medicine."—M. D.

"It, as usual, promotes your friends."—M. D.

"I must take a minute of your time to congratulate you upon the excellent historical number of California and Western Medicine, May, 1925. In a great many ways our State Journal right now is unexcelled, thanks to your vigorous and wonderful management."—Frank Hinman.

Annals of Medical History

New York City, May 14.

"May we not congratulate you on the Historical Number of California and Western Medicine, which has greatly interested us and which we are sending to the editor for possible abstracting in the Annals of Medical History?"

We wish that you would send us two extra copies of this number that we may send to reviewers.

We note that you have other articles which were received too late for publication in this number. If they are to be published later, will you kindly send us marked copies of the numbers containing them?

We want to say that the Annals of Medical History will be glad to co-operate with you at all times in any medical history work. If we can help you, in the way of loaning cuts, etc., we shall be only too glad to do so."—Annals of Medical History, Paul B. Hoeber, Inc., publishers.

"You are to be greatly commended and congratulated for the manner in which you conduct our Association Journal, the type of papers presented, and greatest of all, the personal prefatory note given to many papers and the editorials. The latter always have my first attention with each new issue."

The Historical Number is excellent. It should be repeated. I hope you will continue for many years as our editor."—J. H. Woolsey.

"May I add to the numerous comments you must have already received, my very great appreciation of the Historical Number of California and Western Medicine? It is certainly a delightfully written, and an interesting and instructive compilation of fascinating articles, worthy of real litterateurs; and is particularly pleasing to me, for I am of a pioneer family and was born in San Francisco in 1861. I am familiar with many of the names and knew not a few of the splendid medical pioneers mentioned by Dr. Lyman."

One might easily get dangerously near exorbitant praise of Dr. Lyman's exceptionally fine handling of his subject, and the work of the other distinguished gentlemen who have lent so much to the success of the May issue, which should be perused by every Californian who truly loves his profession and his state."—Donald MacC. Gedge.

"Most hearty congratulations for the May number of California and Western Medicine. A most interesting and valuable addition to the library of any California physician."—Joseph Catton.

"I found the article on the early medical history of California intensely interesting and instructive. I never before realized what important roles physicians from the southern states played in the early California development. I am sure it will prove of equal interest to some of my southern doctor friends to whom I wish to send a copy of the Historical Number."

Please mail me a copy, for which I enclose 50 cents (stamps). Congratulations on the success of this interesting number."—Lindsay Peters.

"Permit me to congratulate you upon a most splendid production."

The illuminating and scholarly special article of Dr. George D. Lyman would grace the columns of any medical journal in the world. I suppose there were compelling reasons for omitting the bibliography of this paper, but I cannot refrain from expressing a regret that it did not also appear.

Concerning historical material in future issues of our Journal, my opinion is that a policy of collecting short authentic biographies of California medical men should be persistently followed by our state Journal, and from time to time the material so gathered should be edited and published.

I believe that our State Association, so far as the pages of its Journal are concerned, should allow the name of no practitioner of this state to go into complete oblivion. As the years roll by, the indices of our state Journal should reveal at least some little biographical record of every medical man who ever, for any considerable length of time, practiced his profession in California."—C. F. Griffin.

Medical Economics and Public Health

Veterans' Bureau Introduces an Innovation—In order to carry out the work of regional and hospital standardization of clinical and administrative service in the field, General Hines, director of the Veterans' Bureau, has just assigned four medical supervisors to a tour of field duty, with stations at New York, New Orleans, Chicago, and San Francisco.

To facilitate the handling of medical problems, it is the plan of the director to alternate field and central office service for staff physicians, so that they may become thoroughly familiar with all phases of medical administration both in the field and in central office, and also in order that the medical service may be completely standardized and uniform throughout. This plan was strongly endorsed at the last meeting of the Medical Council of the Bureau in February.

Dr. George O. Skinner, until recently acting manager of the District of Columbia regional office of the Bureau, will be stationed in San Francisco, his territory comprising the states of Montana, Wyoming, Colorado, New Mexico, Utah, Arizona, Nevada, California, Oregon, Idaho, and Washington.

It is a mystery why lay organizations which promote public health persist in ignoring the practicing physicians of their communities. A great criticism of public health nursing is, that the nurses diagnose and treat cases of sickness. While it is true that the cases which most nurses diagnose and treat are mild and are those which a physician does not usually care to visit, yet who shall draw the line?—Editorial, New York State Journal of Medicine.

The "Middle Man" in Medicine in Action—"There may be a few Indiana doctors," says the Journal Indiana Medical Association editorially, "who are connected with health institutes and who make health examinations of persons who have applied to the institute for such service and the reports of which are passed on to the institute for analysis before results of the examination are reported to the patient who pays handsomely for the advice. Just why any physician should consent to be a go-between is hard to explain, but the worst feature of the business is that the patient is being imposed upon, and the doctor who makes the examination is contributing to the success of a commercial enterprise that does not deserve recognition at the hands of ethical medical men. Periodical health examinations are becoming justly popular, but if they are going to fulfill their purpose they must be controlled by the medical profession, and any suggestions or advice given the patient should come from the physician making the examination and not in a round-about way through a commercial agency."

Note the Italics—An Eastern state now has a law which, according to official publications, "authorizes *boards of education* and school trustees to provide transportation; home teaching; special classes or special schools; scholarships in non-residence schools; tuition and maintenance in elementary, secondary, higher, special and technical schools and, on recommendation of the State Department of Health, *surgical, medical or therapeutic treatment, hospital care, braces, and other appliances* for physically handicapped children."

And yet some people still claim that public school systems are not even interested in the practice of medicine.

How Can a Christian Science Healer Consistently Sign a Certificate of Illness—In answer to this question, the chairman of the Christian Science Committee on Publication answers in part (Colorado Medicine):

"Christian Science naturally and consistently deduces that whatever does not speak of the goodness and harmony of God is but an expression of erring human sense. Sickness is very real to the human sense, but no one can

reasonably claim that sickness is eternal and a part of the absolute reality of being in God's sight, for if it were we could never be rid of sickness. From this it will be seen that the therapy of Christian Science does not consist of, nor depend upon a negative premise, but rather does it operate from the affirmative spiritual facts about God and His creation. Thus Christian Scientists obey Jesus' counsel to 'render unto Caesar the things that are Caesar's by signing certificates of illness and also 'render unto God the things that are God's' by endeavoring in their prayer or treatment to 'know the truth,' which Christ Jesus said would make men free."

To which the editor of Colorado Medicine adds:

"*Reply*—Despite the foregoing explanation, we remain a little hazy concerning the mechanism of Christian Science.

"A man cuts his knee and his trousers. He admits the cut on his clothing, but not in his flesh. A woman has a wart on her nose. She denies the existence of the wart, but acknowledges the reality of the nose.

"Here is a form of differential nihilism in which the credulous mind denies or affirms the existence of things according to caprice.

"We prefer the more critical analysis of the bard:

"There was a faith healer of Deal
Who said, 'Although pain isn't real,
If I sit on a pin,
And it punctures my skin,
I dislike what I fancy I feel.'"

Many Doctors Might Save Money by Reading This—No medical man thoroughly appreciates the hazards of his profession until he has been sued. Your counsel has observed the psychology of countless doctors who have been forced for days at a time to drop their practice and to hear themselves presented in court as the villain of the piece, watching with chagrin, amazement and concern the unfolding of their alleged shortcomings. The possession of insurance, under such circumstances, in addition to the knowledge that their rights will be safeguarded in court, is a source of assurance, confidence and consolation which only those who have been sued fully understand and appreciate. . . .

The question fairly arises for all doctors, both those with years of experience and those who are just embarking upon their professional career: Is it safe to practice medicine without being insured?—Attorney Whiteside, New York State Journal of Medicine.

Protecting the Health of San Franciscans—The new budget of the official San Francisco Health Department shows that one out of every 500 citizens of the county is an officer or employee of the department charged with protecting us against dangers to health. The cost of this service is some \$3.50 a year per person. Assuming that the work is well done, and we are not intimating otherwise, the cost is a reasonable one. Few citizens take the trouble to understand the fact that this is only one of the several official government agencies with other hundreds of employees also largely engaged in keeping us from getting sick. Nor do most of us connect the activities and expenses of OFFICIAL health-protecting agencies with the vastly more numerous persons engaged in and the vastly greater sums of money being spent in the same service by VOLUNTARY health organizations and individuals who are engaged privately in health work for a livelihood. The group of voluntary health betterment organizations which some of the leaders claim to constitute the "*unofficial government*" in places expend more money and employ more helpers than does the "*official government*" board.

The group of individuals and organizations who are engaged in keeping San Franciscans well and getting us well for a livelihood includes physicians (1 to 450 of population), nurses (1 to 1000 of population), technical and clerical help (1 to 500 of population), and several other classes not here enumerated. It may be that the time of more than 10 per cent of our population is necessary to protect the health of the 100 per cent, but one of these days it is going to become *very* difficult to explain why so many people employed by so many different groups, official and unofficial, are being paid to do pre-

cisely the same things. What has been designated as "*charity in business*" and "*business in charity*" movements are so rapidly assuming the same sort of "refrigerated" lines of development that it is becoming difficult to distinguish between them. However, our official health authorities should have their money.

The A. M. A. List of Approved Hospitals—The American Medical Association, through its Council on Medical Education and Hospitals, which handles the hospital work for the association, has issued its 1925 revised list of hospitals approved for internships. The list is published in the *Journal of the American Medical Association* for March 28. It will also appear in the ninth edition of the *American Medical Directory*, besides being in separate pamphlet form. The list names 524 hospitals that are in position to furnish general internships, such as satisfy the medical colleges and state boards, as well as meet the almost universal demand of medical graduates for at least a year's general hospital experience, practice or specialization.

There were reported 5059 interns, of whom 3825 are in the 524 approved hospitals, and 1234 interns in 2696 non-approved hospitals. This total of 5059 interns compares favorably with the 3669 interns reported in the census of one year ago, the increase being 1390 or 37.9 per cent. In fact, there are 156 more interns now in approved hospitals than there were in all hospitals two years ago.

When the hospitals began to feel the shortage of interns about a decade ago, they quite naturally resorted to pecuniary appeals and offered salaries, usually ranging from \$25 to \$100 per month and maintenance. Now the appeal must be made on the basis of educational opportunities offered rather than financial remuneration. There are still a number of hospitals that pay their interns, and there can be no objection to giving interns some financial help, but hospitals which secure the best interns and most easily are those whose staffs are known to furnish the best educational opportunities, salary or no salary. The Council on Medical Education and Hospitals also publishes a list of the hospitals that provide approved residencies in specialties for those who have already had a general internship or experience.

By furnishing these lists the council serves not only those who are seeking an internship or residency; it also contributes much to the good of the profession and the public by encouraging a broad general foundation, both for general practice and for specialization.

Did You Receive One?—Some self-respecting physicians are receiving letters from another New York doctor who wants to add California to his list of supporters, inviting them to "practice my method" of treating errors of refraction without glasses. The letters are signed —, M. D.

Commending State Medicine—"The hospital policy of the state (Colorado) is to be especially commended," says George E. Vincent (*Colorado Medicine*). "Colorado aligns herself with other states, notably Michigan and Iowa, which assemble in a specialized university-controlled hospital needy sick from the entire commonwealth. A budget made up of legislative appropriations, county funds and patients' fees supports the institutions which at the same time provide excellent medical and surgical care and favorable facilities for education. . . . There is much cynicism abroad about the popular understanding and appreciation of science. The willingness of a few legislatures to vote on evolution, the gullibility of whole populations with respect to quack remedies and fraudulent stocks, the too ready acceptance of campaign sophistries are cited as evidences that the people are uncritical and powerless to protect themselves against propaganda.

. . . "If the university graduates—lawyers, teachers, successful business men, clergymen—if women of prominence in social and professional life, in clubs and philanthropy, accept uncritically 'Sunday-supplement science,' unverified testimony about 'cures,' blatantly advertised remedies, most of which at best are useless, and put them-

selves in the hands of doctors of dubious standing or of miscellaneous healers, what hope is there of creating a congenial environment for true science and its devotees?

. . . "There are experts and 'experts.' The popular distrust of experts is significant of several things. In a democratic society, one who professes to know more than the average man is naturally resented and disliked.

. . . "Human personality is complex; motives are mixed. All good qualities and all bad do not come in neatly separated bundles. They are variously assorted. Judgment must try to determine the predominant and guiding purpose of a given personality."

Chief Surgeon Morrison of the Atchison, Topeka & Santa Fe Railway Company, announces the following appointments, effective April 1: A. Schloss, district surgeon; Alson R. Kilgore, local surgeon; E. S. Kilgore, Wallace I. Terry, Gilbert M. Barrett, consultants. The physicians and surgeons named above all have headquarters at San Francisco. Dr. Schloss, newly appointed district surgeon, has been attached to the staff of the Medical Department of the Santa Fe for the past twenty years. The other appointees are well-known physicians, surgeons, and specialists.

The Nestle's Food Company, who are appreciated advertisers in *CALIFORNIA AND WESTERN MEDICINE*, submit as their contribution to the advancement of scientific infant-feeding, Nestle's Lactogen—the natural food for infants.

"Lactogen," writes Doctor W. E. J. Kirk, medical director Nestle's Food Company, "is a homogenized, scientifically desiccated, full-cream cow's milk, manufactured primarily for the feeding of infants from birth to six months of age, who, for any reason, are denied the privilege of breast-feeding. It is peculiarly adapted for infant-feeding, owing to its close approximation to breast milk in composition, digestion and assimilation, thereby supplying a rapidly increasing demand from the medical profession for a desiccated milk of superior quality and unquestionable safeness, wholesomeness, and nutritional value.

Physicians will be interested to know that Lactogen is marketed only on an ethical basis. No feeding instructions appear on the trade package, and no literature is mailed to the laity.

Analysis, complete suggestions for the dilution and feeding of Lactogen, together with comparative analyses and caloric values, are mailed physicians upon request.

The Physiological Treatment of Hay-Fever—It is now widely known that hay-fever is due to the hypersensibility of the patient toward one or more foreign proteins, generally those of the pollens of neglected and useless weeds. Therefore, this fact must be kept in mind in the treatment of this disease. The pestiferous pollens are usually present in all parts of the United States between June 1 and September 1. They are present in the atmosphere, being wind-blown, the patient inhaling them into the nose. The pollens adhere to the sensitive and moist mucous membranes, and if they are allowed to remain and penetrate the surface, soon set up an irritation and inflammatory condition of the terminal nerve filaments which quickly spreads widely through the air passages.

In order to prevent the development and liberation of the poisonous proteins of the pollens, many physicians prescribe irrigation of the nasal channel from one to several times a day, thus washing them out as fast as they accumulate.

This cleansing process is easily and comfortably accomplished by the Nichol's nasal syphon, about which further information will be found monthly in our advertising pages, which suggests itself as a safe and sure device, owing to its unique suction action. In fact, whatever treatment is prescribed, the device will prove an additional aid, inasmuch as it dissolves and draws out the pollen carrying secretions by irrigation.

After each irrigation, it is recommended that a bland oil should be used with an atomizer. This acts as a prophylactic, as it covers the membranes with an oil coating

which prevents the pollens from adhering to them and starting the irritation.

Medical Profession Found Constant in Recognizing Merit—"Some of the older pharmaceutical houses tell us," say the Deschell Laboratories, whose advertising is found in CALIFORNIA AND WESTERN MEDICINE each month, "that the medical profession are fickle; that they will prescribe an article for a while and then leave it to take up something else.

We have investigated this very carefully and have come to the conclusion that the medical profession are very constant, recognizing merit wherever it may be; use a good article over long periods of time, and stop using it only when something better is available.

The houses that are abandoning the medical profession and advertising their products to the public (some of them under the guise of household remedies, all of them, however, tending to encourage self-medication), are the ones that state the medical profession are fickle.

We find that where quality is maintained; where strict ethical merchandising methods are followed, the profession is loyal. But where unscrupulous houses put out a good article at first, then decrease the quality and start advertising to the public, they cannot expect to carry water on both shoulders and keep the loyalty and support of the medical profession.

We take this instance to pledge our loyalty to the medical profession in the manner of our merchandising and in the constant effort to preserve the high quality of our product.

Ampoule Solutions Daily Growing in Popularity—

The ampoules that are particularly to be recommended are made of imported glass, glass containing no soluble alkali that might have an effect upon the medicament. The ampoules, after being filled, are closed hermetically under a gas flame; in other words, the glass at the neck is melted and fused, and the container is thus made air-tight and water-tight. In addition to this protection, it is necessary in some cases to protect the solution from the effect of light, and the ampoules are, therefore, put up in cardboard cartons which exclude the light.

All of which goes to show that conveniences are not gratuitous, but must be paid for by either the manufacturer or the user. In this case the manufacturer pays the major part of the price in the care required for assaying, sterilizing and encasing the medicinal solutions; but the user is supposed to keep the ampoules in their respective packages, and not let them lie around loose, until they are needed. In some cases, too, it is quite important that the date stamped on the package be consulted, for the ampouled solutions are not all indefinitely stable. This reasonable care cannot be considered a high price to pay for the convenience of having at hand a sterilized solution in individual doses for subcutaneous, intramuscular, or intravenous administration.

Some of the merits of this class of products are tersely set forth in the advertisement on "Ampoules," by Parke, Davis & Co., which appeared in the April issue of CALIFORNIA AND WESTERN MEDICINE.

What Would Similar Tests Show for San Francisco and Los Angeles?—"The air breathed in downtown Chicago contains eight times as much dust and twenty times as many bacteria as air in the suburbs. These facts are the result of elaborate health department tests."

"The Investment Banker," writes Mr. R. B. F. Randolph, vice-president Anglo London Paris Company of San Francisco, "finds, in his endeavor to serve the community, that the physician and surgeon is probably the hardest person to get at for the purpose of talking investments, and yet practically the greatest part of his daily work hinges on appointments. It is, of course, one of these peculiar situations, and one which we all appreciate, that the professional man constantly has his mind on professional matters, and rarely has time for his own personal business affairs; accordingly, these must necessarily be neglected to an extent.

This situation is an unfortunate one, yet, nevertheless,

seems to be true in many instances, and the accumulation of surplus funds should, therefore, be invested under the advice of investment specialists, as it is quite possible that the investor neither has the time to acquaint himself with prevailing market conditions, nor perhaps has made sufficient study of the security market to enable him to make safe and profitable investments, and it is just possible that those securities already held should be reviewed and analyzed and suggestions made, where necessary, as to reinvestment.

No doubt some may feel that the representatives of various investment companies have perhaps been over-persistent in their endeavors to make appointments to discuss investments, but a short time used in this manner may be the means of a considerable saving, insofar as present holdings are concerned, or a suggestion given for the employment of idle or surplus funds. The officers and representatives of the Anglo London Paris Company are at all times available for consultation in this respect, either at their office or at yours, and will be glad to make suggestions as to sound investments and also through the recent establishment of an analysis division, properly analyze present holdings and advise impartially as to reinvestment when necessary. Their announcement is found in the advertising pages of CALIFORNIA AND WESTERN MEDICINE every month.

Intestinal Parasites Among Filipino Food Handlers

—Many of the Filipinos that come to the United States find employment in the handling of food supplies. In the public institution surveyed by Harry A. Wyckoff and William O. French, San Francisco (Journal A. M. A.), some of them are employed as waiters, as bus boys, and in the kitchen. Out of thirty-four cases examined, twenty-eight were found positive for parasites. Twenty-two of these positive patients harbored either a double or triple infestation. The parasites found were hookworm, in twenty-one cases; trichuris, sixteen cases; ascariis, two cases; fasciolopsis and hymenolepis in one case each, and protozoa in twelve cases. Compared with the incidence of intestinal protozoa in medical patients in the Stanford Hospital the percentage of infested Filipinos is greatly in excess. The number of positive findings among hospital and clinical patients was found to be 22 per cent in 7000 patients examined. Only 4 per cent harbored helminths. Among the Filipinos, 72.4 per cent were infested with hookworm and 42.9 per cent with protozoa. All the hookworm patients were given routine treatment with carbon tetrachlorid. Nineteen patients were treated for hookworm. Adult worms were removed in fourteen cases. Adult ascariids were found in two cases, and the ova in three cases. Trichuris ova were recovered in six cases. hymenolepis and fasciolopsis ova in one case each. Protozoa alone were found in four cases. The number of hookworms recovered were small, although one case yielded sixty-seven worms. Ascariids were recovered by this treatment in two out of three patients infested. Fourteen patients treated with carbon tetrachlorid were re-examined two months later. No ova of either hookworm or ascariis was found. The carbon tetrachlorid did not affect any of the other worms or protozoa. The only toxic symptoms noted as a result of this treatment were nausea and vomiting in six patients, and dizziness with headache in two patients. All, however, except two, could be discharged the next morning, although some were unable to carry on their duties the following day. Carbon tetrachlorid did not always act as a cathartic. In many cases there were no evacuations or only one evacuation in the eighteen hours following administration. In the majority of cases in which there was only one stool, or in which an enema was needed, the patients were nauseated or vomited.

"The tendency to centralize government at Washington," Senator Borah recently declared, "is undermining the confidence and destroying the capacity of the citizen to assume and meet the duties and obligations of citizenship. There is not a practice, custom or habit but must soon be censored from Washington. There is not in all the relationship of parent and child, of family and home, anything sufficiently private and sacred to exempt it from the furtive eye of the special agent."

California Medical Association

EDWARD N. EWER, M. D., Oakland.....President
 W. T. McARTHUR, M. D.....President-Elect
 EMMA W. POPE, M. D., San Francisco.....
Secretary and Associate Editor for California

ALAMEDA COUNTY

Alameda County News (reported by P. S. Nusbaumer, secretary Alameda County Medical Association)—At the regular monthly meeting of the Association, held April 20, 1925, F. J. Carlson reported a case, dislocation of the shoulder, with exhibition of the patient, and Lindsay Peters reported results of insulin treatment in a case of diabetes mellitus complicated by pregnancy and funnel pelvis. The regular program was a symposium on cancer by members of the Fabiola Hospital staff, H. D. Bell, chairman. The first paper was by Daniel Crosby, entitled "Solid Cancer of the Ovary." Crosby discussed the pathology and various classifications of ovarian cancers, following which he reported a case in which a large solid carcinoma of the ovary was discovered during an abdominal section for other causes. This case was complicated by a diffuse adeno-carcinoma of the body of the uterus. The affected ovary, tube and uterus were removed. The patient was treated with radium, and has no evidence of recurrence three years and six months after operation. Gertrude Moore discussed this paper from the pathological standpoint. In his discussion of the paper, E. H. Barbera also reported a case of solid carcinoma of the ovary. Dr. Ewer's subject was "Cancer of the Uterus." Ewer pointed out the lines of extension of the different varieties of cancer of the uterus and their bearing upon diagnosis of operability. In connection with operability, the value of the Ruge-Phillip test to determine virulence of streptococci in the degenerating mass was pointed out. Streptococcic peritonitis, the cause of most operative deaths, follows when virulent strains of the organisms are present, in a very large percentage of cases. The technique of radium treatment in several Eastern clinics was described. The discussion of the paper was opened by L. P. Adams. In his paper on "Cancer of the Stomach," R. T. Sutherland emphasized the need for earlier diagnosis and treatment of gastric cancer. Because of the very insidious onset in most cases, greater attention should be paid to a careful history of so-called dyspepsia in patients over 30 years of age, together with scrutinizing examinations of all such patients. He stated that in many of these patients the earliest symptoms may be either loss of weight, anorexia, weakness, or pallor. He advises that frequent gastric examinations, together with fluoroscopic and roentgen-ray examinations, should be employed in all suspicious cases, and if doubt of cancer exists, early exploratory operations are justifiable. This paper was discussed by Guy H. Liliencrantz and C. E. Peters. At the conclusion of the scientific program the business matters were taken up; new members introduced by the president, announcements made; after adjournment, refreshments and a social hour.

Providence Hospital Staff—The annual banquet of the Providence Hospital staff was held at the Hotel Oakland, May 7, with some sixty-five members attending. O. D. Hamlin presided. H. B. Mehrmann extended greetings. J. Wilson Shiels was the speaker of the evening. Among other things, he emphasized the importance of the medical man joining the United States Medical Reserve Corps. There was good music, both vocal and instrumental. All agreed that it was an evening long to be remembered.

Fabiola Hospital—At the first annual reunion of the graduate nurses of Fabiola Hospital, held recently at the nurses' home of the Fabiola Hospital, 200 nurses were present and were welcomed by Mrs. J. P. H. Dunn, president of the Fabiola Hospital Association. The celebration opened with a supper and entertainment given in the auditorium of the home. The nurses came from all parts of the state for the occasion. Many of the first

graduates of the Fabiola Hospital Training School traced the progress of the institution since its foundation thirty-seven years ago, when their Alma Mater was the first established in Oakland. There are now 500 graduate nurses, many of whom are still in active service.

A notable feature of the banquet program was a parade of the different uniforms, which were worn by the nurses during their training in the earliest days of the school, in which every branch of nursing is taught.

On May 1 a luncheon was given in Mosswood Park by the alumnae for all the graduates, and in the evening the graduation exercises were held in the auditorium of the nurses' home, when fourteen young women received their diplomas.

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CONTRA COSTA COUNTY

Contra Costa County Society (reported by L. St. John Hely, secretary)—The regular monthly meeting was held Saturday evening, April 25, at the Hotel Los Medanos at Pittsburg. The society were the hosts of Drs. Gregory and Blackshaw. A dainty lunch was served the members in the main dining-room of the hotel.

Dr. S. H. Buteau read a paper on "Acute Abdomen." The subject was discussed at length by nearly all the members. Never in the history of the society was a subject so important or interesting brought before the members. Dr. Buteau brought out every possible complication and emergency that may arise in meeting with such a case, and what he did not bring out the members did. In all, we consider that we spent a most profitable evening.

One new member was enrolled on the list, in the name of David C. Wise of Pittsburg. We think he is going to be a valuable addition to the roll.

The members, by unanimous vote, ordered the secretary to forward a vote of thanks and appreciation to the assistant district attorney, congratulating him on his successful prosecution of Cosper in the Dietrich case.

The following members and visitors were present: S. H. Marks, Pittsburg; L. A. Clary, San Francisco; G. M. Bumgarner, Richmond; E. C. Love, Danville; H. L. Carpenter, Richmond; J. Edward Clark, Walnut Creek; George McKenzie, Concord; W. C. Robins, Brentwood; Denninger-Keser, Richmond; L. St. John Hely, Richmond; H. W. Stirewalt, Walnut Creek; John Beard, Martinez; H. L. Gregory, Pittsburg; D. C. Wise, Pittsburg; C. L. Abbott, Richmond; S. H. Buteau, Oakland; Mrs. E. C. Love; Mrs. John Beard.

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FRESNO COUNTY

Fresno County Medical Society (reported by T. Floyd Bell, secretary)—The monthly luncheon of the Fresno County Medical Society was held April 18 at the Hotel Fresno. There were twenty-three members present, as follows: Members—Drs. Aller, Anderson, Barr, Bell, Binkley, Butin, Cross, Dahlgren, Dau, James, Montgomery, Mitchell, Morgan, Madden, Nider, Newbecker, Pettis, Pomey, Pisor, Schottstaedt, Sciaroni, and Sheldon. Miss Taylor, R. N., of Madera was a guest of the society.

In the matter of examining those pre-school children who could not come to any doctor's office, Madden moved, Mitchell seconded, that a volunteer committee of doctors be appointed to examine such children at convenient places to be designated later. Carried. P. S. Barrett was named chairman.

Pettis moved, James seconded, that a committee of two be appointed to make a suitable placard for offices announcing the Saturday afternoon closing, and also have same published in the local press. Pettis and Mitchell were appointed.

R. W. Binkley, a member of this society, was the speaker, his subject being "The Variation of Medical Fees According to the Ability of the Patient to Pay." He first talked about the financial status of doctors, and said that, as a class, they were failures as business men. The doctor is not trained in the business part of his profession. The "old doctor" did not send out monthly statements and try to collect money justly due him. Consequently, he collected barely enough to live on, and his children many times actually had to work to help support the family. The doctor should collect money for his services

just as any other business man does when he sells his commodity, for the doctor's services are his commodity. Insurance statistics show that more doctors die leaving nothing but life insurance than any other profession, not excepting teachers and preachers.

Up to a few years ago medical economics had no place in medical meetings. Doctors were interested in presenting new problems or the solution of such problems, and the advance made in the science of medicine. But finally someone had the courage to bring up the "Business Methods of Doctors." They called in efficiency experts, not doctors, to consider this matter and make a report. These experts found that over 50 per cent of the widows of doctors are working for the necessities of life, and that the age of doctors is 45. They reported also that doctors give seven times as much to charity as any other man of similar income, and that they donated not only money, but service. What other business man would do this? These lax business methods would bankrupt any other business in less than a year. They drew up a fee schedule, which is much higher than that used today, based on the ability of the patient to pay. They showed that the responsibility and risk of caring for the rich was much greater than for the poor. Therefore, they advised that a man with moderate income should pay a moderate fee, a poor man none or a small fee, and a rich man a large fee.

Dr. Binkley showed a curve of the doctor's income at various ages. This showed the peak of the greatest income at the age of 45. After this age it dropped rapidly to 55. The necessity of spending about ten years at the beginning on medical training and the inability to keep up to the standard one's earning capacity at the end of life makes the earning time of the doctor very short. He must make his money during this short period or suffer financially. His business is unlike the ordinary business. When he builds it up he must be there to run it or else it is worthless.

The regular meeting of the Board of Governors of the Fresno County Medical Society was held May 4, in Dr. Anderson's office.

Couey, Cross, Miller, Trowbridge, Anderson, and Bell were present.

Bills were audited and ordered paid.

Miller moved, Trowbridge seconded, that the secretary deposit as much money as he thinks best in the savings department of the United Bank and Trust Company. Carried.

Cross moved, Trowbridge seconded, that the placards for Saturday afternoon closing be printed and distributed, 120 in number.

Anderson reported in regard to the recent visit here of a representative from the State Board of Medical Examiners, who came to investigate the alleged violation of the Medical Practice Act of the nurses of the Sun-Maid Welfare League. He believed the matter to be settled satisfactorily.

Cross moved, Trowbridge seconded, that the resolution of April 6, 1925, in re investigation of admission to the General Hospital, be amended to include the City Emergency Hospital, and that the number of the committee be increased to five. Carried.

The secretary was instructed to write the American Legion Auxiliary Unit No. 4 that we sanction the "Better Baby Show," but do not advise it.

Miller moved, Trowbridge seconded, that it be considered unethical for any member of this society to deliver lectures at stores or similar places on professional topics. Carried.

The secretary was instructed to write the Fireman's Benefit Fund that the board felt that the amount of fee is entirely inadequate to cover services required.

The regular meeting of the Fresno County Medical Society was held May 5, at the Hotel Fresno.

There were twenty-five members and thirty-one visitors present.

Members—Drs. Aller, Anderson, Bell, Couey, Cross, H. O. Collins, Dau, Barr, Hare, Konigsmacher, Lamkin, Larson, Manson, Mathewson, Montgomery, Mitchell, Morgan, Milholland, Madden, Nider, Newbecker, Pettis, Schottstaedt, Sciaroni, Thompson, and Willson.

Because of the large number of invited guests, the regular order of business was dispensed with.

The secretary was instructed to cast a ballot for Dr.

J. M. Frawley, his application having been passed on favorably by the board of censors and the state secretary.

Cross presented the following resolution, to be sent to the State Board of Medical Examiners. On motion of Madden, seconded by Milholland, it was carried:

"We, the members of the Fresno County Medical Society, desire to enter a protest to your Honorable Members, in the matter of the employment of narcotic addicts by the State Board of Pharmacy to act as stool-pigeons.

"Recently one C. Bentley, who committed suicide in the jail located in Modesto, California, was used by the said Board of Pharmacy to visit the offices of physicians in this city. His method was to appeal to said physicians as a suffering human requiring relief from pain.

"We deplore the use of these unfortunates for such purpose, as it would appear to encourage them in their habit, as it is known that persons suffering from such habits cannot be trusted with drugs to which they have become a slave.

"We feel it unjust that the license of a practicing physician should be jeopardized who, in the kindness of his heart, is induced to prescribe, under misrepresentation, for such people.

"With the furnishing of narcotics to addicts for gain or the careless dispensing we have no patience, but to the unfair method of using these people to trap a physician during his busy hours when he may be caught off his guard, we consider unfair.

"If it does not come within your province to deal with this situation, will you kindly forward this communication to those who have jurisdiction?"

Cross moved, Morgan seconded, that the new constitution and by-laws, as presented at the last regular meeting, be adopted. Carried.

The meeting was conducted in celebration of "Cancer Week." To give publicity to this subject each member was asked to bring one or two laymen as guests. The speaker was Dr. Alson R. Kilgore of San Francisco, the representative of the American Society for the Control of Cancer. The first part of his talk was devoted to "Some Blue-Sky methods in Medicine," in which he discussed various quack cancer cures, such as arsenic paste, sera, coagulum, and diet. He emphasized the fact that all these methods of treatment are dangerous because they put off the day of proper treatment till it is too late to cure. This part of the program was especially for the lay people present. Kilgore then took up some newer aspects of the cancer problem, dealing mainly with breast cancer and pre-cancerous lesions in the breast. He illustrated this part of his talk by lantern slides.

There were several musical numbers by local artists, after which a buffet luncheon was served.

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MARIN COUNTY

Marin County Medical Society (reported by J. H. Kuser, secretary)—On April 23, at the San Rafael Club, Samuel Hurwitz of San Francisco presented a paper before the Marin County Society. The following members were present: H. Hund, W. F. Jones, R. Furlong, L. Landrock, Charna Perry, U. W. Clark, J. H. Kuser.

Dr. Hurwitz's paper was followed by an interesting discussion. The business meeting was postponed until the next regular session.

Examination of pre-school children by the members of the Marin County Medical Society was undertaken and successfully carried out in the week from April 20 to 24.

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ORANGE COUNTY

Orange County Medical Association (reported by D. R. Ball, secretary)—The regular monthly meeting was held the evening of March 3 at the Orange County Hospital. D. A. Harwood of Santa Ana read an interesting paper on "Ruptured Uterus Following Caesarean Section." The factors at the time of surgical delivery that make for subsequent rupture were discussed. Following this, a plan of procedure for the conduct of later pregnancies and labors was outlined. The doctor advocated the test of labor under supervision rather than the unqualified acceptance of the dictum "Once a Caesarean section, always a Caesarean section." The second paper of the evening was read by G. I. Sellar of Fullerton on

"The Ear and the General Practitioner." The reader discussed the conditions of the external and middle ear commonly met with and the treatment of these conditions. The business included the election of three new members: G. I. Sellon and F. H. Gobar of Fullerton, the former a transfer from Custer County, Nebraska, and J. D. Ball of Santa Ana.

The April meeting was held at the Orange County Hospital on the evening of the 7th. The society had as its guests District 16 of the California Nurses' Association, together with the other nursing organizations of the county. The address of the evening was given by Dr. Lela J. Beebe of the State Bureau of Child Hygiene. The speaker first outlined the great strides that have been made in recent years in the prolongation of human life, and mentioned new problems that this added longevity has brought up. She then proceeded to outline the work that her department is carrying on in this state. The work is divided into four main groups, and includes: First, improving the quality of prenatal care; second, maintenance of breast-feeding and where this is impossible, proper artificial feeding under medical supervision; third, spreading among the laity the knowledge of fundamental health habits; and fourth, the necessity of periodic health examinations. Dr. Beebe's talk provided a stimulus for all of us to renew our work in these large fields. A general discussion of public health problems followed, and the meeting was closed with an enjoyable "feed."

The Santa Ana Clinical Society has recently listened to two very interesting speakers. C. E. Phillips of Los Angeles discussed the subject of "Gall-Bladder Disease" at the March meeting. The speaker first made the point that gall-bladder disease is now accepted as a surgical disease, and then went on to discuss certain difficulties that arise in diagnosis, and finally discussed the operative procedure. V. R. Mason, also of Los Angeles, spoke on "Observations on Gastro-Intestinal Disease" at the April meeting. Subjects touched on by the speaker in an original way included gastric tetany, peptic ulcer, intestinal flagellates, and anebic dysentery. Both of these talks were valuable, in that they were not set papers, but rather observations taken from the large experiences of these men in their respective fields.



PLACER COUNTY

Placer County Medical Society (reported by Robert A. Peers, secretary)—The society held its regular May meeting in the reception-room of the Placer County Hospital, Saturday evening, May 9, President H. N. Miner presiding. There were present the following members and visitors: E. H. Bryan, C. E. Lewis, H. N. Miner, H. M. Kaner, J. A. Russell, F. L. Fanning, R. H. Eveleth, L. B. Barnes, R. A. Peers. Visitors: F. F. Gundrum, C. E. Von Geldern.

Dr. Bryan presented to the society a five weeks' old infant suffering from spina bifida. Gundrum addressed the society on the subject of the "Medical Aspects of Arteriosclerosis," going into detail as to the pathology, etiology, symptoms, prognosis and treatment of the various types, after which Von Geldern discussed "The Relation of High Blood Pressure to Industrial Medicine." Both addresses were discussed by all members present.



RIVERSIDE COUNTY

Riverside County Medical Society—(reported by T. A. Card, secretary)—The regular meeting of the Riverside County Medical Society was held in the Riverside Community Hospital on May 11.

It was decided that the June meeting would be an open social meeting in the form of an outdoor gathering at the Rainbow Angling Club, where the members and their families could enjoy themselves fishing and later have a trout dinner. This form of outdoor meeting has been carried on for the past five years, and has become an annual affair with our society. We are looking forward to a general good time.

The program of the May meeting was as follows:

Case Report: "Esophageal Stricture in an Infant"—Paul F. Thuresson, M. D., Riverside.

"What Do We Know About High Blood Pressure?"—W. W. Roblee, M. D., Riverside.

"Pneumonia in Children"—Joseph Robinson, M. D., Anaheim.

The meeting was well attended, and a free discussion was participated in by the members present.



SACRAMENTO COUNTY

Sacramento Society for Medical Improvement—(reported by Bert S. Thomas, secretary)—The April meeting was held at the Hotel Sacramento on the 20th. Forty-two members and fourteen visitors were in attendance. The latter included Dr. Peers from Colfax and Dr. Thoren from Weimar. A number of local clinical workers in tuberculosis augmented the number to hear the speaker of the evening, Dr. F. M. Pottenger of Monrovia. The minutes of the February meeting were read, and, after one correction in Dr. Schoff's remarks at that meeting, they were approved. There was no presentation of cases, and the meeting was immediately turned over to Doctor Pottenger, who spoke upon "The Classification of Symptoms of Important Internal Viscera." A brief synopsis of his subject follows:

"Pathologic anatomy has dominated medicine for the seventy-five years past; in fact, it has been considered the essence of medicine. The clinician, however, in his every-day practice, is not dealing so much with pathologic anatomy as pathologic physiology. Symptoms of diseases are manifested as disturbed function, and disturbed function does not ever occur until the normal physiologic equilibrium is upset.

"In order to understand symptoms, it is necessary to understand the normal physiologic control of the body. This control is a threefold mechanism, depending upon: (1) The cells, their physical state and ionic content; (2) the nervous system; and (3) the chemical substances which come in contact with the cells, hormones, oxygen, and all the products of secretion and excretion.

"Most symptoms of disease, aside from those of the voluntary nervous system, are expressed on the part of some of the important viscera, such as the nose, pharynx, larynx, heart, lungs, kidneys, bladder, and organs of the gastro-intestinal and genital tracts. While these organs may not be the seat of the disease, symptoms on the part of these viscera nevertheless appear.

"Therefore, it is necessary for us to understand the physiologic relationships which govern the action of these organs, and bind them to the structures which are the seat of the disease process. There are two great correlating systems of the body: The chemical, which is chiefly dependent upon products from the glands of internal secretions, and the nervous system. These two systems cause the body to act as a whole instead of as many individual organs. Through them a correlation and integration of action occurs which makes it impossible for any organ to act alone.

"While the nervous system, as a whole, must be understood in order to grasp physiologic body control, it is especially important that clinicians should understand the vegetative nervous system which supplies all smooth musculature of the body, the heart, and all glandular structures; in fact, presides over the function of all important viscera. The vegetative nervous system, with the products of the glands of internal secretion, furnishes the key to the understanding of most visceral symptoms, either organic or functional.

"Upon our knowledge of these vegetative systems, we may construct a logical etiologic classification of disease of the important internal viscera:

"(1) General or constitutional symptoms. These are the symptoms that are produced by toxins, anaphylactic bodies, whatever they may be, and all products of metabolism which find their way into the blood stream. They produce general disturbances by their action upon the nervous and endocrine systems, as well as upon the body cells themselves.

"(2) Reflex, produced by efferent impulses arising from the stimuli which result from the disease and which course centralward and meditate with efferent nerves and

cause altered function in other tissues either of the same, neighboring, or remote structures; and

"(3) Those produced by disease at the seat of the lesion.

"In this classification most symptoms of visceral disease may be reduced to three causes, and by understanding that the reactivity of different individuals toward the same stimulus varies, and that the reactivity of different neurons in the same individual also varies, one can understand a fact of first importance in clinical disease—the reason for the variability of symptoms.

"If the clinician understands the general widespread action of toxins, anaphylactic bodies, and other products of metabolism, and if he further knows the innervation of the organ which is the seat of the disease process, and the neurons which may meditate with the efferent nerves which carry the stimulus centralward from that organ, he then has a basis for intelligently interpreting most of the symptoms of disease. It is still necessary, however, that he should appreciate fully that disturbed physiologic equilibrium may result just as well from psychical as from physical stimuli."

Peers, Gundrum, Howard, Johnson, and Bramhall entered into the discussion of the paper. The margin of safety, as referring to the overlapping of nerve impulses, was particularly stressed, more so in relation to the breaking down of this margin of safety in protracted disease. This was applied to certain cases of industrial accidents, and probably well explains an actual condition that we are constantly dealing with traumatic neurosis. It also was pointed out, with special regard to these reflex tracts and symptoms, that approximately 36 per cent of the digestive symptoms first entered in a patient's complaint are not due to digestive organs at all.

In concluding the discussion, Pottenger remarked that after the margin of safety has been broken down, after the pathologic stimulus has been once started, i. e., after the synapse has been passed, from that time on this stimulus goes over more easily. This, therefore, applying to compensation cases, means that we are dealing with "sick" people in their protracted stages.

The application of L. H. Sanborn was voted upon and passed by unanimous vote of twenty-eight members. First reading of the applications of J. H. Wilson and Royal deR. Baronides were read.

The report of the April meeting of the board of directors included that of the program committee. The May meeting is to be addressed by Dr. Frank P. Brendel, whose subject will be "Fractures, Their Diagnosis and Treatment," supplemented by lantern slides of cases. An evening clinical meeting is planned for June. This is to be held at the Sacramento Community Hospital. At this time, Dr. Leo P. Bell will probably present a paper dealing with the "Pre-Operative and Surgical Treatment of Splenic Anemia."

A letter from the secretary of the State Society, informing us that the May number of CALIFORNIA AND WESTERN MEDICINE will be an historical number, devoted to the history of the California Medical Association, and of the men and women who were the outstanding pioneer physicians, was received. The board considered it quite fitting to ask Dr. W. A. Briggs to prepare this subject for the Journal.

The Committee on By-Laws was not prepared to report.

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SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock)—At the April monthly dinner of the San Diego County Medical Society, held at the Cabrillo Cafe on April 11, Charles A. Kofoid, Ph. D., addressed the meeting on the subject of "Intestinal Parasites." Dr. Kofoid handled his subject in a masterly manner, profusely illustrating his statements with lantern slides, showing the variations in the various members of the ameba family and their cysts. While his discussion was mainly upon the ameba, which he considers the chief villain in the tragedy of intestinal invalidism, he also discussed somewhat in detail the various flagellates that are found in the human intestine.

For a paper largely devoid of clinical descriptive matter, and discussing the subject mainly from the purely scientific and academic standpoints, Kofoid's presentation

was extremely interesting and held his audience spell-bound throughout. Discussion was somewhat extensively participated in by J. C. Barrow and William H. Olds of Los Angeles, and Pollock and Rees of San Diego.

Quite a representative delegation from the local society is planning to attend the Yosemite Valley meeting of the state organization. It is unfortunate that this meeting and that of the American Medical Association should run together so closely, but at this season of the year, when conventions are the order of the day, it is difficult for all to program successfully without conflict.

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SAN FRANCISCO COUNTY

Franklin Hospital Clinical Society (reported by Ewald H. Angerman, secretary)—The regular staff meeting was held at the hospital on Monday, March 30, at 8:30 p. m., Dr. Otto Westerfeld presiding.

The program of the evening consisted of clinical discussions from J. Wilson Shields' Medical Service at the Franklin Hospital: 1. Presentation of case of sprue. 2. Presentation of case of fifth nerve palsy, accompanied by temporary amnesia—question of encephalitis. 3. Presentation of case of mediastinal syphilis. 4. Presentation of case of cerebral aneurysm, with demonstration of pathological specimen.

Cases were discussed by Naffziger, Inman, Falconer, Werner, and Yoell.

St. Joseph's Drive Success—Gastro-Enterologic Advance Urged—The recent drive of St. Joseph's Hospital of San Francisco for \$500,000 to reconstruct new fireproof units of the institution was notably successful. All elements of the community and many from afar aided in putting over the campaign—in fact, contributions are still coming in from the Sisters' appreciative friends, especially patients.

Dr. James A. Guilfoil addressed the staff on May 13 on "Advances in Gastro-Enterologic Diagnosis and Therapy," summarized as follows:

The diagnosis of gastro-intestinal disease is now a tribute to medicine. The best results are obtained because a routine examination is made that is efficient, but not too elaborate or costly. In chronic digestive disorders, a careful history is the most helpful thing, except the gross pathology disclosed by the x-ray. Periodicity of attacks suggests ulcer, chronic appendicitis or functional disorder rather than gall-bladder, for example. With a luetic history and indigestion for years, we have often cause and effect. Even a history of gonorrhea may indicate an intra-urethral chancre. Recurrent attacks of vomiting may mean migraine.

Physical examination should include throat, teeth, skin, lungs, heart, abdomen, rectum, reflexes, blood pressure, etc. An enlarged liver may be a clew to cardiac disease; irregular or sluggish pupils the key to gastric crisis of tabes. No examination is complete without a proctoscopic and sigmoidoscopic investigation. Frequently, a fissure at the base of a hemorrhoid, cryptitis, rectal cancer, or spastic sphincter ani, if treated, will relieve gastro-intestinal symptoms.

Laboratory tests enable us to make accurate diagnosis. Gastric analyses of fasting contents and after a standard meal are needed. Estimation of secretions and presence of mucus, pus, blood, bacteria, can be made only with them. Hyperacidity does not always give pylorospasm, and the latter may be simulated by achlorhydria associated with extra-gastric pathology, or even tuberculosis of lungs. Achylia may be only transitory or due to pernicious anemia, but it may be a sign of an early removable cancer. A single analysis is not always definite. Blood examinations may disclose the anemias, eosinophilia of parasites, and leucocytosis of focal infections. The urine reveals urologic pathology, producing reflex gastric or appendiceal symptoms. Stool study shows up occult blood, mucus, parasites, and fat digestions.

Roentgen-ray study is equaled by no other single method, many findings being obtained only by it, but all means must be used and conflicts studied. It requires, besides a proper technique, additional training in anatomy, physiology, and pathology. Many inferior radiograms are worthless. The best results are obtained by closest co-operation of all.

Ulcer is more accurately located by x-ray, but history

should also fit, especially with only slight deformity of bulb. Pylorospasm can be due to many lesions of abdomen, and hematemesis occurs in 5 per cent of cases of chronic appendicitis. Treatment of duodenal ulcer at the Southern Pacific Hospital, without retention, bleeding or persistent pain, is Lenhart's or Brown-Guilfoil diet, the latter having higher caloric value and avoiding loss of weight and working just as well, and bed rest. Any soft, bland diet, with frequent feedings of small amounts, is good. Routine alkalies are avoided, as patients get to depend on them for relief, instead of proper diet, which must be continued for six to twelve months. For retention of food for six hours, rest in bed and Lenhart's diet are used. If no improvement of emptying time is noted after ten days, surgery is advised. Many retentions improve with this trial. Recurrent bleeding, persistent pain, and retention of food over six hours and perforation, call for surgery.

For gastric ulcer less conservatism is used, as the percentage of medical cures is less and there is danger of malignant change. Except in young adults, without bleeding and retention, resection with gastro-enterostomy is advised. Cancer is the great baffler, and early x-ray diagnosis is disappointing, especially at the fundus and the posterior wall. Patients' lack of appreciation of slight indigestion and physicians' procrastination are also causes of not making early diagnoses.

Ptois may not interfere or may cause symptoms. Gastric polypus, diverticular processes of the stomach and duodenum are x-ray diagnoses, causing trouble rarely. Diverticulitis causes colicky pains, distention, bloating, and constipation, often followed by diarrhea after the attack. If in the sigmoid, there is desire for stool, with no result. Tenderness is felt over the lesion. In chronic diverticulitis, ulceration, adhesions, stenosis, hemorrhage, and perforation may occur and surgery is usual, but if lesions are buried in the pancreas, rest, bland diet and plenty of olive or petroleum oil are best.

Useless appendectomies are less frequent now, with x-ray study.

Multiple lesions are often demonstrated by surgeons. Appendectomy, when indicated, is done first if accompanied with uncomplicated ulcer in young adult, medical treatment being instituted. In chronic appendicitis and cholecystitis, both are operated. With cholecystitis and duodenal ulcer without gastric retention or bleeding, removal of gall-bladder has apparently caused cure of ulcer. With uncomplicated duodenal ulcer with other lesions, conservatism seems indicated and radical stomach surgery avoided if possible. "Nervous indigestion" generally indicates that a further study is needed for an organic basis.

L. B. Crow demonstrated radiograms of gastro-intestinal lesions. G. D. Schoonmaker discussed the differential diagnosis between digestive lesions and kidney-stones and ureteral stenosis. W. W. Washburn spoke of the surgical problems involved, especially in multiple lesions. Henry Kreutzmann exemplified nephritic, ureteral and duodenal plates, including diverticula. Harold Wright agreed that "nervous indigestion" generally had an organic basis, and that tabes caused visceral pain. Adolph Berg and Walter Smith stressed rectal examinations, the avoidance of multiple operations and appendiceal fluoroscopy. C. O. Southard mentioned patients cleared of nasal infection and eye-strain, with improvement of stomach symptoms.

Case histories were presented by R. F. Grant (influenza pneumonia), William Quin (gangrene of leg, coronary atheroma and lobar pneumonia), and D. E. Stafford (tubercular peritonitis).

The program for June 10 follows: "Surgical First Aid Noted in the East," Edmund Butler, discussion opened by O. E. Ekland, and "Modern Treatment of Asthmatic Conditions," S. H. Hurwitz.

Southern Pacific General Hospital Staff Holds Clinical Meeting (reported by W. T. Cummins, secretary)—The regular monthly clinical meeting was held at the hospital, Huntington Hall, Wednesday, April 1, 1925, at 8:30 p. m. W. W. Washburn presented the topic, "Other Abdominal Surgical Conditions that Simulate Kidney Lesions," summarized as follows:

Many diagnostic points were emphasized in the consideration of perinephric abscess, enlarged gall-bladder,

retroperitoneal growths, sarcoma of twelfth rib, splenic tumors, appendicitis, etc., in their differentiation from renal lesions. Retroperitoneal malignancies usually produce more intense pain and cachexia than do kidney tumors or perinephric effusions of blood or pus. The kidney is often displaced by retroperitoneal growths and intra-abdominal tumors, which may cause one to err in interpreting physical findings. An enlarged, freely movable gall-bladder may simulate a kidney. Acute unilateral hematogenous renal infection in the early stage may give no pathological urinary findings and may be confused with acute appendicitis. An illustrative case report was presented. Pathological findings in the urine in acute appendicitis may simulate a pyelitis or nephrolithiasis, especially when the appendix is adjacent to the kidney pelvis or ureter. A right-sided, acute pyelitis showing occlusion of the ureter with mucus and normal urinary findings may be mistaken for acute appendicitis. Careful history-taking, pre-operative investigation and urological studies should be carried out in doubtful cases. Hypernephroma may cause no urinary disturbance. Splenic tumors have a notched, sharp margin, and do not displace the colon anteriorly and laterally as do kidney tumors. Inflation of the colon or a roentgen picture, after a barium enema, aids in the differentiation. Case records and numerous lantern slides illustrated the subject.

Discussion—G. L. Eaton, with chart and roentgen pictures; W. I. Terry, L. B. Crowe, M. P. Burnham, P. K. Brown, O. E. Eklund, and F. A. Lowe.

St. Luke's Clinical Club—The regular meeting of St. Luke's Clinical Club was held Thursday, April 23. H. A. L. Ryfkogel presented the subject of "Splanchnic Anesthesia." This method of anesthesia is much more popular in the East than here. The speaker himself has had very good results with a modified Cappus method, using one-half per cent of novocaine instead of the 1 per cent recommended by Cappus. He had found 1 per cent dangerous. This method is especially good in old people, who cannot stand the ordinary form of anesthesia. It is absolutely devoid of shock. Splanchnic is the method of regional anesthesia. Blocking of the two major splanchnic nerves is preferable to the paravertebral method. Finster, who has done a good deal of this work, has had a very low mortality. Again, we do not have the same mortality from pulmonary complications. The field block in the abdominal wall is the method of choice. If you are going to use this method, inject regionally before you block off your main splanchnic nerve.

The subject was further discussed by Dr. Rosberg, who dwelt on the work done by the Mayo Clinic, and who brought up the question of a more general use of other anesthetics, such as ethylene gas.

St. Mary's Hospital Clinical Society (reported by Randolph G. Flood, secretary)—The regular staff meeting was held Friday evening, May 1, Dr. R. Topham presiding.

An interesting paper, accompanied by slides and patients, was presented by H. Spiro, subject: "Aneurysms of Thoracic Aorta." Among the more important points brought out by Spiro, was the differential diagnosis of diffuse dilation and aneurysm of the thoracic aorta. Of primary aid in the differentiation is the radiographic plate, taken with the patient in the right oblique position, which throws into marked relief any irregularity of any part of the aorta. This paper was discussed by Drs. Morris, Monica Donovan, and Edmund Butler.

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SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by Alex C. Soper, Jr., Secretary)—The May meeting of the society was a special one held at Lompoc, with the scientific program arranged by the physicians of the northern part of the county, and a complimentary dinner given by the Lompoc Chamber of Commerce, after several hours, during which they conducted members of the society about their beautiful valley. The chief point of interest was, of course, the works of the Celite Products Company, where mountains of "diatomaceous" chalk compound are being cut into for various commercial products, and sent all over the American continent and to Europe. Covering about 2000 acres, and extending to a known

depth of 1500 feet, this company employs and houses about 600 men, and has a well-equipped hospital and houses, and so forth, for its men.

The medical meeting was held at the American Legion hall, and was called to order at 9 p. m., President Nuzum in the chair. Owing to the lateness of the hour, and the long distance from Santa Barbara, no routine business was transacted, except a unanimous vote to endorse and support the formation in the county of a branch of the American Association for Medical Progress, starting under the auspices of Mr. George E. Coleman, the Santa Barbara bacteriologist.

Twenty-nine members were present, and the following guests: Dr. Bracken, former State Health Officer of Minnesota; Dr. Harris, Santa Barbara County Health Officer; Dr. Schwartz of Lompoc, Dr. Schultz and Dr. Blaisdell of Santa Paula.

Program—"New Method of Treatment of Eclampsia," Lysle McNeile, Los Angeles.

"Fungus Diseases of Human Beings," Roy Hammack, Los Angeles.

"Treatment of Abortion," W. D. Sink, Guadalupe.

"Five Cases of Acute Osteomyelitis," M. Thorner, Santa Maria.

Discussion of papers was held by Sansum, Spaulding, Sink, Pierce, Profant, Cummings, Ullmann, Eaton, Nuzum.



SONOMA COUNTY

Sonoma County Medical Society (reported by G. A. Hunt, secretary)—The Sonoma County Medical Society met in Santa Rosa Thursday, April 9. Eighteen members were present. The speaker of the evening was Dr. Emmet Rixford, who gave an address on "Ulcer of the Duodenum and Stomach." The entire evening was given to the discussion of this subject, and members who came many miles to the meeting considered themselves well paid.



TULARE COUNTY

Tulare County Medical Society (reported by John C. Paine, secretary)—The society accepted invitation of Dr. D. D. Nice of Three Rivers to dine with him and hold their monthly meeting at his beautiful ranch house, April 26.

Members present were Drs. Willey, McSwain, Fraser, Tourtillott, Melvin, Brigham, Nice, Preston, Edmonds, Betts, Seligman, Campbell, Zeller, Ginsburg, Tillotson, Todd, Lipson and Paine, with Drs. Hill and Furness as guests, in addition to Dr. J. H. Woolsey of San Francisco, the speaker of the day, and Dr. Fred De Lappe of Modesto, councilor of the district.

After a very bountiful repast, the members listened to an interesting talk by Dr. De Lappe in his capacity as councilor of the district, which contained much interesting information and was appreciated by all. Dr. Woolsey then gave a forty-five-minute talk on the "Treatment of Infections," which was enthusiastically received.

CHANGES IN MEMBERSHIP

New Members—Alameda County: David E. Froelich, Ben Stetson, Oakland; A. J. Howell, Berkeley.

Kern County—Lucille B. May, Bakersfield.

Los Angeles County—Edwin S. Budge, Robert A. Campbell, Elmer J. Lambert, J. S. McAtee, George H. Patterson, J. W. Pidcock, Warren Sheley, Pinne M. Welbourn, Louis Levin, Los Angeles.

Napa County—Harry V. Baker, George B. Todd, Napa; E. F. Donnelly, Imola.

San Benito County—Sanford W. Cartwright, Idria.

San Diego County—Julio Paez, William H. Wilson, San Diego; William R. Eastman, La Jolla.

San Francisco County—John R. O'Neill, Arthur Sonnenberg, Eugene M. McKevitt, J. Morrille George, Myrnie Ada Gifford, Alexander David McLean, San Francisco.

San Luis Obispo County—John W. Nielsen, San Luis Obispo.

Santa Barbara County—Horace Gray, Horace Hagen, Kent R. Wilson, Santa Barbara.

Transferred Members—Hans B. Christiansen, from Alameda County to San Francisco County; Lloyd A.

Clary, from Contra Costa County to San Francisco County.

Resigned—C. E. Locke, Jr., H. H. Whitner, San Francisco County.

Deaths—Foye, Frank Alonzo. Died at Eagle Rock, April 28, 1925, age 44. Graduate of the College of Physicians and Surgeons of Los Angeles, 1912. Licensed in California the same year. Doctor Foye was a member of the Los Angeles County Medical Society, the California Medical Association, and the American Medical Association.

CORRECTION

It is pleasant to be able to correct an error that appeared in the Obituary column of the April Journal. The Orange County Medical Society lost one of their most active members, W. Leland Mitchell, M. D., not by death, as was erroneously published, but by reason of his removal to France, in connection with the Rockefeller Foundation.

CALIFORNIA ASSOCIATION OF PHYSIOTHERAPISTS

(Reported by B. H. Stenvig, secretary San Francisco branch)

The subject of the April meeting of the San Francisco branch of the California Association of Physiotherapists, held at St. Luke's Hospital, was nervous disorders and their treatment.

R. W. Harvey, M. D., spoke on the various nerve conditions and their treatment from a physiotherapy standpoint, stressing the use of hydrotherapy. He divided nervous disorders into the two classes of organic and functional. The organic class includes the spastic and flaccid types of paralysis, in both of which he advised the use of light massage after the first stage of soreness has worn off. The benefits of this form of treatment are twofold, the physical benefit in keeping up the nutrition of the affected parts and preventing deformities, and the psychological in keeping up the morale of the patient in his feeling that something is being done for him.

In the functional class he spoke of neurasthenia and hysteria. As a usual thing in neurasthenia some organic cause can be found and measures taken to remove the cause. The symptoms are headaches and a feeling of fullness in the back of the head and the eyes. Often there is some stomach trouble; the patient is easily tired; almost always insomnia exists, the muscles are tense, and the patient is continually fearing something that never happens. One of the first things to try to gain in the patient is relaxation. This can often best be gained by a course of warm tub baths and massage, the time of the bath and the temperature being regulated. At the same time other hygienic measures, such as diet, are taken. With few exceptions Dr. Harvey finds there is an improvement within two or three weeks.

Hysteria presents an entirely different case in that usually no organic cause can be found. Often some shock in childhood or certain environments act as trauma. With adults, excesses of various kinds will cause hysterical psychosis. In some cases the same treatment is successful in improving the condition, although this type is very much harder to treat.

Following Dr. Harvey's talk the meeting adjourned to the Physiotherapy Department at St. Luke's, where the technician in charge gave a short demonstration in hydrotherapy. For the baths which Dr. Harvey spoke of, the hammock or continuous bath, as it is sometimes called, is most effective. This is a tub with a canvas hammock slung in the tub in which the patient may rest. There is a rheostat for controlling the temperature of the water, it being possible to keep the same temperature for hours at a time if necessary. For the ordinary neurasthenic type the usual time is fifteen or twenty minutes at a temperature of 98 degrees or 100 degrees Fahrenheit. Maniacal patients are sometimes kept in for an hour or several hours, the purpose of the bath being to insure enough relaxation so that the patient can sleep.

Utah State Medical Association

SOL G. KAHN, Salt Lake City.....President
 WILLIAM L. RICH, M. D., Salt Lake.....Secretary
 J. U. GIESY, Kearns Building, Salt Lake City,
 Associate Editor for Utah

GET TOGETHER

One of the high lights of the medical month was the banquet extended by the Salt Lake County Dental Society to the Salt Lake Medical Society at the Elks' Club on the night of May 4.

Not only was this a pleasant occasion from the standpoint of individual enjoyment, of good music, good entertainment and good food, but in its deeper indications of a friendly spirit existing between the two groups of that "get-together" spirit which more than anything else in life helps us to understand and appreciate one another in a sympathetic fashion.

We don't mean that either the dentists or doctors need sympathy either. That's not the point we're trying to reach. What we mean is that understanding, acquaintance with a man, his aims, objects, character, enable us to evaluate him and them in the truest sense. And the thing is true of nations as well as men. Many a man we do not like any too well we would find to be a pretty good scout if we knew him better, knew him as he really was, instead of forming our opinion of him snapshot.

And so these meetings, these broadening of acquaintance, these establishments of friendly relations are steps in the right direction. We're sure that every doctor who attended enjoyed the banquet. And surely it was a graceful gesture on the part of the dentists to furnish us food to eat after laboring to save our teeth. Anyway mouth conditions are a very important factor from the cradle to the grave.

WHA'SA MATTER, DOC?

It has been reported that in China a doctor is paid so long as his patient remains healthy and works without remuneration when he falls sick. I have heard this statement evoke laughter. But, what's funny about it. The Chinaman is not necessarily crazy because he does things differently from us. After all, what is the Chinaman doing but maintaining a prepaid insurance guaranteeing him medical attention when ill?

And we know all about insurance. We carry sick and accident policies, income insurance, and life. We insure ourselves against accident or sickness when neither sick nor hurt. We insure ourselves and our dependents against poverty or destitution when we are neither poor nor destitute. We insure against burglary before we have been burglarized. We insure our lives. And insurance is, after all, a gamble. The carrier bets that we won't be sick or hurt, or robbed, or incapacitated, or that we will live an average number of years, and we bet that we will or won't—and to win we have to lose.

Yet insurance is an excellent thing. It has mitigated a world of suffering and sorrow, and done much good. We're for it. We're for it so strong

we would carry it further. Why not a sort of longevity insurance, or a thing that amounts to as much. How many men and women die a needlessly early death because of unsuspected, or neglected conditions which might have been retarded or cured if taken early enough?

Tire agencies offer free inspection service to help us avoid road accidents and, of course, to sell their goods. Battery agencies give battery inspection to help us get the most out of the little old box. About every so often we have our engines overhauled, inspected, and tuned. Fair enough.

But what about ourselves—the engine that makes the very difference to us between life and death—our bodies—their health. What if we, as physicians, would take a leaf from the book of the Chinese—what if we would educate our patients along the lines of a "physical inspection" as a means of keeping in condition before they are actually taken ill or faced by death itself?

We believe in prophylaxis, preach it, practice it in vaccination, immunization, quarantine. We believe that an ounce of prevention is worth the proverbial pound of cure. And yet we go on from year to year failing to emphasize the importance of the widest prophylactic field. Prophylaxis means prevention, and how better prevent a thing than discover it in its incipiency and abate it.

What, then, if as a step in this direction we, as physicians, should begin to educate our patients to come in about every so often, whether feeling in need of professional attention or not, and simply say, "Wha'sa matter, Doc?" Then give him an overhauling—learn whether there is anything the matter or not. If the answer is negative, well and good. The man goes away satisfied in the knowledge that he is in a good condition, actually buoyed and strengthened by the fact. But if there is really something the matter, then overhaul the engine at once, even though the trouble is but the smallest, faintest knock. Here is a real service physicians might and may yet render to their race. And surely it should be worth as much to a man to know that his teeth, his heart, his lungs, kidneys, liver or what not are in good condition as to be informed by a smiling mechanic that "the old boat is now hitting on all six."

In these days, when we are trying by lectures, written word, and radio to educate the public, why not educate them in the prevention of individual affliction insofar as we may, as well as in the present methods of attack and cure of disease? Why not seek to stress the fact that in this age, when as never before means of examination and diagnosis are at the disposal of the average physician—one of the wisest acts they can perform—one of the cheapest forms of insurance they can purchase—may both be attained by simply now and then going to their medical adviser's office, and, having gracefully and smilingly saluted the young lady office attendant, stroll on into the sanctum sanctorum and accost its occupant in some such fashion: "Good morning. Look me over and tell me wha'sa matter, Doc."

Utah News Notes (reported by J. U. Giesy, associate editor for Utah)—The officers of the Utah State Medical

Association met the members of the Boxelder Medical Association at a luncheon at the Commercial Club in Brigham. The visiting doctors were Sol G. Kahn, president; William L. Rich, secretary; J. C. Landenberger, counselor; W. D. Calderwood. Following the luncheon, the members of the state and local associations motored to Logan, where a scientific program was given by Dr. Calderwood. The officers of the Utah State Medical Association also visited the Utah County Society meeting at Provo, the Weber County Society at Ogden, and the Boxelder Society at Brigham City during the month. F. Steele delivered the scientific paper at Provo, and J. C. Landenberger at Ogden. Rich and Kahn spoke at Brigham City.

Salt Lake County physicians were the guests of the Salt Lake County dentists at the third annual dinner of the Salt Lake County Dental and Medical Societies held at the Elks' clubhouse. About 250 members of both societies were present.

The Holy Cross Clinical Association met at the hospital on the evening of April 20. The program was as follows: Gas Bacillus Infection, John Sugden; Intermittent Hydronephrosis, W. G. Schulte; Carcinoma of the Rectum, C. L. Shields.

Salt Lake County Medical Society (reported by M. M. Critchlow, secretary)—At the meeting of April 27, S. C. Baldwin presented a boy treated for lymphosarcoma of the neck four years ago, with a recent recurrence of cervical adenitis, and discussed the differential diagnosis. A. A. Kerr outlined the clinical history of a case of suppurating orchitis and epididymitis, and presented the pathological specimen.

The society was fortunate in having Emil Novak of the Department of Gynecology, Johns Hopkins University talk on "Uterine Bleeding." He divided the causes into three groups: First, those in which the bleeding is caused by a lesion in the pelvis; second, those in which the lesion is inflammatory, but not enough to cause bleeding itself; third, those in which there is bleeding in the absence of disease in the pelvis. The lecture was well illustrated by lantern slides.

W. R. Calderwood, E. F. Root, Ezra Rich of Ogden, William L. Rich, A. A. Kerr, and T. F. H. Morton took part in the discussion. In closing, Novak analyzed thoroughly the treatment of hyperplasia of the endometrium by curettage, x-ray and radium, and organotherapy.

President Brown announced that comparatively few doctors are taking advantage of the parking privilege extended by the police for the fee of \$5.

W. R. Calderwood reported for the committee to supervise public lectures.

Radio Broadcasting—President John Z. Brown of the Salt Lake County Medical Society has appointed a committee to supervise public health lectures. This committee has arranged for members speaking in the name of the society to broadcast a health talk over the radio once a week. These talks have been broadcasted for several weeks and have proved to be very popular.

Simple Immediate Treatment for Vomiting—All patients suffering from symptoms of reverse peristalsis in the upper gastro-intestinal tract from various causes were given amounts of 2 per cent sodium chlorid solution varying from 50 to 200 cc. In every case there was immediate relief of symptoms, but in several cases the relief was transient. Edwin P. Lehman and Harry V. Gibson, St. Louis (Journal A. M. A.), suggest the possibility that the action is a local one, tending to establish forward peristalsis in the stomach, no matter what the cause of the reversal. It may be found that the expression of this effect in amelioration of symptoms depends on the intensity of the abnormal stimuli to reversal of peristalsis. The treatment is so simple and harmless that it deserves a trial by clinicians everywhere, with a view to confirming or disproving these observations.

If every potential mother would keep herself in suitable condition for successful pregnancy and triumphant motherhood, there would be more normal births and fewer sick and dying babies—a larger number of healthy mothers.—Ida Bailey Allen (Medical Review of Reviews).

Nevada State Medical Association

W. M. EDWARDS, M. D., Mason.....President
CLAUDE E. PIERSALL, M. D., Reno.....
Secretary-Treasurer and Associate Editor for Nevada

The 1925 Session of the Nevada Medical Association—The 1925 meeting of the Nevada State Medical Association will be held at the Elko General Hospital, Friday and Saturday, September 4 and 5, reports C. E. Piersall, secretary.

It has been announced to a number on our program that it would be September 11 and 12, but the dates are changed so that our program will not conflict with the Utah State Medical meeting and post-graduate course, which will be held September 7 to 12, inclusive.

Friday, September 4, we will have a luncheon at the General Hospital, and Friday evening at the theater a movie on pulmonary tuberculosis. Saturday evening we will have a real banquet at La Moille, such as we had there in 1921. Saturday will be devoted not only to papers, but to clinical demonstrations. Sunday, September 6, we will have a fishing trip, which the Elko County Society maintains may be the best that can be had anywhere in the United States.

The following is a quotation, in part, of Dr. W. A. Shaw's letter to the secretary, dated April 25, 1925: "We intend to have the finest meeting that has ever been put over in the state of Nevada. We put over a meeting in 1921 that we figured could be equaled, but not excelled. Reno apparently excelled our meeting at Bower's Mansion in numbers only. We, in Elko County, shall put on a meeting in September which will be written in the history of the Nevada Association and which will also be remembered enthusiastically by all the medical men who attend."

Our Nevada members are urged to present clinical cases, to write to your secretary for a tentative program, then decide what subject you will present or discuss. All members and visitors who are to present a paper or clinical demonstration are urged to send to the secretary a resumé of their subject as early as possible, so that those listed for discussion may be prepared for the same.

The Elko Society will provide space for exhibitors.

The Washoe County Medical Society, according to the report of Henry Albert, secretary, met in regular session at the Chamber of Commerce, April 12, President Vinton A. Muller presiding.

The minutes of the previous meeting of April 13, 1925, were read and approved.

Program—Dr. Carl L. Hoag of San Francisco addressed the society on "The Acute Abdomen." He divided the acute abdominal conditions into two large groups, namely: Those which are inflammatory from the beginning as, appendicitis, cholecystitis, etc., and second, those which are primarily traumatic and only secondarily infectious, as gunshot wounds, perforation of gastric ulcer, acute intestinal obstruction, etc. The following list of symptoms were discussed in detail, as they pertained to the two great groups in question: Onset (especially pain), chill, temperature, tenderness, vomiting, rigidity, flatus.

Paper was discussed by Brown, Albert, and Piersall.

Attendance—Members: Adams, Albert, Bath, Brown, Muller, Pickard, Piersall, Riley, Robison, Tees, Thompson, and Walker; also, Dr. Lehnars of Reno, Mrs. Hoag of San Francisco, and Mrs. Muller of Reno.

The brain is the organ of thought, just as the stomach is the organ of digestion. It handles perceptions just as the stomach handles food, and is subject to all the physical laws which control the rest of the body. The brain must be exercised and thus given the zest of wholesome employment.—Chicago's Health Bulletin.

ANOTHER POPE TRAVELOGUE

Nairobi, April 10, 1925.

My dear Dr. Musgrave—Though we have not entered the game fields of Africa, I thought I should report progress.

Our transatlantic trip was surprisingly pleasant and smooth. Our five days in France entitle us to write a book on "What We Think of the French." Paris, naturally, interested us very little, and we passed through with nothing more than a deferential salute to her beauties.

Marseilles was a much more picturesque and villainous town. I never saw such a collection of strange and murderous-looking people as those on the waterfront—the dregs of the Mediterranean fit for deeds that are dark.

We liked the town and its surroundings the best of all France, and toured Provence with great pleasure.

Our voyage on the Mediterranean was the roughest we encountered, the sky being far from the sunny heavens one sees on the postcard. The paradox continued, fortunately, and the Red Sea and Gulf of Aden we found cool and delightful. This is usually the hottest sea journey that one can make. After seventeen days on the General Duchesne we appeared off the coast of Africa and experienced what had always seemed to me to be a figure of speech. We smelled the spice-laden winds of Africa. The low palm-rimmed beaches were actually fragrant at a distance of several miles. It was like unrolling a Chinese matting in which incense had been packed.

The town of Mourbasa, where we landed, is an old Portuguese settlement many hundreds of years old. Its name means: the Island of Wars, and the old fortifications of Vasco Da Gama still guard the port.

Here we got the true color of the Occident. Somali, Swahili, Arabs, and a few British inhabit this amazing town. The children of the jungle, with all their fine primitive qualities, meet modern material culture as represented in Henry Ford's marvelous Kinetic apparatus. Wild-eyed Shenzi, from the bush, gaze with awe at the magic of the white man, but lose none of their dignity and noble bearing.

From Mombasa we traveled by rail to Nairobi, a trip of three hundred miles. Now we are outfitted and ready to start in the morning for Tanganyika. In three days we shall be lulled to sleep by the coughing grunt of the night-roving lions and the tittering wail of hyenas.

Leslie Simson received us here, and we already have our tent boys, gun-bearers, and provisions ready to start. The gun-bearers were somewhat reluctant to join us, till they saw our archery tackle and saw us shoot. Now we have them squatting on the veranda before us, sharpening arrows, enthusiastic to go.

Simson states very emphatically that we shall have every opportunity to come in contact with a large variety of game, including the king of beasts, and he has no qualms as to the outcome.

You shall hear of this soon.

Yours as ever,

SAXTON POPE.

Our Obsessions—Dean Johnston of the University of Minnesota says: "The greatest American obsession is the habit of going to school. A second great American obsession is the belief in equality. . . . The dogma appeared in the first sentence of our Declaration of Independence, 'All men are created equal.' *No American patriot believed that for a moment.* The instinct for sameness has played a prominent part in the development of our educational institutions. . . . The Chinese bind their girl's feet; we bind the whole child, body and soul. A third great obsession of our nation is the belief that the good things of life can be given to people. Parents fondly hope that they can give their children an education. This is quite impossible; as it is almost equally impossible to keep worthwhile young people from getting an education for themselves. We advise children to prepare themselves for law, medicine, engineering, dentistry, business—with a capital B—and for everything except the work that needs to be done."—*Journal-Lancet*.

California Board of Medical Examiners

SOME PROBLEMS AND ACTIVITIES OF THE BOARD OF MEDICAL EXAMINERS

(Reported by C. B. Pinkham, M. D., Secretary)

Report from Los Angeles states that on April 8, 1925, Seth M. Wells and James M. Fer Don were convicted of fraud in an oil promotion scheme and sentenced by U. S. Judge Paul J. McCormick to pay a fine of \$1000 and serve one year in the Los Angeles county jail on each of two counts. Stay of execution was granted for thirty days to enable defendants' attorneys to prepare for filing an appeal.

The minutes of the Board of Medical Examiners disclose Seth M. Wells some years ago operated a traveling medicine show in California and elsewhere. His application for a license to practice in this state, based on reciprocity with Iowa, was denied at the February, 1924, meeting of the board after an extended hearing wherein his professional record was fully discussed.

It is reported that Francis D. Coltrin, M. D. of Fullerton, was arrested April 13, 1925, by U. S. Federal Narcotic Agent V. H. DeSpain for violation of the Harrison Narcotic Act, he having been alleged to have sold twenty to twenty-five grains of morphine to an addict operator, who paid him \$25 in marked money. At the hearing of Dr. Coltrin before U. S. Commissioner Turney on April 14, 1925, he was held to answer under \$5000 bond. At that time he testified he had given morphine to the addict, who stated he wanted it to enable him to make a trip to Texas; that he did not charge the addict, but the addict wanted to give him \$25, and when refused said addict left the money on the doctor's table.

Skigerosky Adachi, alleged to have been in business in Los Angeles for some time, ostensibly manufacturing handkerchiefs, was recently found to have displayed on the wall of his reception room an imposing diploma, conferring upon him the degree "Doctor of Bacteriology," said diploma being issued by the "International Physician and Surgeons' College of Micro-biology," dated Chicago, Illinois, February 2, 1925, and signed T. D. Hyland, M. D., president; P. Tempone, M. D., secretary.

"Dr." John F. Costa, Lemoore, California, was recently held to answer in the Superior Court on a charge of having practiced medicine without a license, it being alleged that John R. Mendez was prescribed for by defendant and, instead of recovering from his malady, became worse and eventually insane, so that he was committed to a state hospital. "Dr." Costa is reported to be at liberty on a bond of \$5000.

Reports relate the arrest of George A. Bruning and H. C. Coulson, naprapaths of Los Angeles, on a charge of violation of the Medical Practice Act. It is related that they belong to a national association which will pay their fines, attorney's fees, etc., and that an attempt will be made by some twelve or thirteen naprapaths, now located in California, to obtain a separate board of examiners.

The theory of the naprapath is that various ailments are due to pressure on nerves, caused by tight ligaments in the spinal column, said theory being originated by Oakley Smith, who operates the Chicago College of Naprapathy, Chicago, Illinois.

R. H. W. Albrectondare, who not long since was convicted of violation of the Medical Practice Act in Santa Ana, California, following the death of two women patients, lost his appeal to the District Court of Appeals for a new trial; however, he has petitioned the Supreme Court for a hearing, and we understand the matter must be disposed of before April 19, 1925.

Dr. Albrectondare, who so far as can be ascertained has never studied medicine or any other system of treating human ailments, was given considerable newspaper notoriety about a year ago in connection with his troubles in Pasadena and Orange.

The San Francisco Chronicle of April 18, 1925, relates

that Wilbert LeRoy Cosper, self-styled bishop of an Oakland religious cult, was found guilty on April 17 in the Superior Court at Martinez of violation of the Medical Practice Act, but did not seem to be annoyed by the verdict and is quoted as having stated, "What is a fine of a few hundred dollars when one has been given a million dollars worth of publicity?" Cosper was charged with having held a clinic in the home of a Mrs. Dietrich, Richmond, California, who was about to become a mother. It is reported that "Dr." Cosper, with a number of students, made such a commotion in the home of Mrs. Dietrich that the husband is charged to have shouted, "Get out, you dirty dogs."

Cosper formerly had an office in the Pacific Building, San Francisco, when complaints were filed that he was alleged to charge a fee for treatment, which was reported to consist in his sitting before his patient with his eyes closed for a few minutes, and then a request that the patient return again at a certain time for another treatment.

Some years ago Cosper was also in considerable financial difficulty over a moving picture which he filmed and had produced at the Savoy Theatre, entitled "The Kingdom of Human Hearts." Shortly after the film was completed, his producer, J. Patrick Kennedy, called at the office of the Board of Medical Examiners, leaving a "certificate of ordination," which he stated Cosper had given him, said certificate conferring upon Kennedy the degree D.D. and C.P., certifying that Kennedy had been ordained a priest of the Christian Philosophical Church, and thereby was entitled to treat by prayer the sick and afflicted. At another time he created considerable publicity by staging a boxing bout in the pulpit of his church in Oakland.

It was reported that last year he was involved in other financial difficulties arising from an attempt of "several feminine followers to get back certain funds which they had advanced on notes to Cosper for the advancement of his cult."

The Sacramento Bee of April 15, 1925, relates that Dr. Earl Harlan of Colusa, a physician and surgeon, had been indicted by the federal grand jury on a charge of possession and sale of narcotics.

On March 17, 1925, Allen Mills, Chirothesian, Richfield, Tehama County, California, was charged with violation of Section 17 of the Medical Practice Act. According to the report of our investigator, Mills stated that he made "a positive diagnosis by the examination of the pulse, by examination of other parts of the person of the patient, and by what the defendant termed iridiagnosis."

Mills claims to be an ordained minister of the "Chirothesian Church of Faith, incorporated under the laws of California, August 2, 1917." In "The Chirothesian," a pamphlet published by the organization, it is related: "It is intended by the board of trustees of the church that the word 'Chirothesian' shall have as much significance as that of minister of an orthodox church or as *even that of 'M.D.'* * after any person's name." The pamphlet further relates that, although the original papers of incorporation were issued under the title "Church of Faith," later the word "Chirothesian" was adopted "by the board of trustees as the title under which the ordained ministers of the church should advertise and practice their healing work . . . and while working under this title, healers ordained to the work are *protected from annoyance by the State Medical Board.*" *

M. T. Larkin, a Chirothesian of Los Angeles, was charged with violation of the Medical Practice Act of January, 1925, and at the time of investigation his place of business is reported to have contained a large quantity of remedies, the bottles being labeled for various diseases, such as tumors, rheumatism, paralysis, cancer, etc. On his wall was a diploma from the Western College of Drugless Therapeutics and, according to information from the Department of Licenses, State of Washington, a letter from the Sanipractic Board of that state relates that the Western College of Drugless Therapeutics was a "fly-by-night" affair "apparently for the purpose of giving a few persons a sort of diploma."

Our investigator further reported that on the wall of

Chirothesian Larkin's office was a sign reading, "We diagnose your ailments if you wish us to do so." Larkin, in answer to the question of our special agent as to how much his certificate of membership in the Chirothesian Church had cost him, is reported to have replied: "It cost me about \$250 so far. I paid \$75 at first, and as I don't go to church very often, I sent them \$5 or \$10 occasionally."

Diploma Mill Indictments—Replying to a letter of inquiry from the Board of Medical Examiners with reference to this subject, Mr. I. M. Golden, assistant district attorney of San Francisco, writes:

"I beg to advise you that the cases have been dismissed upon the ground that the authorities of San Francisco have not given to the district attorney the needed funds with which to prosecute, to extradite witnesses, and to transport witnesses from other states to California. The record is clear that the district attorney and the Board of Medical Examiners did all that was humanly possible to bring the cases to trial."

Surely this is sufficiently illuminating without additional comment.

"Bishop" Cosper Given Ninety Days—"Bishop" Wilbert LeRoy Cosper, leader of the Christian Philosophical Institute of Oakland, and self-styled "apostle of the divine chemist," was sentenced recently by Superior Judge H. V. Alvarado in Martinez to ninety days in the county jail and a fine of \$500 for violating the Medical Practice Act.

CALIFORNIA AND WESTERN MEDICINE discussed the "Bishop" and his alleged Philosophical Institute when the propaganda was at its height last year.

According to press dispatches an attempt may now be made by the Contra Costa followers of the convicted "Bishop," who, he says, number 1100, to recall Superior Judge Alvarado.

When Cults Are Forgotten—An isolated community of one thousand people had one physician. The data are not now available as to the number of spinal manipulators, testimonial shooters, drugless healers, nature friends, and what not shared the care of the community during relatively healthy times. We do know that when an emergency arose, when the results of the knowledge of the regular school of medical practitioners and those in other allied fields who have been so bitterly assailed and maligned by the opponents of medicine was needed, the whole world sat at its doorstep to watch through the press, to listen by the air, to compute on its maps, the trip against death. A small package was visualized by millions. Worthless glass vials assumed unheard of value because of their life-giving contents. Forgotten the vaunted merits of subluxation of vertebrae for nerves which never reach the spinal column. Disregarded the tenets of absent treatment. Water cures, mud cures, ice cures, are not mentioned.—Herman Goodman, M. D.

"What are the attractions of a career in life?" asks Doctor William Henry Welch, who then proceeds to answer by saying: "They lie, do they not, in the opportunities the career offers for service to mankind, in the congeniality of the work and in its rewards. The profession of medicine surpasses all others in its opportunities for service to our fellow-men. Besides this there are manifold fields of activity, appealing to the most varied personal inclinations and aptitudes, be these practical or scientific. The rewards of success in medicine, even of the highest success, lie not in money; they lie in the intellectual pleasure which one gets from his work as a physician, in the consciousness of service, in the relief of suffering, and in the cure and prevention of disease." Doctor Welch has just celebrated his seventy-fifth birthday, and so far as we have seen he has not told the newspapers how he managed it. In fact, Doctor Welch is partial to scientific journals for such messages as he has to give.

*Italics ours.—Editor.

Clinical Notes and Case Reports

ADENOMYOMA, WITH THE INFILTRATIVE CHARACTERISTICS OF MALIGNANCY

By H. E. BUTKA, M. D., *Los Angeles*

The usual finding of adenomyomata is in the wall of the uterus with rather indefinite outline and with color almost that of the normal uterine wall. The finding of adenomyomata elsewhere is rather unusual. The case here presented is still more unusual in its relation to the surrounding organs.

No. 13485—White Memorial Hospital—Service of Dr. Thomason—Mrs. C. C., age 38 years; housewife. History of profuse menstrual flow for a few days and then scanty but continuous flow of four months' duration. Physical examination revealed perineum and cervix intact. Body of uterus quite firmly fixed and about 5 cm. in diameter, with a nodule apparently involving posterior wall of uterus and rectum. Laboratory findings revealed 10,200 leucocytes, $3\frac{1}{4}$ million red cells with 75 per cent of polynuclears. Wassermann, negative.

At operation three small fibroid nodules were found in the body of the uterus. One ovarian cyst measuring 5 cm. in diameter was present. Anterior to the uterus, between it and bladder and adhered to both is found a tumor mass measuring about 3 cm. x 5 or 6 cm. in size. This mass could be separated from the uterine wall, but it was found impossible to separate from the bladder wall, and necessitated the removal of the adherent portion of the bladder with the mass.

A similar nodule adherent to the rectum posterior to the uterus was found. It was impossible to remove this mass without removal of a portion of the rectal wall, and with the extensive surgery already completed it was thought best to leave this tumor mass for the present.

Pathological study reveals tumor anterior to uterus and adjacent to bladder wall to consist of a typical adenomyoma, small areas of stroma with glands of type found in endometrium. No evidence of malignancy found. The tumor mass invades bladder wall, leaving only traces of bladder muscle and the mucosa in involved area.

Other findings were: peritoneal and parovarian cysts, cyst of ovary, fibroids (small in size and three in number), and a chronic catarrhal inflammation of the appendix, with the endometrium in the resting stage.

Comment—Rapid section, using Terry's polychrome methylene blue, revealed the nature of this growth, and although the gross appearance suggested malignancy, more radical surgery was not done. Patient has recovered.

BISMUTH SUBNITRATE POISONING

REPORT OF A CASE

By C. W. PIERCE, M. D., *Los Angeles*

There is a more or less prevailing view that bismuth subnitrate may be used with great freedom, both externally and internally, regardless of the fact that our attention has been repeatedly called to its danger. That the matter may again be brought to the attention of physicians, I wish to report the following case of bismuth poisoning:

Mrs. C., age 31, was admitted to the California Lutheran Hospital, September 19, 1924. Four months previously a tuberculous kidney had been removed by Doctor Franklin Farman. A fistula formed and persisted. Squibbs' 33 per cent bismuth subnitrate was used in the wound. Altogether during one month four ounces were used. The patient lived in the country and was not kept under close observation.

Three months after the operation she developed signs of salivation. Sloughing ulcers appeared in the mouth and blood was noticed in the urine. She consulted a den-

tist and was also treated by her local physician without the cause of the trouble being discovered.

The patient entered the hospital complaining of intense pyralism, pains in the face, headache, abdominal pains, vomiting, diarrhea and hematuria. She was very weak and had lost several pounds in weight. The breath was extremely offensive, so much so that the odor could be noticed on entering the room, simulating a garlic odor. The pains in the face were severe. Examination showed a black or slate discoloration of the edges of the gums, the mucosa of the cheeks and lower edge of the tip of tongue. Severe stomatitis and gingivitis. Some of the ulcers were quite deep, penetrating to the deeper layers. Urinalysis showed granular and hyalin casts, pus and red blood cells.

Treatment consisted of daily injections of a 10 per cent solution of sodium thiosulphate, intravenously. Each dose contained ten cubic centimeters of the solution, and a total of four injections was given. A mouth wash was used to heal the gums. One loose tooth was extracted. The acute nephritis which had developed as a sequela of the bismuth poisoning began to subside immediately under the above treatment, and at the time of her dismissal from the hospital the kidney function was normal. Her mouth healed and general condition improved. The dark line under the tongue and discoloration of the mucosa of the cheek persisted and was still present a month after she left the hospital.

1501 South Grand Avenue.

Medicine Before the Bench

Findings and Comments of the Courts on Acts and Omissions of Doctors

(EDITOR'S NOTE—*The law reports contain many interesting decisions, involving the reputations and fortunes of doctors. In this column in each issue a brief summary of one or more decisions and comments of the several courts of last resort upon the cases will appear. The matter will be selected by our general counsel, Hartley F. Peart, who, with Hubert T. Morrow, attorney for Southern California, will contribute from time to time.*)

In the most recent malpractice decision decided by our Appellate Court the importance of expert medical testimony to prove negligence on the part of a physician was emphasized. The judge before whom the case was tried instructed the jury that the opinions of the doctors who had testified as experts were merely advisory and that the jury was not bound to accept such opinions as true, but should accord them such weight as the circumstances warranted, or the jury might disregard such opinions entirely if they believed them to be unreasonable. The court held that this instruction was erroneous as, in effect, it instructed and permitted the jury to set up their own standard of treatment which they thought the physician should have given the case and permitted them to entirely ignore the expert testimony. The physician was charged with negligently failing to discover a fracture by reason of the fact that he took no x-rays. Two physicians testified that this was negligence. The court said:

"It necessarily follows . . . it was prejudicial error for the court to give the second instruction above set out, which it gave upon its own motion. For in this second instruction the court told the jury that they might disregard altogether the opinions of the experts testifying in the case if, from all the facts and circumstances in the case, they believed that such opinions were unreasonable. In other words, the court, in effect, instructed the jury that if there were facts and circumstances in the case, testified to by lay witnesses, which the jury believed and which rendered the opinions given in the case by expert witnesses unreasonable, then the jury were at liberty to reject altogether the opinions of the experts. As we have already noted, such is not the accepted rule, and to so instruct the jury was highly prejudicial to the rights of the appellants. . . . The judgment is therefore reversed."

CORRESPONDENCE

LIGHTS THAT ARE HIDDEN

An advertisement in a local *newspaper* stated that "few people who at some time or another have not suffered that terrific pain with 'neuralgia of the face' and yet not one in ten got instant relief with the remedies used or even understood the true cause of the ailment."

"Neuralgia is caused by pressure on the nerve fibers connected with the trifacial nerve of the face. This pressure is found in the neck. The small spinal segments in the neck are displaced enough to cause an impingement of those nerves, and neuralgia pain its the result. Relief is very certain under chiropractic adjustments; why suffer when there is no need of it? Let us explain how we can correct your ailment without the use of poisonous drugs."

E. L. Meyers, M. D., Chico, California, commenting on this says:

One who did not understand would say, "What is wrong with this advertisement?" First of all, it is a gross misstatement of facts, because the fifth cranial nerve or trifacial does not go near the neck; it is purely a cranial nerve having its origin within the skull, and its exit is through openings in the skull known as the "foramens, ovale rotundum and sphenoidal fissure and not between the vertebra of the *neck*," therefore, it could not be from vertebral misplacement causing an impingement upon the trifacial nerve.

We are, therefore, led to believe the person who wrote this advertisement belonged to the nine in place of the one who really understands the true situation. We who know and have made a lifetime study of conditions particularly due to disease, see the error not only in this advertisement, but in others of "wonder cures," patent medicines, so-called Chinese herb venders, and other cults that have taken root in America today.

Among the various "systems" of healing is the "osteopathic system," founded in Kirksville, Missouri, about thirty years ago. Their educational requirements at the beginning were very low, and are still deficient in quality or quantity of learning and upon the requirements for admission to other schools and colleges. Another "system" is chiropractic, with very low requirements for entry and only a short time for study—eighteen months. Whereas a regular medical student must study at the present time eight years, then after the eight years he is called in assembly and graduated; but he is still without the freedom of other "systems." He has a code of ethics, which is the bushel basket that forever hides his light. He must not advertise his individual ability to treat certain diseases, for if he does he is classed by his fellow-physicians as quack advertiser. Therefore, he has no way except his work to show his ability.

In my opinion, at the present time and age this is all wrong, as long as the class of advertising is true and not false. I think a medical man should be allowed this privilege without the odium of classification of *quack*. How is Brown to know the class and character of merchandise Smith has for sale without the medium of advertisement through the newspaper. Readers, stop and think of the conditions as they exist today! Who has founded and operates the hospitals of our land? Who, at great sacrifice to life and drudgery, has discovered the life-saving secrets, such as yellow fever, malaria, diphtheria, scarlet fever, diabetes, hydrophobia, tetanus or (lockjaw), smallpox, typhoid, and finally cancer in its early stages? The answer is the regular practitioner of medicine who has given his life to research work; and have they who have been the discoverers patented their ideas? *No*. It has been given to suffering humanity, without reward through the medium of the regular medical man.

Last, but not least, the physician gives his time and knowledge in establishing free clinics and health centers for the poor. Everything that has been discovered has been through exhaustive research of the regular medical man, and he is still working—working to add pleasant and comfortable years to human life by conquering the enemies of health.

"WHEN DOCTORS DISAGREE"

Under this caption (a quotation, by the way, from the San Francisco Daily News), are a few paragraphs in the May number of CALIFORNIA AND WESTERN MEDICINE. Why shouldn't doctors disagree? Disagreement has the authority of the greatest antiquity behind it. Adam and Eve disagreed with the Lord and were put out of the Garden of Eden. Some time later their sons disagreed and Cain killed Abel. As years went on the population became so disagreeable, individually and collectively, that the Lord sent the great flood to wipe off the earth. Centuries afterward, tribes and nations disagreed with each other and began warfare. To settle disagreements between individuals our courts were founded. Man disagreed with the circumstances surrounding animal life and began to wear cloths, live in houses, and cook his food. If his food disagreed with him, or the weather, or he got a disagreeable hurt, he felt the need of human aid. Hence, the founding of the profession of medicine and surgery.

In the Dorothy Ellingson case it is reported that Dorothy disagreed with her mother and then shot the mother. At the trial one set of attorneys bitterly disagreed with another lot of attorneys. Dorothy seemed to disagree with everybody in the courtroom, and the judge seemed perturbed also. Why did the News editor not notice some of these other disagreements, but single out the doctors for comment? Our civilization is founded on disagreements. Disagreement is the biggest and most popular thing in the world today. Any Democrat or Republican will swear to the truth of this statement.

ETHAN H. SMITH.

528 Flood Building, May 12, 1925.

To the Editor—In Dr. Miller's article on "Ringworm of the Scalp," in the March number of CALIFORNIA AND WESTERN MEDICINE, I found no mention made of quartz light therapy. This was a surprise to me, as I have had very good results with it in treating fungus infections.

A young man who had a very bad case of tinea barbae, covering nearly two-thirds of the beard region, of two months' duration was completely cured by two treatments carried to the point of vesication.

A young man of 16, with a skin lesion on the thigh and inguinal adenitis of four months' duration, declared by the pathologist to be a yeast infection, was immediately benefited and permanently cured by three weeks' treatment with quartz light.

The almost immediate improvement and ultimate entire cure in these cases, as well as others of minor degree of infection has converted me completely to the use of quartz light in all fungus infections.

I would like to know the experience of others in the treatment of such cases, for if quartz light will cure ringworm even of hairy regions, why risk x-ray?

F. F. ABBOTT, M. D.

Ontario, California.

Doctor Miller's reply:

"I think the following will answer the enclosed communication:

"The title of my article was 'Ringworm of the Scalp.' The discussion was, therefore, limited to fungus infections of the scalp. In the treatment of the disease in this location, quartz light therapy has not been found to be of value.

In the treatment of kerion fungus infections of the bearded region and in blastomycosis or coccidioides of the skin, quartz light therapy is undoubtedly of some value. However, I have never seen or read of any such rapid cures in these stubborn infections as Dr. Abbott reports. I am sure that a more detailed clinical and bacteriological report along with the technique of treatment of his patients would be welcomed by all of us.

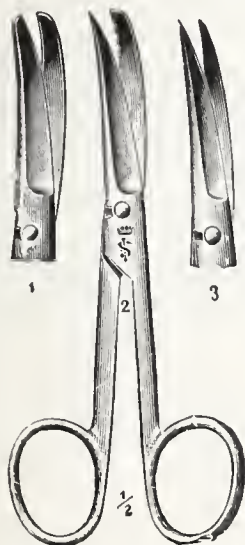
Sincerely yours,

HIRAM E. MILLER."

Stock Reducing Sale

While They Last

Every Instrument High Grade



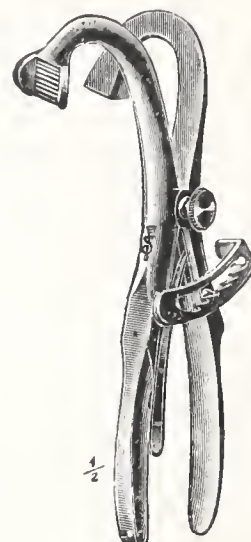
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Write for our booklet on the Endocrines

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CHICAGO



MEDICAL STRAWS

By THE EDITOR

Experience is fallacious and judgment difficult

What Does This Signify?—"The school health agencies now control the means of communicable disease prevention and control," says an official publication of the Department of Education. "In other words," continues the author, "the school health service, including its staff of physicians, dentists and nurses, is best prepared to handle most of the positive health and physical efficiency program of the school."

LACK of law enforcement is a far worse thing than lack of laws. Our metropolitan towns of today and our Western wildernesses of yesterday combine their annals in recording conclusively this truth. Metropolitan crime statistics and the history of vigilance committees prove it. In the cities feeble enforcement encourages, protects, and multiplies our modern criminal population.—John Hays Hammond.

AS LONG as children—and dogs—take naturally and at once to me, I am quite willing to be called a bad mixer.—Percy Fridenberg, M. D.

Gratitude in Action—We give freely of our time to the clinics under the mantle of charity, and the prow of the Ship of State bunts us in the seat of the pants for being in the way.—Medical Pocket Quarterly.

In Which Class Are You?—If you are a partisan, you have one chance in two of being right. If you are a neutral, you have no chance of being right.—Clarence Darrow.

Worth Pondering—Some of our alleged health experts have adopted the ambitious policy of immortality for us all. But the facts remain that the centenarian lives half his life *after the full enjoyment of it has died*, and that the much greater proportion of old people is hardly likely to make for social vigor. The extension of the average length of life is filling the streets with the aged, and the falling death rate, bringing in its train a falling birth rate, is making our children grow scarcer.—E. M. Nicholson.

If This Is True, Why Educated Doctors?—"The ferreting out of beginning physical defects and beginning communicable conditions," says the California State Board of Health Weekly Bulletin, "can be done very effectively by the teacher."

The ferreting out of beginning physical defects is the most difficult of all phases of the practice of medicine.

"The treatment of drug addiction is a doctor's job."—Louise B. Deal, M. D.

More Important Than Living Long—Half the misery of human life might be extinguished by mutual offices of compassion, benevolence, and humanity.—Joseph Addison.

WE ARE prone to discuss medical matters from the standpoint of their elaborate and conspicuous episodes among the well-to-do or the brilliant and well-co-ordinated activities of hospital life. It must be borne

in mind that the mass of medical experience lies among the working people.—Henry B. Faville.

SHAW lies brilliantly, impartially, and epigrammatically, about soldiers (Arms and the Man), physicians (Doctor's Dilemma), physical love (Devil's Disciple) and preventive medicine (Prefaces), and however successful this brilliancy may be with the general public, he discredits himself, as far as essential honesty is concerned, with those who are in the habit of facing things as they are.—Medical Review of Reviews.

He was Ill When He Said It—"Occasionally only do we meet with an example of vigorous health continued to old age; hourly do we meet with examples of acute disorder, chronic ailment, general debility, premature decrepitude. Not to dwell on the natural pain, the weariness, the gloom, the waste of time and money thus entailed; only consider how greatly ill health hinders the discharge of all duties, makes business often impossible, and always more difficult; produces an irritability fatal to the right management of children, puts the functions of citizenship out of the question; and makes amusement a bore."—Herbert Spencer.

University Publicity—Are our universities destined to replace barbershops as centers for the dissemination of jokes? It begins to look like it, doesn't it?

Opportunity

They do me wrong who say I come no more
When once I knock and fail to find you in,
For every day I stand outside your door
And bid you wake and rise to fight and win.

THE index of community intelligence is represented in the percentage of voluntary vaccination. Only children and fools *must* be protected against smallpox.—Ohio Health News.

"Pity 'Tis True"—An unscrupulous physician talking to a sensation-seeking reporter can do more harm to scientific medicine in one interview than can be undone by the united effort of a hundred conscientious and capable physicians talking to the public.—Indiana Medical Journal.

THE only advertising that will redound to the professional credit of the physician is that which he does not do, but which he gets, and which he cannot keep from getting as the result of efficiency in the practice of his profession in a professional manner."

NO CIVILIZATION can long endure a universal disdain for work, for labor.—Dean J. B. Johnston, University of Minnesota.

THE young doctor having been thoroughly grounded in life as it is not, and taught to think in terms of a language that adapts itself easily to ambiguity, can it be wondered that he does not understand what a practical world wants to buy from him and really what he has to sell. Let us not fool ourselves, as doctors we sell knowledge and service.—New Orleans Medical and Surgical Journal.

SYPHILIS," states a writer (New York State Journal of Medicine), "is the second principal cause of the cardio-vascular diseases which are now by far the leading causes of death in the United States. Lamb estimated cardiac involvements to be present in 50 to 75 per cent of all syphilitics."

And still the crusaders are out to prevent heart disease by diet!



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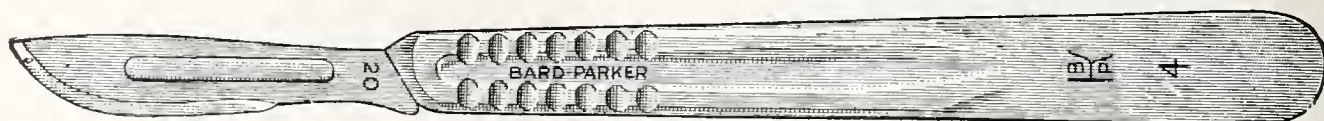
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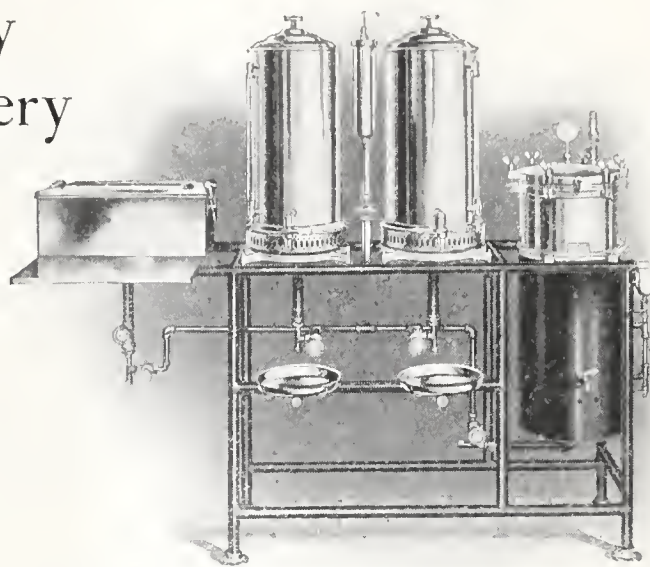
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The risk in using partly sterilized goods is as great in a small hospital or clinic as in a large institution. In either place the danger from infection is too large to be neglected.

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The CASTLE 1336 combination gives you that protection. It has a 10x20" autoclave, eight gallon tanks for hot and cold water with a filter, and a 19" instrument sterilizer. It is ideal for community hospitals, clinics, and small surgeries.



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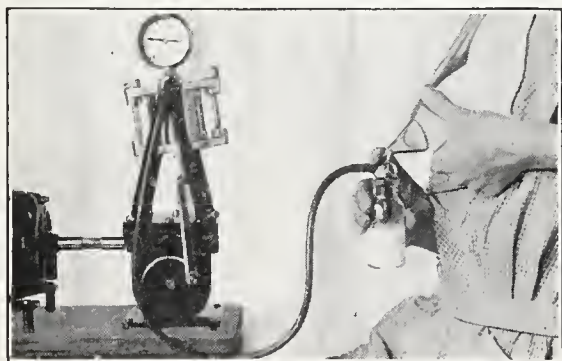
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Rapidly Stimulates Milk Secretion

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References and testimonials from leading hospitals and doctors throughout the country.

See Article on use of this pump, page 728, this issue California and Western Medicine.

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Establishes Milk in Dry Breasts.
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- 9—Wellsworth Monaxial lenses give myopes the same bifocal comfort as hyperopes—and hyperopes receive greater comfort than ever.

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Renal Failure Casts—During the course of a quantitative study of the formed elements of the urine, Thomas Addis, San Francisco (Journal A. M. A.), noted the occasional occurrence of a certain type of cast whose most distinctive characteristic is a quite unusual breadth. There are three distinct varieties of these broad casts, but they seem to be only different forms of the degeneration of a single type, since every stage of gradation from one variety to the other is often found in the same urine. The first variety, and the one from which the other two apparently develop, is a cellular cast in which even the nuclei of the cells can sometimes be distinguished. These cells are mononuclear, though occasionally two round or oval nuclei are seen in the same cell. They are somewhat larger than polymorphonuclear white blood cells, and no granules have been demonstrated. But much more commonly only rather faint cellular outlines can be traced on the surface of the cast, and at this stage it begins to have a glassy, refractile appearance. As the cell outlines grow still more indistinct and the case becomes almost homogeneous, the second variety is approached, the broad waxy cast, which in every respect except its breadth is indistinguishable from the ordinary waxy cast. This is the variety that is least frequently seen, however, for most of the broad cellular casts degenerate into the third variety, the broad granular cast, the variety that is nearly always present in the greatest abundance and sometimes is the only form that can be found. Under the low power of the microscope they look black, as if they were composed of graphite particles. Under the high power, coarse granules can be seen, which are closely packed toward the center, but are sometimes frayed out toward the periphery, making the outline irregular and giving the impression that the cast is in process of disintegration. The conception that the broad granular and waxy varieties are derivatives of the broad cellular cast, which is suggested by their morphology, is further supported by the fact that in concentrations of methylene blue that leave hyaline casts unaffected, the granular, as well as the cellular casts, stain deeply, and that a varying amount

(Continued on Page 768)

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Cultures are sent direct-by-mail to the patient. Information gladly supplied.



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Objectives, 16mm, 4mm and 1.9 mm oil immersion.

Abbe condenser in quick-screw substage.

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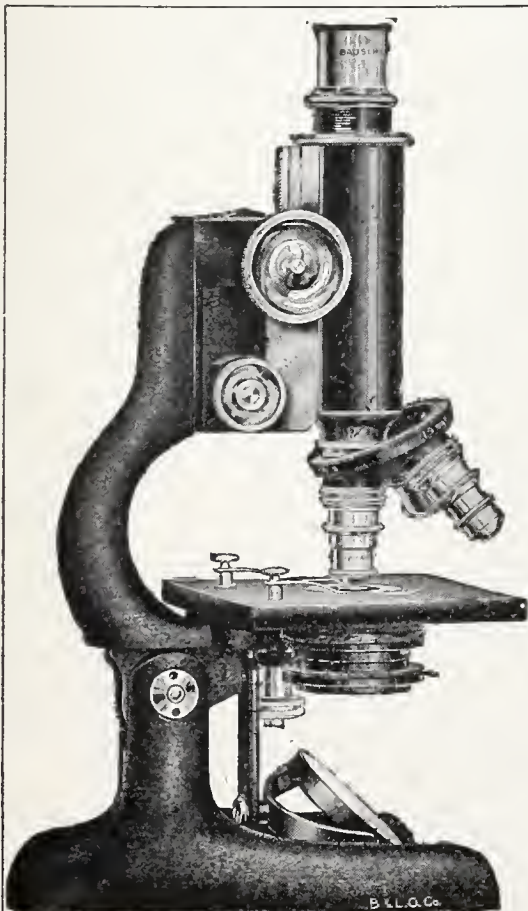
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RENAL FAILURE CASTS

(Continued from Page 766)

of the dye is also taken up by the broad, waxy cast. Broad casts remain unaltered even in distilled water. For this reason they may be found in dilute urine in which hyaline casts are never seen. Again, in any given concentration of sodium chlorid, hyaline casts remain undissolved only within a relatively narrow range of pH variation, but broad casts are not appreciably affected even by hundredth normal acid or alkali. Yet they sometimes disappear from urine within a very short time and under the microscope they have been seen to grow more and more faint and indistinct, and ultimately to disappear altogether; although, when they have been freed from urine by repeated centrifugalizing from changes of salt solution, they may remain unaltered for weeks. Addis terms these casts renal failure casts. In every case in which broad casts composed all or almost all the casts found in the urine, the concentration of urea in the blood was over 100 mg. per hundred cubic centimeters. In every case in which the outcome is known—with one exception, an instance of mercury nephrosis—the patient died in true uremia. In every case of true uremia this sediment was found, with the exception of patients with pyonephrosis and macroscopic pyuria. The clinical value of a knowledge of this association is obvious. Some of these patients came with superficially trivial complaints, such as headache or nausea, and it was this quite pathognomonic urinary finding that first indicated the real gravity of their condition. When only some of the casts were broad, there was always some degree of renal failure. But in certain patients during the height of activity of bacterial infections, a considerable proportion of the casts were broad, although there was no marked impairment of renal function; while in other patients whose general condition was good, none of the casts were broad, although there was a pronounced reduction in the functional capacity of the kidney.

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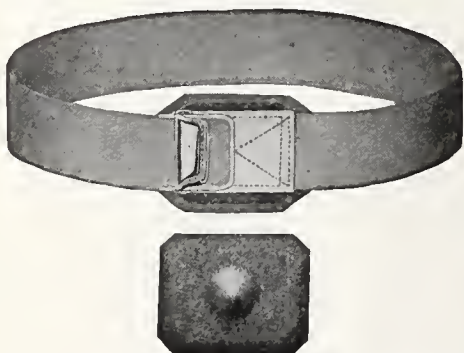
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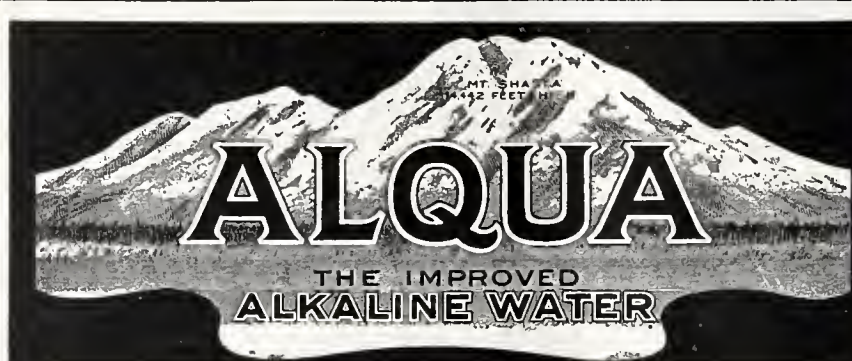
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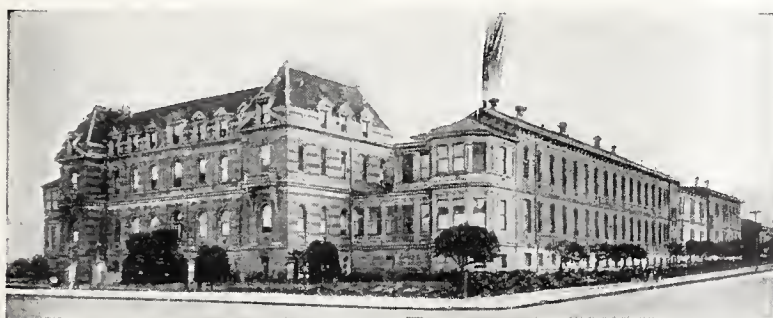
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Hepatic Cirrhosis in the Philippines—A. G. Sison, A. B. M. Sison, and W. De Leon (Journal of the Philippine Islands Medical Association) have supplied us with an unusual amount of most exact information about cirrhosis of the liver. The facts accumulated by the authors have been taken from the combined clinical and pathological records of the Medical College and its hospitals. While the data and discussion are intended to apply to the Philippines, similarly careful work may show that the facts are more widely applicable than we have been taught to realize.

Effect of Epinephrin by Oral Administration—This study by William C. Menninger, Topeka, Kan. (Journal A. M. A.), is based on a series of observations in the administration of epinephrin by mouth in various types of hyperthyroid cases. To date, a series of fourteen observations has been made on nine patients. Of this group, three have given a very definite and in one case a marked reaction, and two others have given slight reactions. Of the three cases in which the reaction was marked, the blood pressure rose (systolic) 30 mm. in one case, 50 mm. in the second, and 110 mm. in the third. The pulse remained practically constant in the first two, but increased fifty-two beats a minute in the third. In all three cases, epigastric and substernal pain and nausea occurred. Vomiting, sweating and increased tremor occurred in two cases. In the two cases giving slight reactions, the blood pressure (systolic) rose in one case 12 mm. with a pulse increase of 20, and 18 mm. in the second with a pulse increase of 10. In both cases there was epigastric "burning" and distress. These reactions were slight and might be disregarded, excepting that control observations with smaller doses on the same patients produced no objective or subjective effects. At present, conservatively, the only conclusion to be made is that epinephrin may produce marked systemic effect on the circulation in some cases of hyperthyroidism when administered by mouth, the effect resulting from absorption through the gastro-intestinal canal and not from the mouth or throat.

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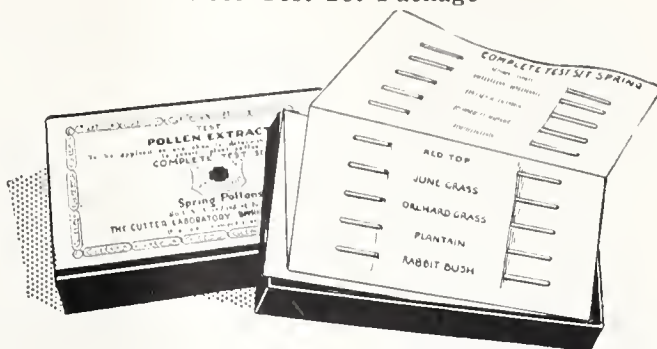
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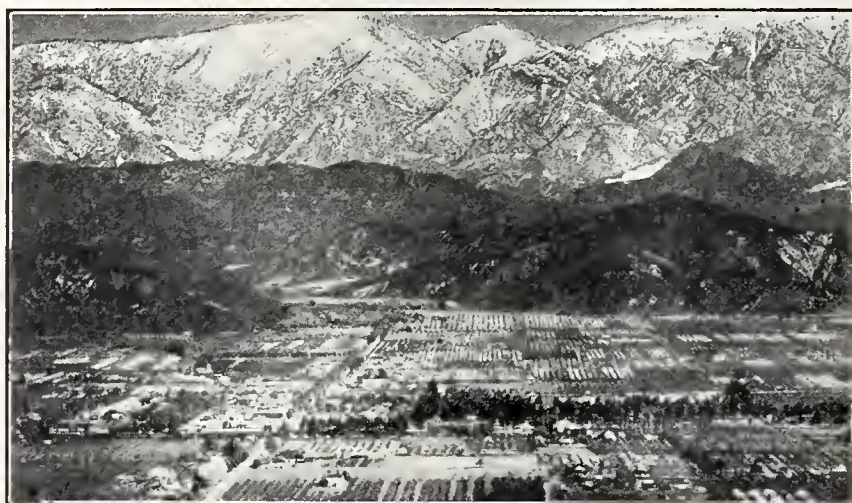
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Pellagra Secondary to Lesions of Stomach Interfering With Nutrition—An interesting side-light is thrown on the subject of pellagra by the occasional appearance of the disease in patients with faulty food utilization due to some gastro-intestinal lesion. Three such cases are reported by William L. Bender, San Francisco (Journal A. M. A.) Pellagra developed in one of these patients during a period of jejunal feeding necessitated by deformity of the stomach by a benign ulcer, and in the other two cases during progressive carcinomatous pyloric obstruction. Only two similar reports have been found in the literature. In each of these three cases, pellagra developed after the stomach lesion had seriously interfered with the passage of food for some time. In one case the disease developed during the course of duodenal feedings with good animal protein content, improved when this was increased, and disappeared on a general diet by mouth. Surgically relieving gastric retention, in the second case, and permitting a full diet resulted in improvement of the pellagrous condition, though the patient was dying of cancer. The trial of improving the diet was impossible with the third patient, who died two weeks after operation. In these three cases of this report, the only apparent cause for pellagra was the interference in nutrition, another piece of evidence in favor of the dietetic origin of the disease.

“Case”—“Case” is the incidence of a disease, the totality of the symptoms and of the pathologic and other conditions; “patient” is the human being, the man himself. “The case had quite a temperature,” “I put the case to bed,” “This case was taken ill three weeks ago,” “I sent the case out for a walk”—these and similar expressions are found continually in manuscripts; the error nearly always is in using “case” for “patient,” seldom the reverse.—From “The Art and Practice of Medical Writing by Dr. G. H. Simons and Dr. M. Fishbein (Journal A. M. A.), which every medical author should study and apply in the preparation of his manuscripts.



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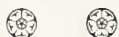
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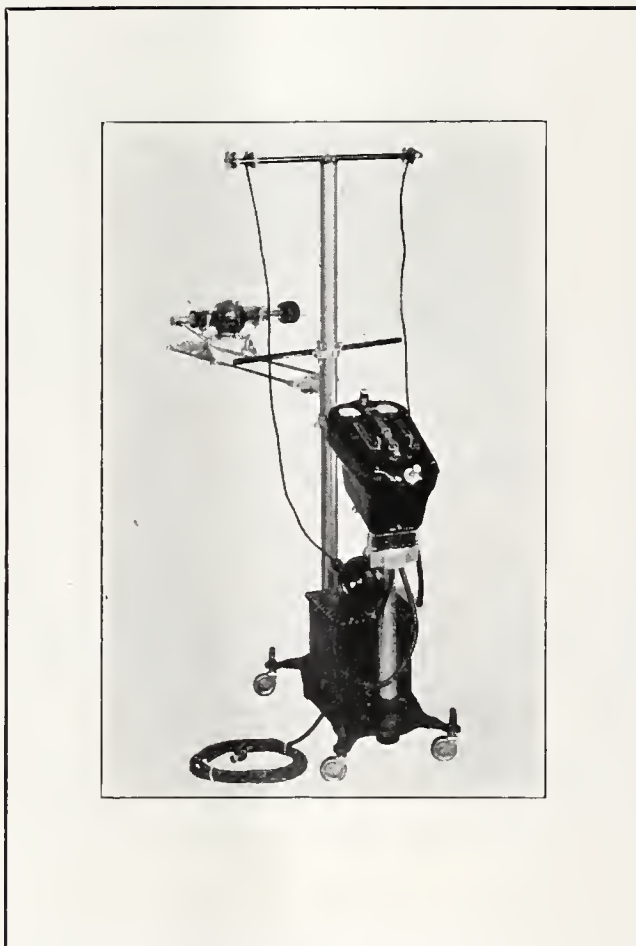
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BOOK REVIEWS

This column is conducted solely in the interests of California and Western Medicine readers. Critical comment, favorable and unfavorable, purely from the standpoint of the interests of the medical reader, will be made about books selected from the larger number acknowledged in the Books Received column. The advertising columns are open to book publishers who wish to make additional statements about their publications.

A Manual of Obstetrics. By John C. Hirst. 2nd ed. Illustrated. 551 pages. Philadelphia and London: W. B. Saunders Co. 1924.

The second edition of "A Manual of Obstetrics," by John C. Hirst, covers the field of obstetrics in sufficient detail to be of much value to the busy practitioner of medicine. It is not too detailed to prevent its being very practical.

The chapters on dystocia and mechanism of labor are well written and constitute a splendid study for anyone called upon to do obstetrics. C. D. H.

Developmental Anatomy. A Textbook and Laboratory Manual of Embryology. By Leslie Brainard Arey. 433 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1924.

Arey's Developmental Anatomy, following the former textbook of embryology by Prentiss and Arey, which was published by Saunders a good many years ago, seems a great improvement over the previous work. It is a work of merit for anyone interested in man and his anatomic development. The volume is remarkably complete, is well illustrated, and is clear and concise.

The structural rather than the functional aspect of the developmental history of the structure of the body are emphasized. From the practicing surgeon's point of view, the section of the book on organogenesis is well worth its price. C. L. C.

The Relative Position of Rest of the Eyes and the Prolonged Occlusion Test. By F. W. Marlow. 96 pages. Philadelphia: F. A. Davis Company, 1924. Price \$2.50.

The author deserves credit for stressing a relatively little known and hitherto neglected test which is of distinct value in certain cases. Its study and application can be recommended to those ophthalmologists who have

(Continued on Page 787)

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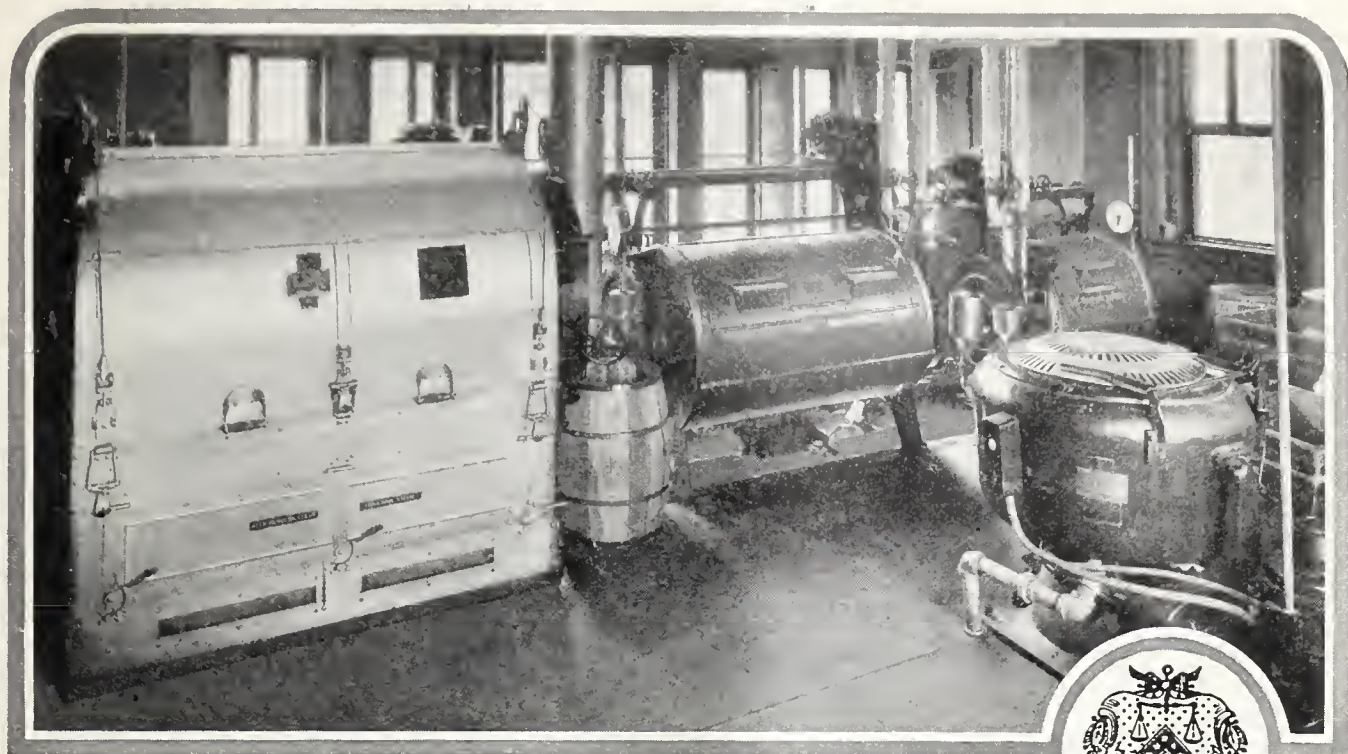
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BOOK REVIEWS

(Continued from Page 780)

not employed it. It is regrettable, however, that the chapter on treatment is so short and is restricted to some general statements of satisfactory results. O. B.

Basal Metabolism in Health and Disease. By Eugene F. DuBois. 372 pages. Philadelphia and New York: Lea & Febiger, 1924. Price \$4.75.

It is a pleasure to review a book such as Doctor DuBois has written. It is complete, concise and readable. Being one of the pioneer workers in basal metabolism in this country, the author is a recognized authority on his subject. The work is even more comprehensive than its title implies. Over fifty pages are devoted to discussion of diseases of the thyroid touching on other aspects than those concerned with basal metabolism changes.

About one-third of the book is devoted to physiological metabolism, technical methods, etc., and the remaining two-thirds to changes in metabolism accompanying pathological states.

An author and subject index complete the book, which is recommended to the practitioner as a guide to indications for and meaning of basal metabolism estimations.

J. M. R.

Principles of Surgery for Nurses. By M. S. Woolf. 350 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1925.

The author in his preface promises a simple statement and explanation of surgical affections for the use of nurses, and in the twenty-four chapters of his book has in practically every instance carried this out admirably.

In the introduction a brief survey is given of many important historical data. The first three chapters are devoted to a consideration of micro-organisms and their effect in the body. This discussion is, in the main, very satisfactory. Why the section on burns and scalds and skin grafting is included here rather than in the section dealing with loss of tissue is less clear.

The chapters dealing with surgical diseases of the skeleton and accompanying soft parts are clear, but are possibly open to the criticism of being too comprehensive for the majority of those for whom written. This brings up the question of how much we should require of the trained nurse, and my criticism may here be without foundation.

Injuries and diseases of the blood vessels are well and briefly covered and the chapter on hernia is good; that on diseases of the alimentary tract seems, at least in places, beyond the scope suggested by the book's title.

Surgical conditions of the special sense organs, central

nervous system, and genito-urinary systems are well and, in the main, briefly handled. If more is given than the title would seem to demand, this is explained in advance in the preface.

The book is well written, written in a pleasing and easy style that should recommend it strongly to those for whom it was prepared. It shows careful preparation on the part of the author. His illustrations are usually such as to round out the text and are for the most part happily selected. It is a book that should serve well the nurse studying it and contains many suggestions in the well-executed summaries for such students who desire to pursue the subjects further.

P. K. G.

"Under the 'Panel System' existing in England," says the Ohio State Medical Journal editorially, "millions of British citizens pay a small yearly stipend, in return for which they secure medical care and treatment for the twelve months. Panel physicians have many hundreds of patients. Their salary is fixed. They have no further interest in patients than to 'get them out of their offices as quickly as possible.' The incentive to keep abreast of the times in scientific medicine has gone, for superficial service serves as well as thorough service. They cannot lose their patients; they cannot miss their income. As the final analysis, the English people have traded a small money consideration for a 'pottage of supersocial medical service.' The 'panel physicians' have attached themselves to a payroll and a large array of 'assigned patients. The physician who is conscientious, who wishes to give his patients the very best, cannot compete with the 'panel system,' which embraces most of the English population. He cannot become a 'panel physician' because he is unable to give the necessary time to each case. This may be why thousands of physicians are out of work in London."

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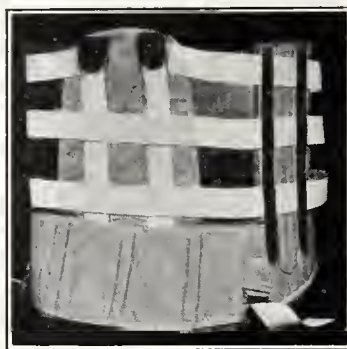
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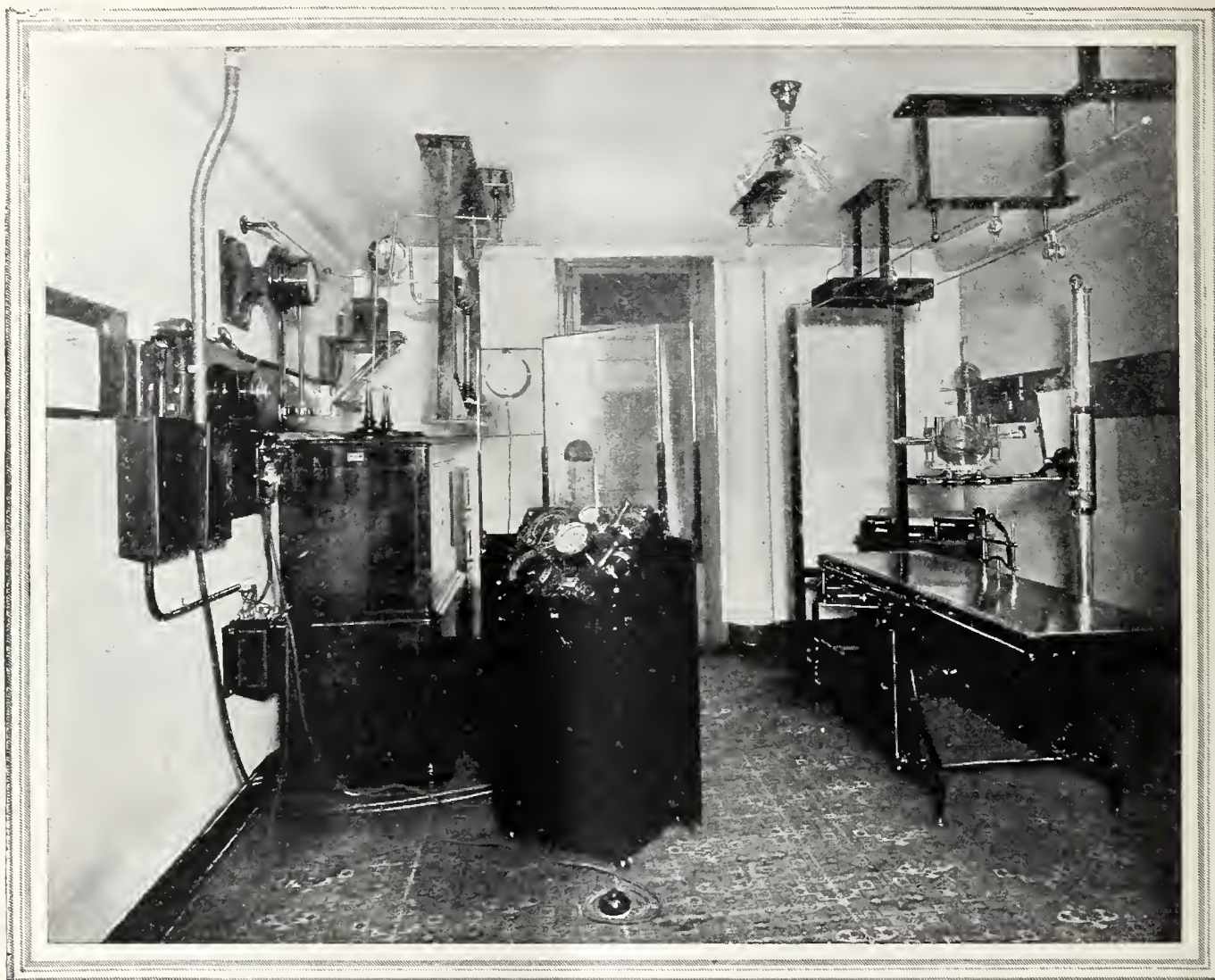
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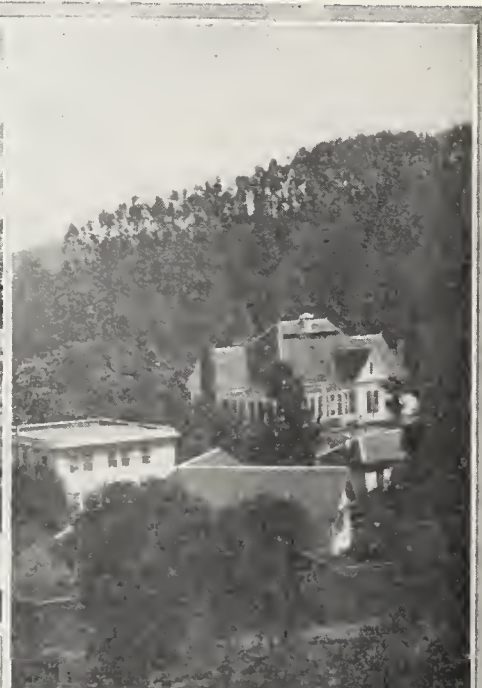
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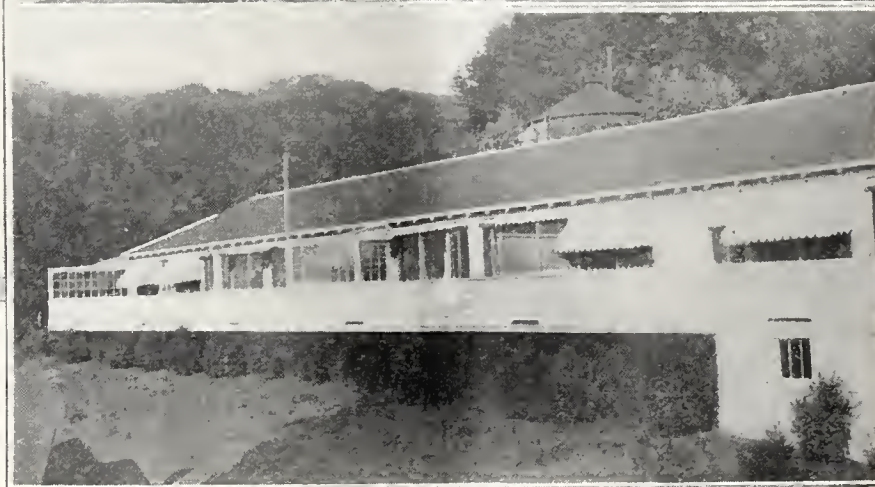
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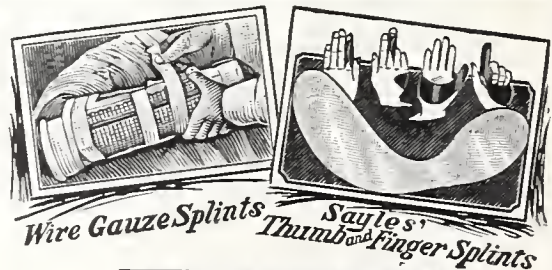
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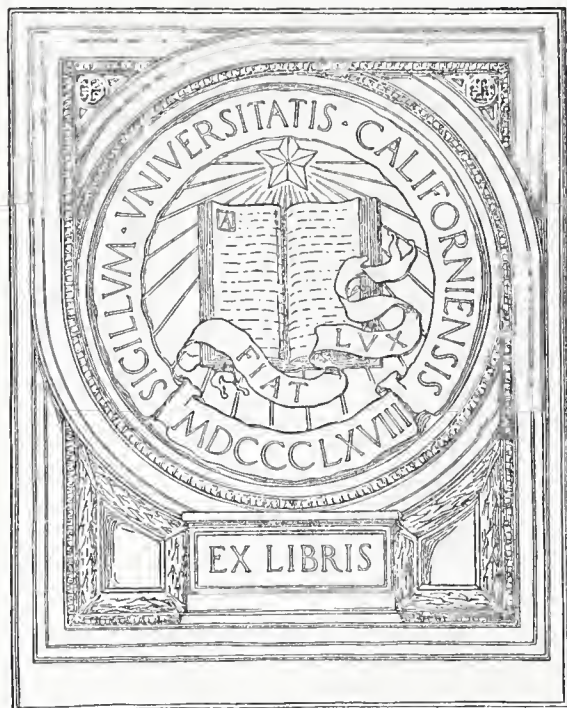
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JULY, 1925

No. 7

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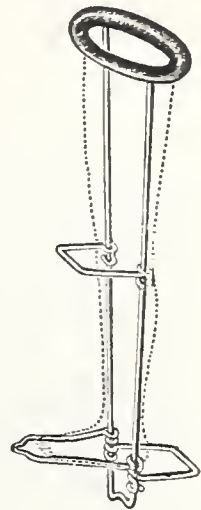
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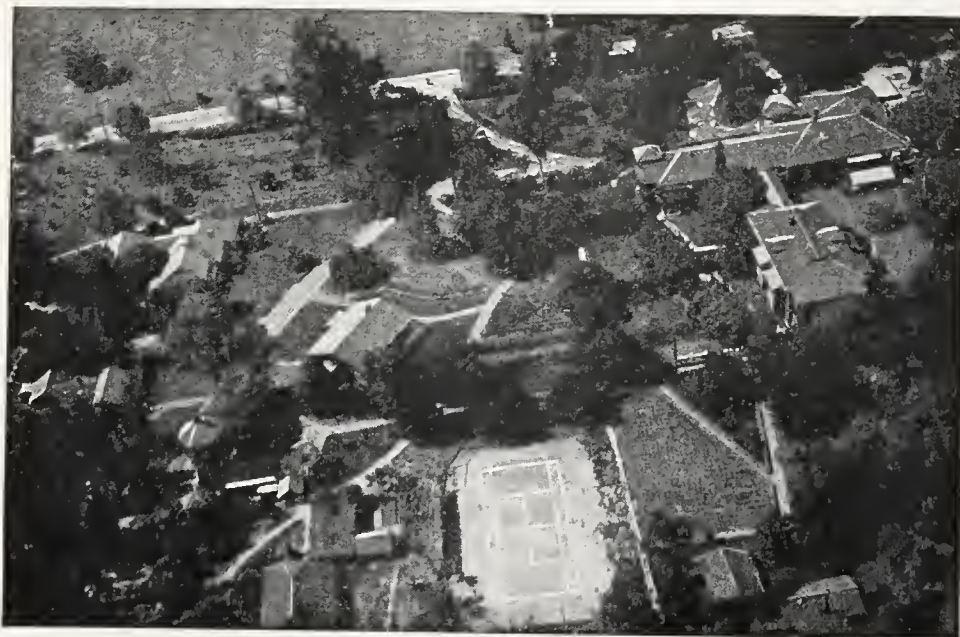
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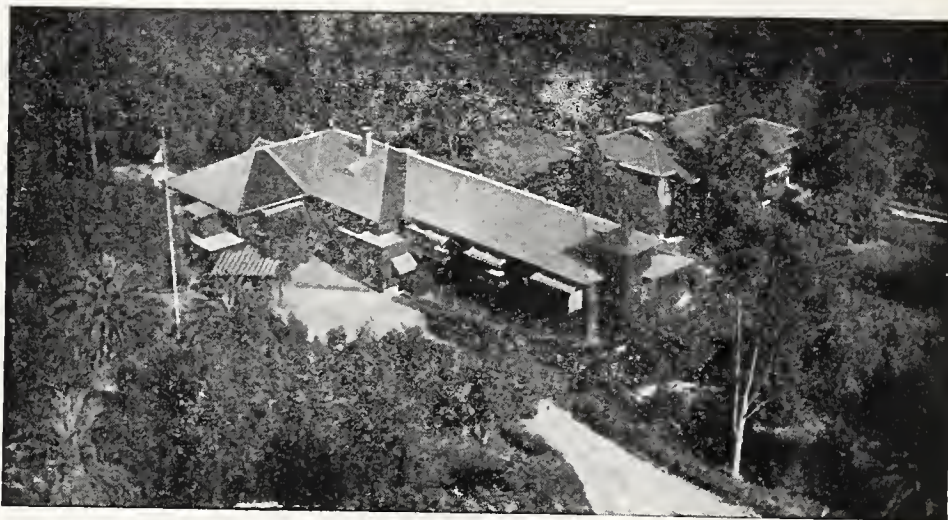
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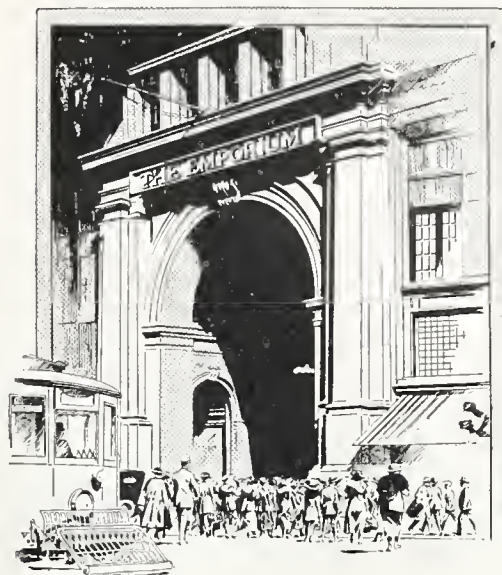
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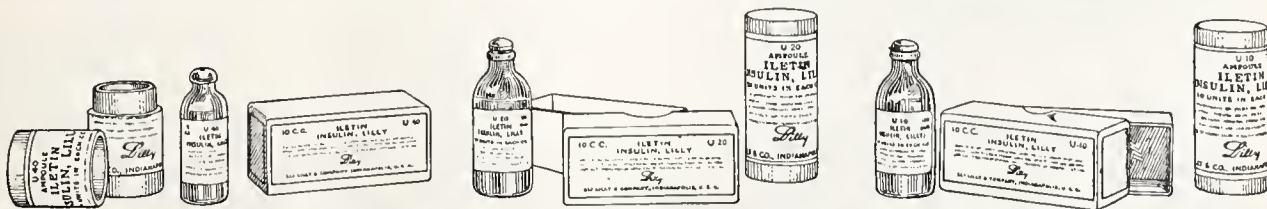
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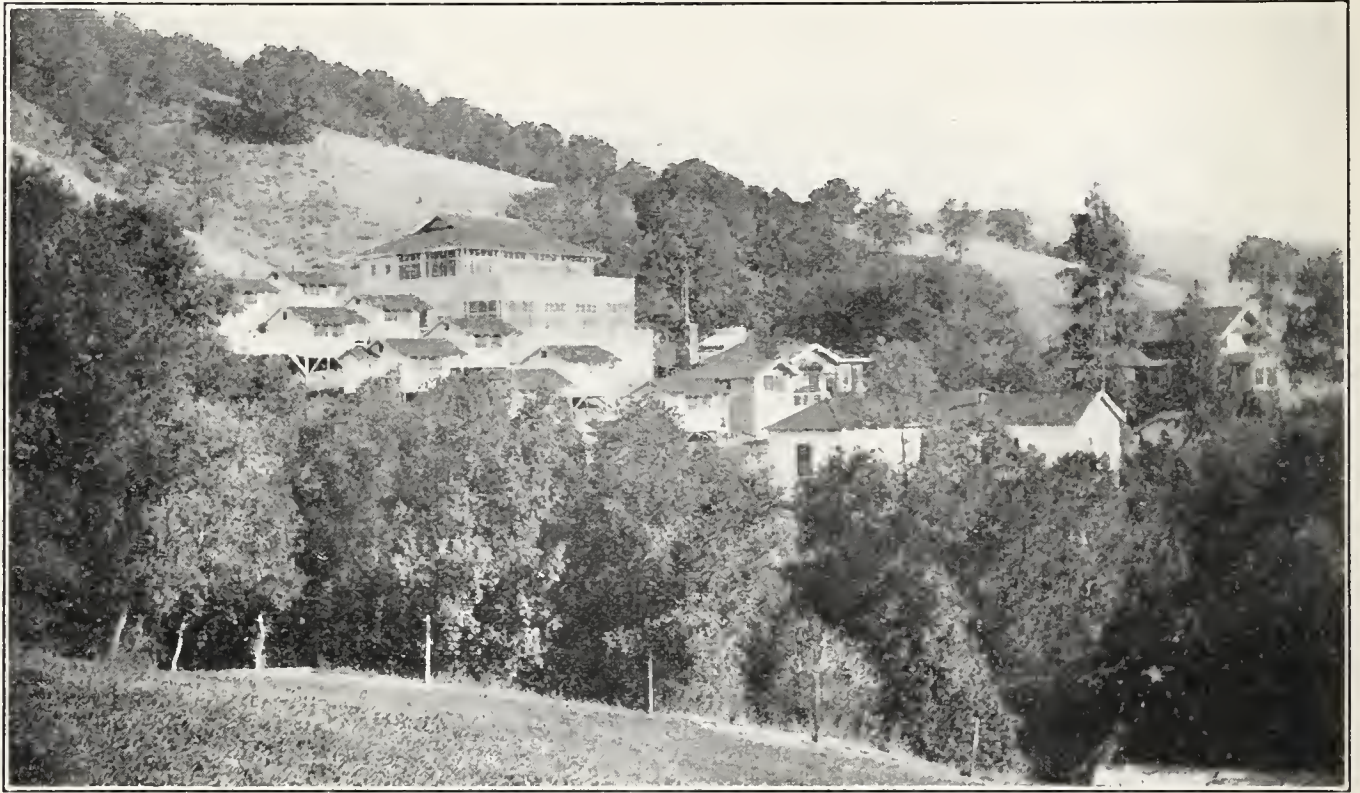
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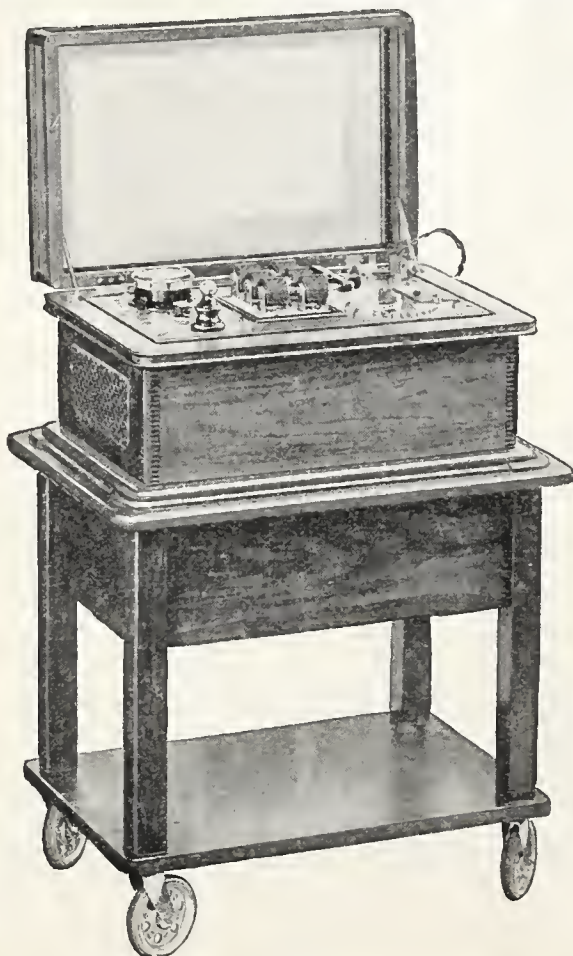
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Rabies Vaccine (Semple)—Anantirabic Vaccine (New and Non-official Remedies, 1925, p. 342), prepared according to the general method of David Semple (phenol killed). It is marketed in packages of seven syringes, each containing 2.5 cc. Cutter Laboratory, Berkeley, Calif. (Journal A. M. A., May 16, 1925, p. 1497).

Bromsulphalein (H. W. & D.)—Disodium Phenol-tetrabromphthaleinsulphonate—The disodium salt formed by the interaction of tetrabromphthalic acid (or anhydride) and phenol with subsequent sulphonation. It contains from 37 to 38 per cent of bromine. Bromsulphalein (H. W. & D.) is used as a test of liver function; the amount remaining in the blood stream after intravenous injections, as determined colorimetrically, is considered a measure of hepatic dysfunction. Bromsulphalein (H. W. & D.) is supplied in ampules containing 3 cc. of a 5 per cent solution. Hynson, Westcott & Dunning, Baltimore (Journal A. M. A., May 23, 1925, p. 1573).

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(Continued on Page 814)

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(Continued from Page 812)

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Hyperpnea as Method of Diagnosis—L. E. Grimberg, New York (Journal A. M. A.), undertook to try his method on patients suffering from purely functional conditions. He selected five patients with an established diagnosis. The cases were classified as hysteria, anxiety, neurosis, and psychoneurosis. All the patients were women, their ages ranging between 18 and 30. The results obtained are briefly reviewed. Hyperpnea produces in the neurotic, in addition to involuntary movements of the fingers, tetany, and emotional outbursts. In hysterical patients, the outbursts are identical to the hysterical attacks of such patients. In organic cases it increases the symptoms, and may serve to establish (in some patients) the organic or functional character of the condition. The method is of use in patients suffering from hysteria with major attacks or from epilepsy who are unable to give a clear description of the attacks. In such patients, the method will reproduce the attack. Hyperpnea should be used cautiously in patients suffering from thyroid disturbances.

More people die from chronic diseases than acute. The proportion would undoubtedly be even much higher than the mortality statistics indicate, if every death certificate were carefully made out and showed the chronic disease which is largely responsible for the fatal result as well as the immediate cause of death or the terminal condition. Bulletin N. Y. Academy of Medicine.



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Some Also Avoid the Penalties of the Prohibition Law—"The common exemption of the practice of the 'religious tenets of a church' is, of course, defective," says H. E. Kelly, member of the Chicago Bar, "because the law can give no fair or defensible preference to the religion of a church member over the religion of a person who is not a church member. Such a provision must be held to exempt the religious tenets of any person to the same extent that it exempts the religious tenets of a church. Some persistent quacks have attempted to avoid this type of exemption by incorporating themselves into a church society in order to carry on their business of healing for pay under the privileges of churches unrestrained by the law, but they have met insuperable barriers in the courts, which have not been overawed by mere church machinery."

"The Golden Rule is an excellent religion for a physician to live and practice by," believes Edward J. G. Beardsley (Journal New Jersey Medical Society). "It is

not always those that are physically ill that most need our sympathy and help. Can a cultist do as much for the victim of psychasthenia as can a sympathetic, understanding, and interested physician? Have we not all neglected opportunities for being helpful to those suffering with both minor and chronic ailments? Such conditions may not be vitally interesting to the physician, but the patient cannot be in a position to understand or appreciate that point of view. The medical cults have always existed in some form or other and probably always will. *We must, as a profession, see to it that they do not exist as a protest against our failure to meet the needs, actual or psychological, of the public.*"

When proper attention is given to the treatment of chronic ailments, the charlatans' field for exploitation will rapidly shrink. At present it is this class of patients who are the prey of unscrupulous healers of many cults.—Bulletin N. Y. Academy of Medicine.



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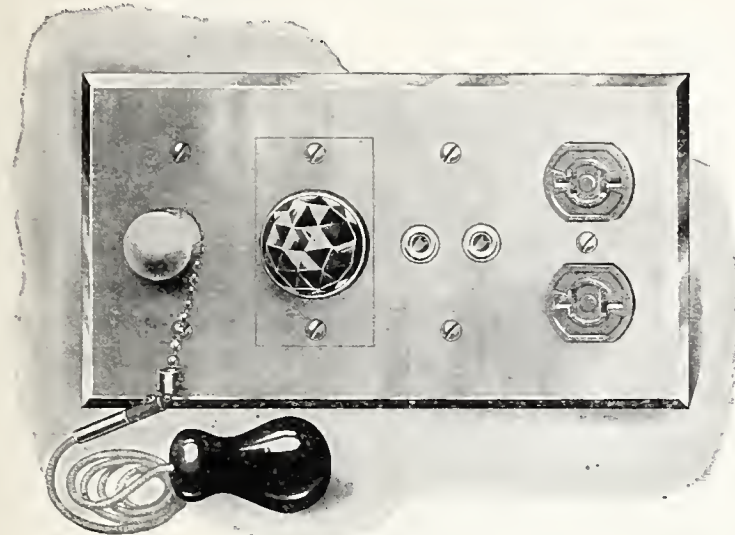
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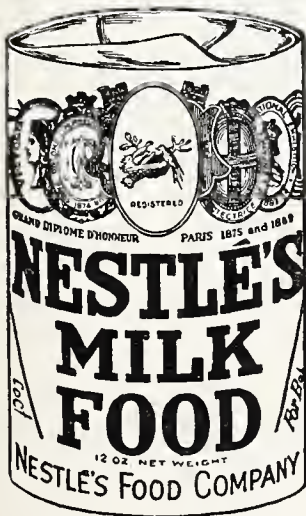
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All books received are promptly acknowledged in this column. Such acknowledgment is the only return California and Western Medicine feels obligated to render in return for the courtesy of the sender. Selected books believed to be deserving of comment will be reviewed solely in the interests of our readers. Our advertising columns are open to publishers of acceptable books for such further statements as they care to make.

Operative Dentistry for Children. A Textbook Dealing with the Prophylactic and Curative Treatment of the Teeth of the Child, Based Upon Experiences Gained During More Than Twenty-five Years Devoted to the Care of Children Exclusively. By M. Evangeline Jordan, D. D. S., Los Angeles and San Francisco, California, with 158 illustrations. Brooklyn, New York Dental Items of Interest Publishing Co.

Abt's Pediatrics. By 150 specialists. Edited by Isaac A. Abt, M. D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. Set complete in eight octavo volumes, totaling 8000 pages with 1500 illustrations, and separate Index Volume free. Now ready—Volume VII, containing 879 pages with 70 illustrations. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, \$10 per volume. Sold by Subscription.

Modern Surgery, General and Operative. By J. Chalmers Da Costa, M. D., LL. D., F. A. C. S.; Samuel D. Gross, Professor of Surgery, Jefferson Medical College, Philadelphia. Ninth edition, revised and reset. Octavo of 1527 pages with 1200 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, \$10 net.

1924 Collected Papers of the Mayo Clinic and the Mayo Foundation, Rochester, Minnesota. Octavo of 1331 pages, 254 illustrations. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, \$13 net.

New and Non-official Remedies, 1925, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1925. Cloth. Price, postpaid, \$1.50. Pp. 461+XL. Chicago: American Medical Association, 1925.

New and Non-official Remedies is the publication of the Council on Pharmacy and Chemistry, through which this body annually provides the American medical profession

with disinterested critical information about the proprietary medicines which are offered to the profession and which the council deems worthy of recognition. The book also contains descriptions of non-proprietary medicines which the council considers worthy of consideration.

In addition to a statement of the actions, uses and dosage of each product, many of these are arranged in classes, and these classes are introduced by a general discussion of the group; thus, the silver preparations, the iodine preparations, the arsenic preparations, and the biologic products are preceded by a thoroughly up-to-date discussion of the group.

A glance at the preface shows that, in addition to the description of the new drugs which were accepted during the past year, the book has been extensively revised; many of the preparations listed in the previous edition have been omitted and the statements of the properties of others have been revised to bring the descriptions in accord with present-day knowledge. Of particular interest is the revision of the general articles; thus, the article on endocrine products has been entirely rewritten to bring this chapter in accord with the series of articles on glandular therapy which were published in 1924 under the auspices of the council. A general article on medicinal dyes has been added.

A section of the book (brought up to date each year) gives references to proprietary articles not accepted for New and Non-official Remedies. This list, in conjunction with the book proper, constitutes a cumulative index of proprietary medicines which physicians may consult when some proprietary product is brought to their attention.

Physicians cannot dispense with the newer remedies that are being brought out, yet they can neither judge them on the basis of the manufacturers' claims nor have they the opportunity or time to determine their merits. For this reason every physician should possess a copy of the annual volume of New and Non-official Remedies which the Council on Pharmacy and Chemistry puts at his disposal.

Industrial Poisons in the United States. By Alice Hamilton, A. M., M. D., Assistant Professor of Industrial Medicine, Harvard Medical School, Boston, Mass.; formerly Special Investigator of Poisonous Industries for the U. S. Bureau of Labor Statistics. New York: The Macmillan Company, 1925.

Newer Methods of Ophthalmic Plastic Surgery. By Edmund B. Spaeth, M. D., F. A. C. S., Major M. C., U. S. A. Chief, Eye Clinic, Walter Reed U. S. Army General Hospital, Washington, D. C.; Clinical Instructor and Assistant in Ophthalmology, the Army Medical School, Washington, D. C. With 168 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut street.

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REX DUNCAN, M. D., Medical Director

Antagonistic Action of Posterior Pituitary Extract and Insulin—From work performed on diabetic patients, Robert C. Moehlig and Harriet B. Ainslee, Detroit (Journal A. M. A.), believe that pituitary extract injections improve the muscular asthenia to a great extent. This is true despite the fact that the patients, for the purpose of the work, are not placed on a diet. Patients with hypopituitarism suffer from asthenia, and fatigue is easily induced. The opposite is true in cases of hyperpituitarism. Posterior pituitary extract injected into normal rabbits produces, as a rule, a slight rise in blood sugar. Posterior pituitary extract, when injected simultaneously with insulin, prevents the fall produced by the latter. Posterior pituitary extract, injected during insulin hypoglycemic convulsions, produces a rapid rise in blood sugar, with subsequent recovery of the rabbits. The point of attack of the pituitary extract seems to be in the periphery: viz., the skeletal muscle metabolism.

Quality of Nitrous Oxid Manufactured in the United States—G. W. Hoover, Washington, D. C. (Journal A. M. A.), reports on the investigation of nitrous oxid made by the bureau of chemistry. The survey of this industry included an examination of raw materials, the collection and examination of representative samples of the gas as found on the market in different sections of the United States, and interviews with surgeons, dentists, and anesthetists. The findings, though gratifying in the main, show the need for a close and continued watch over the quality of nitrous oxid being marketed. The production of this important anesthetic in the United States is in the hands of comparatively few manufacturers. It is a highly specialized industry, and there is every reason to believe that safe nitrous oxid is being marketed. This conclusion was borne out by the present investigation of representative samples. It is particularly gratifying to the bureau that none of the samples examined contained enough impurities to warrant action under the Food and Drugs Act. While a few samples showed the presence of perceptible traces of nitric oxid, none contained harmful quantities.

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For further information address

ROBERT A. PEERS, M. D., *Medical Director*
Colfax, California

CALIFORNIA AND WESTERN MEDICINE

VOL. XXIII

JULY, 1925

No. 7

SOME MEDICAL CONVICTIONS AND MEDITATIONS *

By GRANVILLE MACGOWAN, *Los Angeles*

THIS year your president will be satisfied in directing your attention to a few subjects with relation to our internal affairs, our life as a medical body, which he believes are worthy of your attention:

Permanent quarters for the California Medical Association; attitude of the profession toward what constitutes the practice of medicine; problems of industrial medicine; progress in the treatment of internal diseases; the Eighteenth Amendment; Revenue Act of 1924.

chimerical—stand fast; be true; be watchful. This country is one of party government. If the salvation may not be found in one or other of the two older political parties, then it will not be found outside of them. It will not be found in Communism.

This year your president will be satisfied in directing your attention to a few subjects with relation to our internal affairs, our life as a medical body, which he believes are worthy of your attention.

We are gathered here today in this beautiful valley of the Yosemite, the wonders of which were first portrayed to the world by an humble medical man, serving in a semi-military capacity. As we look about upon waters, cliffs, the great forests and the lush grasses of the meadow land, we awaken to the fact that we are isolated from the great cities—away from the hum of trade—we are in the country, where we can relax and enjoy ourselves and breathe the pure air. How many of you think that it would be delectable to have our own place in the country—to have a home to which we could go, where we would be free for a season each year from the inroads of the outside world—where we could be among ourselves, and have a place that belongs to us, which might be used by ourselves during our lifetime and kept intact for the benefit of the California Medical Association for many decades—a place of recreation and a place where we could hold our meetings and transact our annual business away from the hurry and crowding of our busy marts? There is among us one man—a marvelous business man for a physician, one who thinks of the comforts of the individual members of the California Medical Association—one who thinks in terms of the welfare of his own local society, and who has by precept and example and by persuasive ways built up the personnel of the Los Angeles County Medical Society. Dreaming of a home, an abiding place for this county society, when we did not have a dollar for it, he has today very nearly approximated the ideal which he set out to attain, and in this he has had pretty nearly the united support of the members of his society. He has dreamed further—he is still dreaming. We do not care to wake him up, because we wish to see his dream come true. He has interested with him a number of the far-seeing men of the association who desire to secure, at some convenient point in this state, both for those who live in the northern section and those who inhabit the southern portion, a place where we may have our home—a reasonably large place, either with a beach that belongs to us, or woodland with flowing streams, where we may live in tents, where we may have a simple and capacious hall, to which we can invite learned strangers to give to us, while we are entertaining them, some of their precious knowledge—not in a hotel, nor in some caravansary, but in some home of our own. Your President thinks that this is a very vital thing for the welfare of the California Medical Association, and he recommends that each member talk and work towards its achievement.

ATTITUDE OF THE PROFESSION TOWARD WHAT CONSTITUTES THE PRACTICE OF MEDICINE,
WHICH IS GREATLY CHANGED FROM WHAT IT WAS FIVE YEARS AGO

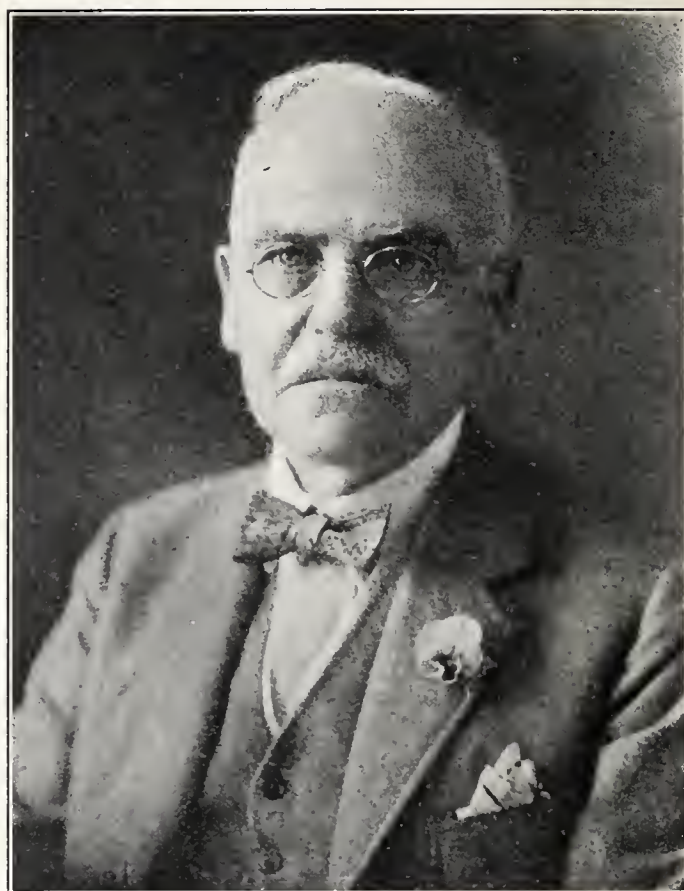
Believing as we did when an organized effort was made to cheapen the profession of medicine and lower the standard of the preparation required, in the struggle for the protection of the interests of the

* Address of the President of the California Medical Association, Yosemite, May 18, 1925.

people, such as we understood it, we sought to control political opinion in two bitterly fought campaigns, and in the end we lost our battle, and we lost it for two very potent reasons—one, because there is a very large Pharisaical element among us, an element so greatly impressed by its own present social and professional perfection that it feels its own professional interests to be entirely protected by its intellectual superiority, and that it is not incumbent upon it to guide or influence the public in general for the public good. The second reason was the unwillingness of the average practitioner of medicine to assess himself to pay for the prevention of the success of the chiropractic and osteopathic bills. These latter groups, being well supplied with money and the enthusiasm of the forbidden, gathered up their votes and put their measure through. So we are today living in a regime of medical freedom in California. No one knows exactly what constitutes medical practice; it is not definitely and succinctly defined. Apparently, under present conditions anyone can, without legal danger, prescribe for the sick. The public is beginning to grow into the position where it makes no definite distinction between a learned physician who has with great care and sacrifice of time and money attempted to perfect his art and the charlatan who had never seen the inside of any real medical school, nor listened to the teaching of any real physician. We have, as a body, to a large extent taken the position of our Pharisaical friends, that this is a question which concerns the public itself. Thus we have, as a body, while waiting, unwillingly and with grumbling, accepted the lowering of medical standards. As individuals, some of us have not felt like adopting this attitude. Although the public has shown very clearly by its votes that it does not desire our assistance, yet we have believed that, perhaps, the populace will presently awaken to the errors into which it has fallen, so that in matters of public health, through the League, we endeavor by persuasion and indirection to render the opposition as innocuous as possible, and we hope to accomplish by education, through our organ *Better Health*, which is now a regular journal to be found on all news-stands, what we failed to do by strenuous political combat.

THE DISSENSIONS IN OUR RANKS, BECAUSE OF
THE PROBLEMS OF INDUSTRIAL MEDICINE,
STILL SEETHE

There is much dissatisfaction as to the present condition of the enforcement of the medical side of the Industrial Compensation Act in the state of California. This is again a question in which the interests of the working man and of the physician are pitted against those of the employer and the insurance carrier, and its intricacies are such that it is very difficult to understand and perhaps even more to alleviate. The attitude of some of the members of the association in this matter is very far from ethical, but it appears to be within the law, and if we do not like it as it is, our remedy is to have the law changed, because this association does not, as a few of its members seem to think, possess any dictatorial power as to who shall be employed upon the panels, or to designate when and how injured people



GRANVILLE MACGOWAN
President C. M. A. 1924-1925

shall be looked after. This brings us around again to the question of attaining sufficient political power, as individuals, to have attention paid to our requests as a body. It is in this way, and this way only, by indirection, that our influence may be felt by those who make and those who enforce our law.

We have at the present time a Committee on Industrial Practice which, under the chairmanship of Dr. Hyman, has a plan which your president believes will get you somewhere, if you adopt it. But this plan requires the action of the medical men interested in industrial medicine as a unit, and if there are not too many among you unwilling to deprive yourselves of the pleasure of finding fault and to learn to program for the general good, or if there are not too many Brookharts or La Follettes in our ranks, there is a good chance that this matter will be settled, perhaps, some time before the youngest member of the association dies, should he live out his life expectancy.

It is a common saying, said so many times that it almost becomes trite, that there has been little progress in the medical treatment of internal diseases, as compared with the great changes wrought in pathological conditions which are amenable to the interference of surgery. But this only appears more striking because it is more spectacular.

To the genius of Louis Pasteur, who was only an honorary doctor but the most marvelous chemist of all time and the best friend medicine ever had, our profession owes its ability to accomplish its surgical miracles. It is he who made it safe to change the human frame by alteration, and to mend and darn its tissues without fear of infection and death. If

the mechanical skill is sufficient and enough care is taken to ascertain before operation that the subject has a reasonable metabolic index, marvels may be done in a surgical way, almost without any mortal risk, which were entirely impossible before the era in which the development of the twin sciences of stereo-chemistry and bacteriology were given to a skeptical and not very willing medical world. The research work of this school has in the last thirty years resulted in the discovery of a number of relatively specific remedies which are the pride of our professional life—antitoxin, the active agents of the pituitary and thyroid, and many others.

Along the lines of chemical research, following up the possibilities of the action of the dye stuffs as therapeutic agents in bacterial diseases, worked out chiefly by Ehrlich, Raisus and the Brady Urological Institute, we have been furnished with remedies which makes the life of a properly educated physician of today one of not only great value and usefulness, but also one in which he may feel very proper pride, because although he may not be able to conquer, overcome and heal each and every disease to which the human frame is liable, yet so much has been accomplished and the amount of guesswork so greatly reduced, that modern scientific medicine has much more to it than a college yell.

Many preparations introduced with fervor have fallen by the wayside through the premature claims of those who have discovered them, they not being satisfied to apply, as did Pasteur always, the rigid proofs which were necessary to convince the scientific mind which should always be ready to criticize its own work as freely and as harshly as it criticizes the work of others.

It has been rather well known for a number of years that colloidal preparations of certain metallic elements other than arsenic and mercury have a very active therapeutic influence upon bioplasmic changes. An English syphiliologist, a man of very great ability, introduced into medical practice quite a few years ago a preparation of colloidal sulphur which appears to possess to a considerable extent the power of causing the oxidation of minerals retained in the organs of the human system. MacDonagh firmly believes that intramuscular injections of this substance in those cases of syphilis which obstinately refuse to improve beyond a certain point under mercury or arsenic in any form will, after the moderate use of intramuscular injections, become once again susceptible to the therapeutic action of the luetic trinity of mercury, arsenic, and bismuth. The proof of this has never been sufficiently and accurately demonstrated, for these injections are, in most instances, extremely painful and patients often refuse to continue them sufficiently long to decide their value. It was noticed very recently, I think, purely empirically and perhaps accidentally, that in those cases of syphilis in which there are dermatitis of arsenical origin, they can be overcome or prevented during the prolonged use of arsphenamine or neoarsphenamine by the intravenous use of solutions of sodium thiosulphate, a preparation of sulphur which acts as a colloid. No danger apparently follows these intravenous injections, and it is believed and is reason-

ably probable that the presence of the sulphur in small amounts in an assimilable form causes oxidation and disappearance of the minerals which are, after long-continued use, deposited in the internal organs of the body. We furnish an agent that is lacking in the system, and in its presence the surplus of these other minerals is disposed of by the bio-chemistry of the body.

The latest addition to our pharmacopeia is the use of hexyresorcinol for renal suppurations. This preparation, we have found in my office to be very potent, and it looks as if Doctor Young's claims are well founded. This is really only another form of colloidal sulphur. There is no reason why the physician should rest under the imputation of practicing the science of medicine by guesswork alone. It is true, after all, that the chief thing which marks the great physician from those whom he works beside, is the knowledge of human nature—the ability to inspire hope and to drive away gloom and fear. But in addition the psyche must be assisted by some remedies which actually have therapeutic potency and furnish elements much needed by the human laboratory. It is certain that within my lifetime, the number of those remedies upon which we can really depend for relief of our patients in their illnesses has been marvelously increased. The chemist is always on the watch.

There is a subject of general interest—I might almost say of paramount interest—at the present time in the United States which I desire to bring before you. It is one that I approach reluctantly and more or less with timidity because I feel that what I am about to say may perhaps offend some of those whose opinion I value most highly, but nevertheless I cannot see, without protest, our great profession lending itself to what appears to be a civic wrong, the results of which are grave now, and give promise of becoming extremely iniquitous and perhaps disastrous to our nation.

A few years ago, by a combination of well-meaning fanatics, with heartless industrialists whose sole god is that of money, the celebrated Eighteenth Amendment to the Constitution of the United States was put over in the absence from the country of approximately four million young men who were voters. The fanatics, some of whom with most virtuous intent, thought they were acting for the best interests of the rising generation; others, professional uplifters, swayed by the hope of gain and the itch to pose as reformers and to have their names continuously blazoned in the limelight of the daily press, by assiduous work at the polls, often by measures of duress in their dealings with legislative bodies which, if employed for the passing of ordinary bills, would have been regarded as criminal, contrary to public policy and probably punishable by sentence to jail, passed the amendment and a glorious jubilee was announced. The method was rotten, but many believed the end justified the means, and that alcohol once removed from the market place and made difficult to obtain for any purpose and impossible to obtain for beverage purposes would prove to be a great saving influence upon those who had never

been subject to its use, and that crime would be definitely decreased and poverty abolished.

The alliance made with many great employers supplied the money needed for this object, and also in no way decreased the political power necessary to sway the legislatures. Many of us who were not naturally pessimists but inclined to optimism believed that perhaps the demon rum would be permanently abolished and that the high hopes of the advocates of total prohibition would be realized. The governing bodies of many medical associations voted upon this bill approved it and gave it their sanction. But alas! we knew but little of the temptations that such a law would present to those whose duty it became to enforce it. We had no idea of the enormous leverage which it gave to blackmail. We did not understand that so many young men of great physical courage, taught by the war to delight in adventure, would take up the trade or profession, more or less openly, of smuggling and manufacturing intoxicating alcoholic drinks and their distribution in cities, towns, villages, and rural districts. We had no means of knowing how shrewd, unscrupulous business men, forming combinations with courageous, fearless and murderous banditti, would let loose upon us a perfect flood of vilely concocted alcoholic beverages manufactured in Europe or in adjacent countries, inundating our seaboard and flooding the lands nearby our national borders; nor could we foresee to what extent, through connivance with national, state, county, or city officials from one end of this land to the other with these dealers, no one who has the price anywhere from Maine to California, from Canada to Mexico, need be without alcoholic drinks if he has the will to have them.

Gradually the morale of our peace officials has been undermined by the temptations to which it is subjected, so that today the surest way to obtain liquor which is measurably fit to drink consists in forming an indirect alliance with those who are named by the national and local authorities to enforce this law. In witness whereof, we have in the last three years, week after week, seen the dismissal of prohibition officers, policemen, sheriffs, and constables, and in many instances these forlorn individuals who have fallen under corrupt influence set in motion by the Eighteenth Amendment have been committed to the national penitentiaries for a crime which found its excuse only in the fact that "everybody was doing it."

Within these three years I have traveled very extensively in the United States. Nowhere have I seen among the kind of people with whom I would naturally come in contact, and who are exactly the same kind of people who are present here at this gathering, in their houses, in their clubs, and in their learned societies, any absence of alcoholic liquors, the supply of which was unquestionably, in the majority of cases, of illegal origin.

It has been my privilege to attend many social gatherings and often my painful experience to notice the character of drinking that exists among the sons and daughters of the well-to-do—in the dances, private or public, in the country clubs and places of

amusement, where boys think it smart to have a flask upon the hip and to use it and offer it to the young girls. And many of the girls themselves have these flasks which are also filled and used. It scarcely requires such observation, because every department store in the land, every dealer of silverware, every druggist, exhibits a vast number of flasks for the holding of illicit liquor to be taken to gatherings where the law may interfere with its being served openly.

At this time our government is engaged at sea in what is practically a civil war for the prevention of smuggling of alcohol—a civil war in which the navy and army are employed for the enforcement of the law; two bodies in which the sentiment, from the highest official to the most recently enlisted man, is almost totally against prohibition and from which it is idle to expect a heart-stirring enforcement.

It is true, or seems to be, that there is less public drunkenness; it is true, or seems to be, that the working class, the mechanics and the day laborers have more money for their families, because the price of alcohol is beyond many of these men, but so high has the daily wage risen in the last five years in America in the building trades especially that, I am told by employers, in many of the shops and factories of the land the bootlegger is a well-recognized individual within their walls and one whom it is impossible for the employers to expel without danger of incurring trouble with their discontented working men who, deprived of their really comparatively innocuous drink of mild beer, feel that their government is not one that cares for the welfare of the working man or his comfort and that they are not on an equality with the rich, who are able successfully to defy the law which bears the name of Mr. Volstead.

This has gradually given rise to an attitude of receptivity by these men to the doctrines of Communism, the agents of which are extremely active, and lose no time in fostering this discontent and sowing in this fertile soil the seeds of trouble.

I have no patent to advocate. We cannot return to the old order of things. The open saloon was a horrible political evil and should not under any circumstances ever be restored. But an iniquitous enactment, as is this amendment, which has made so definite a class distinction in our daily life, and so potently sows the seeds of discontent among the proletariat, and fosters pernicious habits among those who, by reason of their education and social position, will, in the next generation, lead in government and business and installs hypocrisy as a constant feature of our daily life, opens the way wide and full to the encroachment upon our personal liberty by other sumptuary laws, which the cruel Loyolas and Torquemadoes, the austere Albigenses, and the grim and merciless Puritan Sam Parris' witch burners, who exist all around us today as full of zealous and inhuman fanaticism, as ready to satisfy their sadistic natures as they did in the seventeenth century, would make use of every other dear-bought right which we have under our constitution.

While we seem to do the working man good by removing from him the opportunity at will to become a drunkard, we have offset this by the gradual

undermining of our civil honor and respect for law because we lead in our lives a continuous lie and will eventually lose the power of speaking the truth on any matter, and while we count the additional dollars in our savings bank, we forget it can be but little benefit to the individual or to the nation to gain a whole world and to lose its soul.

Now I say, gentlemen, that in the medical conventions which I have attended in many different cities of the Union, in the labor conventions, the proceedings of which I have been familiar with by reason of affiliated interests, in the political conventions of all parties in all parts of the country during the past three years, there has been no end of the supply of liquor that might be used and most of it illegally obtained; and I have noticed among our own people many drinking whom I know I never saw drink before in the old days.

We should not behave towards this very important question as if we were congressmen, because our opinions should not be throttled by the fear of punishment at the polls by the active minority. We should at least be able to say that our lives and actions are an example of our preaching!

I do not recommend and I do not ask that any official action be taken by our association, but I hope that each member shall go home and, in meditation, take earnest communion with himself to determine if the cause of prohibition is worth the price which we are paying.

And finally I have another subject which should be of great interest to you and of great interest to any learned body, the members of which gather together for the sake of improving their knowledge and skill in their respective professions from time to time in conventions held at some distance from their place of residence. You who make income-tax returns have learned with distaste and disgust within the past year that no allowance is made by the bureaucrats in charge of the levying and collection of the income tax for the expenses incident to the attendance of such conventions. The ruling of the department has been that those who are engaged in trades or business should have a per diem for their expenses while away from their homes in attendance on such conventions and for the actual transportation charges, but this is not allowed to doctors, lawyers or architects and several other professions, whose gatherings are looked upon by this department as intellectual junkets, pleasure trips, or social relaxations having no value near or remote to the government.

This ruling of the department incensed your president, and he has been largely influential in having your executive council instruct our attorney to draw up a law to be brought before the next congress for the removal of this defect. Your officers will endeavor to secure the co-operation of every incorporated society of regular physicians in the republic. The law is so drawn that it will cover the same question in meetings of other learned associations.

Following is the law:

Amend Section 214 of the Revenue Act of 1924 (a) (1), as follows:

Section 214 (a). In computing net income there

shall be allowed as deductions: (1) All the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade, business, *or profession*, including a reasonable allowance for salaries or other compensation for personal services actually rendered; traveling expenses (including the entire amount expended for meals and lodging) while away from home in the pursuit of a trade or business, *or profession, or in attending professional conventions of the profession of which the taxpayer is a member.* (The words in italics comprised the proposed amendment.)

I thank you for your consideration in electing me your president for the year 1924-1925 and for your kind consideration, rendering the filling of this office a pleasure instead of a task. I wish my successor as happy and as pleasing a year in office as I have had. His year cannot be so instructing as has been mine, for he has been familiar as a member of the council with the machinery required to keep the association's business affairs in function which I was not, and it is my humble opinion that it is from this body, the council, that presiding officers of the society should always be drawn.

Brack Shops Building.

The Use of Physostigmin in Abdominal Distention—

The use of physostigmin in abdominal distention was studied by Hayes E. Martin and Soma Weiss, New York (Jour. A. M. A.), in non-toxic cases in which abdominal distention followed laparotomy, surgical shock, early intestinal obstruction, or injury to the central nervous system, and in toxic cases, in which the condition was associated with peritonitis or general toxemias, such as pneumonia or long-standing intestinal obstruction. In every case various simple measures, such as gastric lavage, enemas, turpentine stipes and colonic irrigation were employed when distention occurred, and physostigmin was not used unless those measures proved ineffective, the purpose being to learn whether physostigmin is capable of relieving these patients. All the patients who received physostigmin were in a serious condition, and all manifested alarming symptoms. All of the sixteen patients embraced in the group of non-toxic cases of abdominal distention were completely relieved of this distressing symptom by the injection of physostigmin. The fifteen patients embraced in the toxic group were benefited but little or not at all. The results of these experiences indicate that the drug should be administered in doses sufficient to induce its characteristic therapeutic effect or until the occurrence of systemic actions indicates that the limits of safe dosage have been reached. Physostigmin is a useful drug for the treatment of abdominal distention in non-toxic cases, especially. It is less useful in cases of the toxic type. It has fallen into disuse mainly because of the employment of insufficient doses, partly, perhaps, because of the failure to distinguish the type of cases in which it is more effective (non-toxic type) from those in which it is less effective (toxic type). The effective dose of the salicylate or benzoate, in cases which do not yield to simple measures, is from 3 to 4 mg. (from 1/20 to 1/16 grain) injected intramuscularly. Such a dose may be repeated once after an hour if the first does not induce any systemic effects, and it may be repeated three times (at least) at intervals of three or four hours if there are no symptoms which indicate that its systemic effects persist. The general condition of the patient and his behavior toward the drug must be observed carefully and must serve as a guide for the repetition of the dose. The dose required for those patients who respond to simple therapeutic measures, such as rectal enemas, has not been determined.

Jud Tunkins says patent medicine ads are so attractive that it makes a man who has his health feel like he was missing something.—Washington Evening Star.

AS THE LAYMAN SEES US*

Cultural Education in Medicine, Specialism, and the Distribution of Physicians

By EDWARD N. EWER, M. D., *Oakland*

CULTURAL education in medicine, specialism, and the distribution of physicians.

Cold science, effective but not always convincing, has come into nursing and medicine, as sentiment has been squeezed out. It has been remarked that, in the beginning, medicine was all art and no science, while now we are trying to make it all science and no art.

MOST of us who have been practicing medicine for a considerable number of years are sometimes troubled at an apparent change from high regard to something like querulous criticism on the part of the public we serve. There is an impression that the esteem in which the medical profession was once held has suffered in recent years. We find laymen here and there addressing medical men on such subjects as *The Layman's Impressions of the Medical Profession*; *What Is the Matter With the Medical Profession*, and like topics.

Conscious of progress and rectitude, we wonder wherein we have fallen from grace. The passing of the old family doctor, revered in story and song, has been the regretful theme of addresses and writings until it almost brings tears to the eyes. Thus do the humanities tug at the heartstrings, and cloud the vision, till progress and scientific achievement are lost to view.

The office picture of the bearded doctor in midnight vigil at the cot of the dying child, hand on chin in troubled thought, doing nothing, but breathing sympathy, had a fine human appeal. Bring the scene up to date, and what would the picture be? White-garbed figures, an impersonal nurse or two, and aspiring needles ready to jab into the infant's spine—efficiency, action, but repelling, a life jerked back from the brink perhaps; but roughly. Cold science, effective but not always convincing, has come into nursing and medicine, as sentiment has been squeezed out. It has been remarked that, in the beginning, medicine was all art and no science, while now we are trying to make it all science and no art.

Those fortunate individuals who have been blessed with cultural influences in their early surroundings, and especially in their educational advantages, still make conspicuous successes by applying their science clothed with human interest and sympathetic concern. Do we wish to encourage this character-forming influence in medical training, or is the whole world becoming so materialistic it is not worth while? Can we be educated and neglect the humanities? It has even been said the quacks get closer to the people than do the physicians; though cultural training, Heaven knows, has nothing to do with this.

One professor of philosophy said: "The satisfaction that many of us laymen get out of going to quacks is, primarily, the comfort of being treated like men instead of like incurious animals. An intelligent layman, in impatience with what he calls the intellectual selfishness of physicians, has recently declared, 'quacks know men, but not medicine; physicians know medicine, but not men.'" Certainly the obligation rests with medical educators to do everything possible to prepare their pupils, to the end that the effect upon the public will enhance the prestige of scientific medicine. The individual graduates owe it to their profession to give careful thought to this phase of their contact with the world.

Dr. John J. Abel says: "There should be in research work a cultural character, an artistic quality, elements that give to painting, music, and poetry their high place in the life of man." A fanciful way of putting it, but it conveys the idea I have in mind.

The people get their misinformation about scientific research in devious ways. Much of it is furnished by the anti-vivisectionists and the other antis. Just now a sensational novelist has furnished a good dose of it in "Arrowsmith." Thousands are reading it and thereby doubtless getting very fixed ideas of the unworthiness of scientists in general. In this novel all the characters who are credited as true scientists are given rather unpleasant personal attributes. Gottlieb has no heart or sympathy, his experimental controls must be carried out relentlessly, whether a number of human beings are sacrificed in the experiments or not. Sondelius has a heart, but he is a sort of roughneck, boisterous, drunken, and obscene. Martin Arrowsmith could have been handled more gently, but scenes of drunkenness and gambling are introduced to mar his good life work. Terry Wickett is cynical and grouchy.

On the other hand, all the characters in the novel, like Tubbs and Holabird, who are given credit for any refinement at all, are made fun of and depicted as namby-pamby, pink tea scientists, using their positions for personal social advancement. One gets the impression that the collaborator of Sinclair Lewis, who furnished the medical stage business for the book, must be a misanthrope with an axe to grind because of experiences in the McGurk institutes of the country which have not been to his liking.

Garrison calls attention to the fact that the century which saw the beginning of scientific medicine "was the culmination of an age in which the Greeks reached a degree of civilization and a supremacy in

* Inaugural address as President California Medical Association, delivered at Yosemite, May 18, 1925.



EDWARD N. EWER
President C. M. A. 1925-1926

philosophy, lyric and dramatic poetry, sculpture and architecture, which has not been equaled by any people who came after them. Never before or since had so many men of genius, the contemporaries of Hippocrates, appeared in the same narrow limits of space and time. Hippocrates gave physicians the highest moral inspiration they have, and he crystallized loose knowledge into systematic science." Thus did a period, during which cultural knowledge reached its acme, bring about the very birth of scientific medicine, and provide it with a code of ethics, than which we have no better today.

Of course there has never been a time in history when medicine and medical men have been quite free from criticism, and their activities even caricatured. Perhaps our hypersensitiveness is bred of our irritation at the apparent lack of applause at the wonderful fruition of the years of *experimental science*. These years are few in number, compared with the centuries of study by *observation*, or as Claude Bernard called it, *passive science*.

In our strenuous efforts to bestow upon a more or less unwilling world the benefits of recent progress, we have interfered with the tranquillity of our smug parasites—those greedy pests that live on the fringe of decent medical society and at its expense. I refer to the myriad frauds which have wilted a little in the sunlight of our propaganda for reform. We cannot entirely destroy them. Each new discovery fertilizes them into rank new growth.

For instance, discovery of a few physiologically active glandular principles has stimulated the busi-

ness of marketing, through medical channels, most of the messy stuff in the abattoirs, which people could not in any other way be persuaded to eat. These endocrine vendors mix up glands and their principles like Hungarian goulashes, make them into tablets, and men who have spent seven years in medical college are expected to fall for this shotgun endocrinology.

We have killed about half the patent medicine evil and have made enemies doing it. At first the periodical and daily press were none too pleased with the decline in patent medicine advertising; but later they rallied to the cause of honest medicine, and now make valuable allies.

We have valiantly fought the cults and quacks and have been roughed a little. They seem to thrive on opposition, and if we turn away the spot-light they will die out or grow into something useful and be absorbed, as have their long line of predecessors.

At present, there are under discussion two other subjects closely related to each other, as well as to the attitude of public criticism. One is specialism, and the other the failing supply of rural physicians. Both these matters rest upon the functioning of inexorable economic laws, which no sudden action by organized medicine, examining boards, or medical faculties can put aside.

The subject of specialism has been attacked by many writers during the last few years. It is curious to note that all straddled the question. They expressed a general feeling that there was something amiss, but none condemned the general practice of medicine, and none had the hardihood to condemn specialism as such. There was much concern over the relationship between the general practitioner and the specialist, and this was shown in the titles of many papers. There was comment upon the arrogant attitude of many specialists toward the family physician. The fact that such attitude exists at all may show the approach of the saturation point in specialism. If certain specialists find it necessary to argue specialism to their clientele and others in season and out, not sparing unworthy criticism of those who work in wider limits, the inference is they are feeling the pinch of hard times.

The advantages of specialization are stated by L. F. Barker to be: "It increases productivity; facilitates the acquisition of accuracy, speed and skill; provides for a better distribution of tasks; economizes material equipment and mental energy; and accelerates discovery and invention."

Specialism in medicine is only response to the spirit of the times. The public is familiar with it in commerce and industry, and undoubtedly encourages it in medicine. This encouragement meets ready answer in our ranks, where mental and physical capacity are subject to variations the same as they are in a Ford factory.

Ultra-specialism, however, is of questionable value. It prevailed in Egypt four hundred years before Christ, when Herodotus, the historian, says, "Each physician applies himself to one disease only, and not more. All places abound in physicians." And yet in ultra-specialism the individual of average ability and the genius, alike, seem at present to find

fertile soil. The one content to drive one bolt in the human flivver, day in and day out, gains a proficiency and prestige denied him in the broader field; and the other, of great mind, concentrating a lifetime upon one line of endeavor, should be expected in addition to material success, to add something of discovery and invention to the total of medical knowledge. If he does not reach these heights, he wastes his talents in narrow specialism, and his life would have been better spent in the service of broader practice.

To those who are inclined toward general practice the situation need not be wholly discouraging. The field is and always will be open in villages and towns; and in every great city are to be found men with enormous general practices doing the best of work. Their success is based upon that soundest of foundations—service. These men recognize the necessity of specialists. They use them freely when the welfare of a patient depends, first, upon the expert use of some instrument of precision too infrequently used to warrant inclusion in their armamentaria; second, upon the exercise of skill in technique, only to be gained by experience with many patients of a particular type; third, upon laboratory work too time-consuming for them to undertake. They choose their specialists with discrimination, for their ability and for their broad-minded willingness to co-operate, and who dare say the patients' interests are jeopardized by passing through the hands of such a general practitioner?

It has been said, "Patients who independently seek the aid of specialists often make a mistake, and the tendency is to be deprecated." With certain modifications this is true. A clientele, all his own, is a tempting asset to many specialists, but this does not alter the basic fact that a broad survey by a general diagnostician is, in most cases, of paramount value to the patient. The ability to make this survey should be the aim of the general man. Perhaps it will mean, especially in cities, his evolution into what we call an internist. The internist now is really a sort of advanced general practitioner. He is the diagnostician and distributor for the other specialties, like the family doctor, but he enjoys the prestige of specialism, and is most useful in his broad field. However, there are signs of disintegration here, for we see his work undergoing subdivision of the ultra-variety, to make room for the electrocardiographer, the gastrologist, the allergist, and, very lately, the periodic medical examiner. The latter is a new and perhaps logical development in the attempt to keep some place open for the wise individual who wants to know which specialist he needs, if any. Seriously, we do not know how far specialism is going, but we do know that in the reasonable subdivision of labor, energy is conserved. If it goes too far, integration will begin, and proceed until the economics of the situation are satisfied.

The same melting pot of economic laws figures in the problem of the distribution of physicians. This is the most actively discussed subject in medical economics today. The failing supply of physicians has caused great complaint from the residents of many rural districts, and there have been demands for drastic relief measures. One of these was a bill

introduced in the Tennessee Legislature two years ago. It was entitled "The Abolishment of the Preliminary Board of Medical Examiners." This legislation was devised with the view of curtailing the length of time and expense required to get a medical license to practice; and its author believed its passage would cause more physicians to locate in the remote country districts. The bill passed both Houses, but failed to receive the Governor's signature. The same position is taken by Dr. Pusey, who believes that shortening the time spent in medical college would attract to medicine a type of individual who would be satisfied to take up the burden of country practice. If this were so, we ought to see the cultists avoiding the cities and flocking to the villages and cross-roads; but while short in knowledge, they are often long in business wisdom. The other side of the thesis is exhaustively treated by Mayers and Harrison in a report of The General Education Board in 1924.

There never has been great attraction in the hardships of country practice, and even twenty-five years ago many young graduates only took it up because of the crowded condition of the profession in the cities, and because of the common belief that a living could be gotten more quickly in the village communities. After a financial footing had been gained, and experience acquired, many left for the cities. After the war the movement was accelerated. Many medical officers recruited from the country never returned, as they had conceived new ambitions through experience in well-equipped hospitals, and through special training in army schools. Many of these entered the specialties of medicine, and have kept pace with their metropolitan confreres.

At the same time there has been a general movement, outside the profession, toward the centers of population. The farmer cannot keep his sons and daughters at home, and has trouble getting labor. Over 50 per cent of the country's total population is in towns of 2500 or more. From 1910 to 1920 the rural population increased only 3 per cent, while the urban population increased 26 per cent. This indicates where the work is, and there the physician will go. One author says: "The reasons why the country doctor will not stay in the country are these: the inadequate fees, the bad roads, the hard work, the lack of hospital accommodations, insufficient educational opportunities, but above all, the lack of loyalty on the part of his patients."

When trained statisticians and economists study the subject, the reason for the exodus of rural physicians becomes manifest. The following passages from Raymond Pearls' article are expressive: "It is apparent that generally the exodus in recent years of physicians from the rural locations has had associated with it a definite and marked decline in the per capital real value of farm property. In short, it is seen again that the behavior of the physician in the conduct of his affairs betokens a considerable degree of good economic sense. The physicians behave in the conduct of life about as any group of sensible people would be expected to. They do business where business is good and avoid places where it is bad."

"After a young medical man gets out in the

world and by hard experience learns economic wisdom, his behavior thereafter, relative to location, will not be different according to whether his education was expensive or cheap."

One of the conclusions of the General Education Board report is: "There is no validity in the view that the proportion of recent graduates settling in the rural locations is lower than the rural population has a right to expect." The Massachusetts Legislature ordered a report on rural health and medical service, and the Department of Public Health made a report in January of this year. Some of its findings are: "Unless the movement of the general population from the country to the city is checked, the economic factors will increase rather than decrease the inability of certain locations to support a physician. Less than 6000 of the population of Massachusetts is more than six miles from a physician. The physician's charge for a distant call, compared with garage charges for making the same trip, shows that the difference is less than the usual fee for the physician's house visit in his own village. This places no higher valuation on the time the physician spends on the road than if he were a taxi driver."

Many examples were found of lack of loyalty in supporting the local physician which was not based on his professional shortcomings. The farmer is not behind his city cousin in his belief in specialists, and he often drives thirty miles to the city for more expensive, but no better, advice than he could get at home. His faithful professional neighbor, good enough for the drudgery of night calls and emergencies, only gains his full confidence when he displays intelligence enough to go where the business is going.

It seems to me there is danger in this propaganda for lowering the standards of medical education. The alleged unfortunate plight of the rural dwellers makes good copy, and it is beginning to be exploited in the periodical literature. It is likely to have its effect upon state legislatures, already prone to dangerously weaken requirements for medical licensure.

Though the argument looked plausible at first, I have failed to find any data sponsored by trained investigators which affords proof that high standards of medical education are at all responsible for rural shortage of physicians.

A study of the exact situation in California, made by our own council or by the league, would be of value if the discussion becomes acute or menacing from the legislative standpoint. I believe such a survey would show conditions to be about as they are in Massachusetts.

In conclusion, it would seem that our public is critical, not because it fails to recognize the colossal advance in medical science, but because the upheaval has subtracted something from the sympathetic, personal contact, so satisfying in the past.

Attempts should be made to overcome this by bringing back into the education of the physician some of those subjects which were of old considered necessary in the equipment of the well-educated person, but which have been dropped as impractical in this business age. They have to do with what we call the art of medicine.

The education of the present fits the physician superlatively for his narrow specialty, but it is not education which commands instant and general recognition. He knows his own attainments and he puts a label on them: surgeon, internist, obstetrician, and he is recognized at his own appraisal, and that only. Most of those subtle influences which could bind him to the human interest activities, such as languages, history, art, music, poetry, and religions, are crowded out of the pre-medical years. Much of the great mass of technical detail which has taken their places is undigested, hence not available for the practical field worker, but most valuable to provide the necessary succession of research workers. The needs of these two classes—field worker and research worker—seem divergent, in that the fifty are being forced that the one may emerge in perfection. The fifty must deal with tried and proven methods for the cure of ills, and in addition must be made into attractive mold that public sentiment may be directed, and scientific medicine allure, not repel.

In spite of all, medical progress is unquestioned and unrivaled. As regards our relations with our disreputable camp followers, quacks, cultists, sellers of useless medicine, and the rest, we are warranted in feeling optimistic, and hope to be loved some day for these enemies we are making.

251 Moss Avenue.

Zinc Stearate Dusting Powders for Infants—The second report of the Committee on Accidents from Zinc Stearate Dusting Powders appointed by the Board of Trustees of the American Medical Association has recently been published. Copies of this report, with an appendix showing the opinions of thirty-four representative pediatricians on the therapeutic value of such powders, can be obtained on request. Address, Committee on Zinc Stearate Dusting Powders, American Medical Association, 535 North Dearborn street, Chicago, Illinois, enclosing a self-addressed, stamped envelope. There were reported to the Committee 131 accidents from the inspiration of zinc stearate dusting powders by infants. Twenty-eight of the victims died. The Committee conferred with representatives of certain distributors concerning the dangers incident to the use of such powders on infants. Following a meeting held at the headquarters of the American Medical Association, these distributors agreed to co-operate by adopting self-closing containers for the powders they distribute and agreed that cautionary labels are desirable. Opinions were secured from thirty-four representative pediatricians concerning the therapeutic value of zinc stearate dusting powders. Thirty-one believe that such powders have no advantage over other dusting powders, that they constitute a hazard to infant life, and that their use should be discouraged.

Pathology of the Hypophysis—It is evident from the seven cases reported by J. P. Simonds and W. W. Brandes, Chicago (Journal A. M. A.), that, with advancing age, in many persons the hypophysis undergoes fibrosis, and the body does not receive the normal amount of the secretion of this gland. Fibrosis of the anterior lobe of the hypophysis occurs with moderate frequency in persons past 50. This condition is apparently due to arteriosclerosis of the vessels of the hypophysis. The character of the lesion is such that it must interfere with the function of the glandular portion of this organ. This suggests one of the reasons for the failure of efforts at rejuvenation that are directed to the restoration of only one gland of internal secretion. One case of the series here reported appears to be true chronic hypophysitis. In spite of the negative Wassermann test, other findings in the body suggest the possibility of syphilis as its cause.

A GENERAL CONSIDERATION OF SUSCEPTIBILITY TO SKIN DISEASES *

By GEORGE D. CULVER, M. D., *San Francisco*

It rests upon the shoulders of the dermatologist to go more than skin-deep. Careful advice as to exercise, rest and proper eating will greatly improve oxygenation, raise the skin resistance, and often mean the deciding point between success and failure in the practice of this specialty.

WITH the large proportionate increase in infective skin eruptions and with recent added interest in occupational dermatoses, a vital question again and again arises as to how great a factor is the lowered individual resistance, permitting what would seem to be a fairly definite individual selection. The same question has to be considered in reference to many of the skin disorders.

If the presence of the streptococcus were all that is required to give rise to the numerous instances of streptodermitis, we should all have some form of streptococcic infection. We must assume that the sufferer has a lowered resistance or has something within his skin that makes of it a suitable soil for the rapid multiplication of streptococci. The eruption might indicate the presence of the organism in the lesion, or it might be an evidence of the toxic effects of its products. It would still mean something inherently wrong with the individual skin. This should hold true with most, if not all, eruptions caused by micro-organisms.

Furthermore, it isn't unreasonable to believe that something more than simple idiosyncrasy and natural susceptibility enters into dermatoses produced by external irritants. For example, many an individual may have worked at his occupation for years, and suddenly he becomes sensitive to something he is using, as a painter with his turpentine. It is occupational, yes, and seriously so, but it doesn't always mean that he must quit painting. Not infrequently there are other reasons than the known one for his hypersusceptibility. It is up to us, as dermatologists, to ferret out and correct such other faults as may be at the bottom of his recently developed susceptibility.

For a long time I have been attempting satisfactorily to solve some of the questions arising in many instances of eruptions easily diagnosed, but not always so easily eradicated, constantly striving toward more effective treatment, and also toward greater security in prophylaxis. Any evidence I may offer is so inconclusive that it is tendered only along the line of a suggestion to stimulate further observation.

Dermatology as a specialty, equal in importance to any branch of medicine, can hold its place and grow only as the dermatologist fulfills his mission of successfully treating his patient, not alone his patient's disease, and to do this he must have a clear conception of all the factors involved. It is my belief that a furuncle or carbuncle surgically treated, however skillfully, but with indifferent care given the patient himself, is neglectful ministrations. Much

dependence is naturally placed upon the inherent tendency for the human body to recover, and many an opportunity is lost when that tendency is not stimulated through proper direction in fortifying the patient's resistance to the particular disturbing element which may be specifically responsible for his disease.

It is this defective resistance that should be of such great interest to the dermatologist, and the neglect of which we all at times are guilty. Most satisfactory results often occur in stubborn skin eruptions, resistant to ordinary treatment, when a normal dermal physiology is brought about.

A certain proportion of the patients we see are either free from organic defects or are suffering little because of them if present, whereas but few are free from functional disorders. How necessary it is to recognize those functional disorders and to be able to so direct the patient as to correct them.

Consider, for example, the epidermophyton implantations which, with other fungus disorders, are increasingly numerous, making of every swimming tank a danger spot. And yet not everyone exposed is infected. Again, we may ask the question, Why? No doubt a disturbed physiology is frequently, if not always an important factor. If largely dependent upon an hyperidrotic base the factor may or may not be easily controlled, but it would seem to be our duty to make the effort, in justice to the one seeking advice to avoid subsequent reinfection. I have seen most dramatic changes take place in that tragic state of wet, putrid feet when excesses of eating, especially of the rich carbohydrates, were properly regulated and other faulty habits corrected. I am not contending that it is just a food question, but it must be admitted that in many instances of both acute and chronic skin affections there is something basically wrong with the skin activity, and what more likely than that it should be influenced by daily regime, including faulty dietary, neglect of exercise and irregular or insufficient rest, all of which may affect the body covering, as well as other parts, especially insofar as skin nutrition and oxygenation are concerned.

Examples innumerable, explanatory of my contention, may be cited, but they would be tiresome. I shall give only a few recent ones that were of particular interest to me.

A physician under 35 years of age came to me nearly a year ago with what was clinically an infective dermatitis, involving the face, neck, and arms to such an extent that he could not satisfactorily practice his profession. He had gone through a most careful series of tests for some specific element that might be the cause, and, though he reacted to a number of things, the blame couldn't be laid to any one. He suffered for two years. After treating him several months unsuccessfully he became discouraged and so did I. It fell to me again to attempt to advise him, and we started anew, just as if he were a patient for the first time. He was asked to follow a much more rigid daily routine of exercise, regular and sufficient rest, with carefully regulated meals. Internal medication was directed toward normal elimination, proper alkalization and improvement

* Chairman's Address, California Medical Association's Section on Dermatology and Syphilology, delivered at the 1925 Session in Yosemite, May, 1925.

in his general well-being. Within two months his skin was clear, and it remains so, but on the least provocation gives evidence that it is ready to again flare up. It was neither the arsenic nor the iron given him that caused the disappearance of the trouble—which also failed to be influenced by endocrine medication, vaccines, or x-ray. Recovery was probably due to systemic improvement through better general body tone and better physiological functioning of the skin, with a consequent raising of its resistance. This man had asthma, and this symptom also has disappeared.

In an instance of severe streptodermitis of the legs, which hospitalized the patient for the greater part of four years following the war, the condition entirely disappeared under careful routine directed toward raising the patient's general resistance, and simultaneously the resistance of his skin to the infection.

A young woman with recurrent generalized dermatitis, clinically of an infective character, who had been inadvertently treated for poison oak by many methods, gave evidence of harboring the streptococcus in her throat. Treatment for focal infection alone and symptomatic treatment of the skin proved quite discouraging. Not until the patient herself was considered of prime importance and treated accordingly was real success attained.

Because it is possible to do so much with the skin with the many varied and remarkable agents now at one's disposal to either cure or eradicate so many manifestations of skin disorders, and because the task of treating the patient is so difficult and so laborious, the tendency is surely toward a greater perfection of the former agents and methods, to the neglect of the latter important phase of the question under consideration.

I am not scolding the other fellow; rather my inclination is to chide myself for so frequently drifting into the easy way of treating the disease instead of the patient. Should a patient come to me with that most trying condition, acne rosacea, there is no hesitancy on my part as to what I must do, for I know that by treating the facial manifestation alone I shall partly or completely fail, and certainly not make the patient's future sufficiently secure, whereas by treating and directing him generally as well, the chances of success are greatly multiplied. My neglect in one instance was firmly impressed upon me by the patient himself, a friend suffering from psoriasis, whom I treated perfunctorily for his "spots," as did others of my confreres. About a year ago he developed a marked rosacea, which stimulated me to more carefully consider his condition. Under more careful treatment his rosacea disappeared, a glycosuria disappeared, and his psoriasis has become much more manageable. What a growing tendency we have to treat acne topically only, because of having such an excellent help as the x-ray. However, we owe it to the patient to do as much for him otherwise as he is willing to accept.

Within the last month a man 32 years of age consulted me for a recurrent infection in the right scrotal-thigh fold, covering a period of one and one-half years, involving part of the time the scrotum

and part of the time the skin of the thigh. There were abscesses and numerous ulcerations. He presented a marked acne rosacea of the middle portion of the face, gave a history and showed the scarring of an extensive acne of the back which had been present when he was then years younger, and the back of his neck was almost covered with scar tissue. This man for ten years had been treated while in college, later while in the army, and many times since, always locally alone, for the particular condition present at the time. It is quite evident that this patient was in need of a most rigid and systematic routine with the proper tonic and regulating medication to build up his resistance, which in the past had been improved only insofar as his natural tendency to recover counted, and as he grew older this resistance lessened rather than increased.

I am of the opinion that some of the endocrine instability which we find favoring skin changes, and much of that which we conjecture as a possibility, would be lessened or completely removed under improvement in the general well-being of the patient.

Since such a large part of a dermatological practice is made up of those not acutely ill and of those apparently able to work, the physician is inclined to pass lightly over skin eruptions and to send referred patients back with negative findings. Not infrequently those are just the ones that continue to have their skin annoyances until the basic functional disturbances are corrected.

It, therefore, rests upon the shoulders of the dermatologist to go more than skin-deep. Careful advice as to exercise, rest, and proper eating, will greatly improve oxygenation, raise the skin resistance, and often mean the deciding point between success and failure.

323 Geary Street.

Blood Pressure Changes Accompanying Coronary Occlusion—In the absence of hemorrhage, shock, infectious disease and excessive toxic or metabolic disturbance, such as diabetic coma, and with the presence or history of severe pain of cardiac origin or distribution, Leslie T. Gager, New York (*Journal A. M. A.*, June 6, 1925), says that the fall in arterial tension will commonly be due to acute myocardial insufficiency on the basis of coronary occlusion. Four cases are cited to show the value of a series of blood pressure readings, when coronary thrombosis is in question. Gager further says that: The recognition of a sudden fall in blood pressure, following an attack of severe cardiac pain, derives its importance from the fact that coronary occlusion brings about this state of hypotension by striking directly at the cardiac output. Following the thrombus formation, or the lodgment in an embolus, in a coronary artery, there occur (1) infarction of the heart muscle to a degree corresponding with the site of obstruction, and (2) impairment or loss of ventricular function according to the area and extent of the infarction. Since the left coronary artery, or its branches, is commonly involved, it is usually the greater circulation that offers the evidence of cardiac failure. In the milder instances of occlusion, or in cases in which the left ventricle escapes, little or no variation in peripheral arterial tension may occur. It is Gager's contention, however, that blood pressure readings, taken daily or even oftener, form an important detail in establishing the diagnosis of coronary occlusion. It is a method of observation at the command of every practitioner. A sudden fall in arterial tension, following severe cardiac pain, rests on the physiologic basis of infarction and myocardial insufficiency following an occlusion.

UNUSUAL UROLOGICAL LESIONS *

By FRANK S. DILLINGHAM, M. D., *Los Angeles*

Brief reports of three cases of fracture of the penis, one of priapism, one of anaphylaxis, and four of toxins from ascarides and oxyuris, causing hematuria and albuminuria.

FROM time to time we all see interesting and, sometimes, rare conditions which, through lack of time or inclination, are not reported to our local sections, or perhaps because of a feeling that the report would not interest a group of men practicing the same specialty; yet if briefly reported such rarities might call forth reports of similar conditions by others, and the discussion might bring out some practical points of benefit to all.

To successfully practice urology, it is necessary to have a broad knowledge of all the specialties. The increasing knowledge of anaphylaxis, referred pain and focal infections, have played their part in forcing us to look beyond our own field in arriving at a final diagnosis.

Last year we were told of a large railroad hospital in which every patient with abdominal symptoms was studied by the urologist before being subjected to laparotomy, with the result that there have been less abdominal operations, and the proper treatment of unsuspected urological conditions have permanently cured the patient.

As our program is very full, I will briefly report a few histories, and wish to add a case of priapism to those reported by two of our members, Doctors Player and Kutzmann, in the *Urologic and Cutaneous Review*, December, 1923.

Patients with arthritis are sent to us for study, and it is hard and sometimes impossible to give their physician a definite answer as to whether the urological tract may be at fault in the presence of a small soft prostate, with moderate infection in the prostate and vesicles, when there may be associated in the same patient beginning flat-feet, infections in tonsils, teeth, or elsewhere. An orthopedic surgeon referred a patient to me who had arthritis of the right hip which had progressed so far that they had to apply a Bradford traction and abduction brace and arch supports. This patient had been thoroughly studied and no foci found in the teeth, tonsils, intestinal tract, or elsewhere. His prostate was small and only slightly infected, and in my opinion was not likely to be the source of the patient's trouble, but as the usual foci were reported negative a thorough course of massage of the prostate, with stripping of the vesicles, followed by an antiseptic, was instituted and he fortunately responded at once. The patient is back at work as a cutter in a tailor shop, where his occupation compels him to stand all day. He has not had to wear the brace nor plaster cast since last November, but continues with his arch supports; he has no pain.

A woman, aged 39, complained of a burning pain in the urethra, was cystoscoped and carefully exam-

ined, but no cause could be found, and as a last resort skin tests were made and she was found to react strongly to coffee and eggs. As long as eggs in any form and coffee were omitted, she had no pain. Local applications of silver nitrate were made to the urethra and bladder neck, and at the end of a year she could gradually return to both coffee and eggs.

Several years ago a 5-year-old child was examined who had a history of hematuria and frequent painful micturition over a period of three weeks. The parents were alarmed and feared Bright's disease, as they could see blood and had been told the urine was loaded with albumin. Pinworms were discovered and their removal caused the bladder symptoms to abate, and the cystitis was cured in a week's time, with no return of symptoms, and the urine has remained free from blood.

Two years ago, in consultation at the hospital, I saw another patient with a heavy ring of albumin who was supposed to have Bright's disease. I was fortunate enough to enter his room as the nurse had finished giving an enema, and several round worms had just been washed out. Appropriate treatment of this condition cured the albuminuria. Last year another patient who had been in the hands of good physicians in Denver and Los Angeles, who had been cystoscoped and carefully examined to determine the cause of pain and throbbing in the urethra, and who received no benefit from treatment through the endoscope with silver, was found to have round worms, and treatment of this condition promptly relieved the reflex symptoms in the urethra.

A tape worm in a woman of 35 caused albuminuria and a dull ache in the kidney regions which was relieved as soon as the tape worm was removed.

Doctor Arthur Herrmann was kind enough to go over some of his histories for me and found three reports of worms in the bowels, causing frequent micturition, vesical tenesmus, blood and albumin in the urine, which were relieved in each instance as soon as the worms were removed.

"A girl, aged 7, had been suffering from digestive troubles and vesical tenesmus for several weeks; was taken suddenly ill with a slight convulsion. She had recovered from the convulsion before my arrival, was slightly delirious, and the temperature was 104. Urine examination showed albumin, microscopic blood, no pus or casts. There was no swelling of the extremities. A careful history elicited the fact that the child had passed some round worms and also pinworms a few weeks previously. The administration of santonin and quassia injections, together with a clove of garlic daily, gave prompt relief of all abnormal symptoms.

I was called in consultation to see a boy aged 3 in a severe convulsion which was abated with chloroform. He had been a vigorous child, but lately had become fretful, complained of abdominal pains and loss of appetite. There was frequent micturition, he wet the bed, was restless in his sleep, and lost weight. Urine examination showed albumin, blood, no casts or any abnormal findings. A close questioning of the mother brought out the fact that the child had passed some round worms a number of weeks

* Chairman's Address, California Medical Association's Section on Urology, delivered at the 1925 Session in Yosemite, May, 1925.

previously, and that she had given him some worm candy which caused the expulsion of several. The usual treatment by santonin was instituted and a large number of round worms were expelled; the urinary and all other disturbances were immediately relieved.

A girl, aged 4, was brought to the hospital, having been referred to me by the late L. M. Ryan, with a diagnosis of pyelitis. The chief complaint was frequent micturition, bladder tenesmus, loss of weight, and irregularly elevated temperature. Urine examination demonstrated B. coli, pus, blood, and albumin. There was intense itching of the anus and genitalia. She had been given the usual alkaline and urinary antiseptics which gave intermittent relief. The history demonstrated she had been troubled with pinworms irregularly for more than a year, to which the mother attached no significance. The child was placed at an angle of 45 degrees for twenty minutes, and once daily a solution of quassia bark was allowed to flow in the bowel. A clove of garlic was given in her food once or twice daily. The alkaline treatment was continued for the pyelitis and after several weeks the child slowly recovered, while the tenesmus, pruritus and excoriated genitalia cleared up within a week.

CONCLUSION

The chief interest in the study of these cases is the fact that the toxemia and urinary symptoms cleared up on the expulsion of the worms; that the toxic substances produced a renal irritation due to some secretion from these worms, that they cause a mechanical irritation which gives reflex symptoms to the urinary tract, adjacent tissues and cerebral cortex."

A patient with typical renal colic, whose x-ray plate showed an oval shadow in the region of the right ureter, could not be cystoscoped because he had filiform strictures. These strictures were dilated as rapidly as possible with a fairly prompt and progressive improvement in his renal symptoms, and when a shadow catheter was passed to the pelvis of the right kidney, the shadow proved to be a lymph gland, and this patient has had no more renal symptoms.

THREE CASES OF FRACTURE OF THE PENIS

A laborer, aged 28, said he turned over in bed while he had a partial erection. The rupture occurred at 5 o'clock in the morning and caused considerable pain, but he went to work. I did not see him until 5 o'clock that afternoon. The skin was edematous, infiltrated with blood from the root to the glans, and a distinct tear of the right corpus cavernosum was found .025 long. The clots were (2.5 cm.) turned out, hemorrhage arrested, fascia lightly sutured, four linear incisions the full length of the shaft were made through the skin on account of the excessive edema, and the organ carefully bandaged. The wounds healed by first intention, and the man made a perfect recovery, with no deformity.

A doctor about 30 years of age sustained a similar injury while climbing out past the steering wheel

of his car. He was seen within an hour. With careful bandaging and rest in bed, the clots were absorbed and there was no deformity.

A cowboy was similarly injured by being thrown on the pommel of his saddle. By using about a 20 gauge needle, we were able to aspirate the clotted blood enough to relieve his condition. This was followed by bandaging and rest in bed, and he was able to return to work in a week or ten days.

Priapism—During the late war a certain patient was gassed three times, which caused him to lose considerable weight. Throughout the war had chronic dysentery, and upon returning home an infected appendix and gall-bladder were added to his troubles. On March 20, 1922, the patient had a constipated passage which was immediately followed by pain in the perineum, to relieve which he made pressure over the perineum. This in turn was followed by a full erection, which was not relieved by hot or cold compresses, morphine or several other measures, and lasted for three weeks, at which time the erection gradually subsided. Full doses of epsom salts gave the most relief. When I saw the patient in consultation he was well nourished and has scar from his former appendectomy and cholecystectomy. General examination negative, with the exception of infected teeth and tonsils. Denies ever having had any venereal disease, and blood Wassermann was negative. Eyes and reflexes normal. No nasal polypi; no enlargement of the prostate gland, but the hemorrhoidal veins were engorged. Urination difficult, but not painful. Patient complained of being tired, even to exhaustion, partly from loss of sleep and partly from nagging pain in the penis and the anal regions.

The penis was erect, engorged, harder and larger than normal, the corpus spongiosum being involved, as well as the cavernosa. The testicles were normal, and the urine negative. There was no sexual desire; intercourse tried once, but was painful and afforded no relief and was not repeated.

I recommended that the teeth and tonsils have immediate attention. This was not done, and later, in connection with doctors of the Public Health Service, I saw the same patient suffering with a severe purpura hemorrhagica, and again recommended that the teeth and tonsils have immediate attention, beginning with the teeth. Upon examination, eleven teeth were found to be infected. These were removed one at a time, each extraction being followed by considerable general reaction, but this treatment eventually cured his skin condition.

As a result of the priapism, the patient has a loss of erectile power amounting to fully twenty-five per cent. He is still forced to wear elastic stockings on account of the edema in his legs, and is not able to work. Cause of his trouble is considered to be due to thrombosis, probably resulting from infection from the teeth and possibly tonsils.

Drainage of the corpora cavernosa in this case would probably have afforded immediate relief and would not have been followed by as much loss of erectile power.

SOCIAL ASPECTS OF THE FREE DISPENSARY *

By ROBERT EWART RAMSAY, M. D., Pasadena

The free dispensary, as a philanthropic institution, can not do otherwise than divide the applicants into two classes—those who can be freely treated, and those who cannot be treated at all.

Once the Social Service Department has ascertained the social status of the patients who wish to pay a small fee, and determines that they are worthy of some fee deduction, it can find physicians who are willing to handle these part-pay patients on a part-pay basis, without detriment to their established schedule.

There is none of us who will not co-operate in that wise philanthropy which increases self-respect and conduces to self-support. But undeserved charity breeds selfishness and pauperism in the recipient and wearies and disillusiones the philanthropic worker.

THE free dispensary exists to give aid to persons who are not able to pay the customary medical fees. Philanthropic individuals and associations give their means, volunteer workers give their time, and physicians give their professional advice and service. Superintendents, nurses, social workers, secretaries, clerks, and volunteers give very often more than the time of the working day. To all of these, but especially to the donors, the volunteers, and the physicians, it is a matter of great concern to know that the service they so freely give is bestowed upon persons who are needy and deserving. Physicians are especially concerned because it is manifestly unfair to be called upon to give advice without charge to persons who are able to pay.

The practical problem of deciding who are deserving of help is not difficult. Slipshod methods of administration have made it appear so, and sentimental considerations have undermined the morale and the efficiency of many a philanthropic institution. The public has little respect for organizations so easily imposed upon. Those who are helped call themselves clever in getting for nothing what others must buy, while the workers develop contempt for certain of their beneficiaries, or take the matter into their own hands by making unkind remarks or giving a lower type of service. If the problem is not faced squarely and decided on business principles, the right kind of work is not done.

Consideration of the actual conditions which arise in the conduct of a free dispensary will disclose the nature of the problem and show how it may be approached. For this reason I have reviewed the social records of 1384 consecutive admissions to the free dispensary of the Anita M. Baldwin Hospital for Babies, children's department of the California Lutheran Hospital of Los Angeles. The facts in these records were verified by home visits in practically all of these cases, the exceptions being those in urgent need and families manifestly large in numbers. I have also reviewed the records of 398 consecutive applicants who were referred to private physicians because, by their own admission, they were financially able to pay. Unfortunately, for the purpose of statistical comparison, this number does not represent the total number of persons who visited

the dispensary and were discouraged from entering, but only those who went far enough to have an interview with the social service department, with the end in view of establishing a satisfactory social status.

All applicants have been questioned on the day of admission with regard to sources of income, amount of average income by the week or month, regularity of employment of the wage-earner, number of children in the family, number of other dependents, and in the case of a woman who supports her family, as to whether she is divorced, deserted, or a widow. This interview is resented only by those who have come to the dispensary under a misunderstanding or with the thought of taking advantage of its charitable purpose. The social visit which is made to confirm the impression at the interview is never resented by the *deserving* families. Rather is it welcomed because, when they have told their story and welcomed the representative of the dispensary in their homes, they feel established in friendly confidence, entitled to aid, and free to seek from nurses and doctors solution of their various problems. The procedure is of great value in cases where families are staggering under burdens too great to be borne and there is help from other agencies than our own which can be mobilized in their behalf. Our own work depends so greatly on home conditions that the need for this friendly co-operation with the home is self-evident.

Subject to modification by extenuating circumstances, we have adopted an arbitrary standard of \$120 monthly income for a family of father, mother, and two children, making an allowance of \$10 monthly for each additional child or dependent. This figure has worked out well in practice. It is sufficiently low to indicate that we demand some evidence of thrift. It is sufficiently high to indicate that we do not expect abject poverty before we give our help. The time to give the help that counts is when people still retain their ideals and have not given up their ambitions for themselves or their children, in time of temporary embarrassment, or in cases of large families. Into our special problem, as we see it in Los Angeles, enters the frequent occurrence of the family which has come to this land of promise, exhausted its resources before getting fully established, and finds itself unable to afford accustomed comforts. This type of family is worthy of our best help and sympathy.

Large families are a factor in bringing patients to the clinic. The average family numbered between four and five members, the exact figure being 4.41. The results may be summarized in a more effective way as 575 families of three or less, and 909 of four or more. Simple increase in numbers must mean either a decline in the condition of living, or a dependence on friendly assistance, or an unusual exhibition of industry and thrift. Thus, we found one family of eight living in apparent comfort and even paying on a home on a budget of \$150 a month. Two families of fifteen members were found in clean and well-furnished homes. But, on the whole, simple increase in numbers, without the addition of unusual misfortune, is a factor in making friendly aid necessary.

* Chairman's Address, California Medical Association's Section on Pediatrics, delivered at the 1925 Session in Yosemite, May, 1925.

The care and illness of dependents is also a factor. When parents and children are just getting along, and an aged grandparent becomes ill, the family resources are strained to the breaking point. In twenty-two cases where families were living in their own homes, unusual circumstances, such as illness of the breadwinner or dependents, justified our extending aid. The same may be said of sixty-one families who were buying homes. In such cases, the families had cut down their margin to the quick in order to get their feet under them, and unexpected illness or lack of work found them temporarily bankrupt.

At times there appears in the clinic some person with furs, silks or jewels, disturbing to the morale of the whole establishment, the patients as well as the staff. Sometimes the disturbing person is not the parent, but some friend, neighbor or other philanthropic person who does not dress in a manner befitting her mission. Sometimes the finery is borrowed to bolster up the pride of the wearer who is making her first visit to a dispensary. It would be too easy to turn away the well-dressed and admit those who were poorly dressed. This is a method too commonly used in free dispensaries. It should be summarily condemned as a method which is inefficient and often unjust. Many who dress plainly are well able to pay, while others come in mistaken pride with all they have on their backs. A good social service department will use the best judgment possible at the time of admission and verify this impression by a visit to the home. Meanwhile, the workers knowing that they are being protected from exploitation, can be gentle in their criticism, and proceed with their work.

The automobile still spells luxury to our minds, and we become critical when we see patients arriving in cars. But much depends on the type of car and whether it is the property of the patient or belongs to a friend or neighbor who is helping out. Then, too, an automobile is a necessity to many kinds of workmen and tradesmen. Where the social service department finds that the automobile is of the type used for business and is owned and used for that purpose, we are charitable in our conclusions. When a family admits that paying for a touring car has diminished their ready money, we do not feel at all charitable.

A problem which frequently arises is that of the parent who comes to the clinic because she feels that she can get there the expert attention to which she has become accustomed but cannot now afford, and frankly explains that she can pay something and would prefer to be on that footing. To this admirable type of person it is not easy to give a rebuff, but the free dispensary, as a philanthropic institution, cannot do otherwise than divide the applicants into two classes—those who can be freely treated, and those who cannot be treated at all. It seems to me that once the social service department has ascertained the social status of the patients who wish to pay a small fee and determines that they are worthy of some fee deduction, it can find physicians who are willing to handle these part-pay patients on a part-pay basis, without detriment to their established schedule.

A periodic review of social status is necessary in

order to exclude those who, because of increased prosperity, have become able to care for themselves. This is accomplished in simple fashion by requiring patients to register anew every three months. This necessitates another interview with the social service department and a new establishment of status.

A review of the cases which were referred to private physicians shows that the dispensary must have an alert social service department to inform applicants with regard to the requirements for admission. Let us put it this way, rather than to speak of exclusion, for many people come to the dispensary because they do not know a better place to which to go, to get the type of service which they desire. There is considerable satisfaction in giving these people courteous treatment. If they are newcomers to this region and have no physician, they may be given a list of the attending staff from whom to choose one. Some persons are shocked by the necessity for social investigation, because they have confused public health activity and private philanthropy. There is some reason for their embarrassment because national, state, county and city health agencies which are striving to disseminate information, and so far as possible to give practical help by means of health centers, baby welfare conferences, and the like, do not and perhaps cannot do otherwise than to serve all who care to come. It is not difficult, however, to make applicants see the difference between a public enterprise and a private one. Especially is it easy for them to understand that physicians who give their time freely must be assured that they are not being victimized.

The 398 cases which were given a social service examination and refused admittance represent that portion of those who applied for admission who were not satisfied with the information given at the desk nor self-condemned by a comparison of their income and the purpose of the dispensary, and therefore put their case up to the management of the dispensary. Ninety-six of these had a monthly budget of \$150 or less which made them border-line cases, according to the number of children and dependents. Among the remaining 302 we found electrical engineers, school teachers, draftsmen, carpenters, bookkeepers, earning \$200 a month; salesmen, insurance agents and small business men clearing \$250 to \$300 a month; an oil-well driller making \$400 a month; a real estate agent who acknowledged \$500 a month; and a dentist admitting \$600 a month. Such cases illustrate the necessity for an efficient social service department. There is none of us who will not co-operate in that wise philanthropy which increases self-respect and conduces to self-support. But undeserved charity breeds selfishness and pauperism in the recipient and wearies and disillusiones the philanthropic worker.

In conclusion, we may say that the majority of the applicants for the services of our free dispensary are worthy of our aid. There is, however, a large number of applicants who are perfectly capable of paying their way, have no business in a free dispensary, and should be excluded. This can be officially done by the social service department after conference, followed by visitation.

TEAM WORK *

By ROBERT BURROWS, M. D., *San Francisco*

ALTHOUGH efforts to alleviate pain during surgical procedure were practiced from time immemorial, it was not until the time of Morton in 1846 that practical anesthesia became a reality. However vague and uncertain the efforts before that time, there is no doubt about the truly wonderful development of anesthesiology since Morton's previous work. Much further progress may be confidently predicted. The list of scientific investigators, chemists, inventors and physicians who have and are devoting their time and efforts to the development of better anesthesia is a long one. Along with progress in methods of eliminating or alleviating pain during surgical procedure has gone the marvelous development of modern surgery. Better anesthesia makes better surgery possible. The dangers attending surgery and anesthesia have been recognized and much has been done to overcome them, and work still goes on to lessen and avoid those that still seem unavoidable. It should be a matter of congratulation that the necessity of education in anesthesiology has been recognized and that courses are now included in most of our medical curricula. Education in this branch of medicine is as necessary and important as in any other, and unless we can appreciate the co-relation of anesthesia with other branches of medicine, our work becomes purely mechanical. The anesthetist must be trained as well as the surgeon, and by the proper training and co-ordination of their efforts good team work may be achieved.

The anesthetist should be much more than simply the one who administers a certain chosen anesthetic. His knowledge of medicine should be such that he would be considered a consultant before, during and after the operation. He should be able to evaluate the physical signs and symptoms, the laboratory findings, etc., so as to form an accurate opinion as to the patient's ability to take an anesthetic and the anesthetic required. It is the anesthetist who watches the general condition of the patient throughout the operation, and by the intelligent estimation of the condition institutes such remedial measures as may be necessary. That he must possess mechanical perfection in administration goes almost without saying, and in this connection we may well be grateful to those within our ranks who have devised mechanical means for the administration of anesthetics with certainty and precision, and these we should be familiar with, never forgetting, however, that a machine is still a machine and that the patient's condition is the final criterion as to whether the anesthetic is being delivered properly. Mechanical perfection is not enough. We must co-ordinate the mechanical part of administration with the known pharmacophysiological reactions of the anesthetic. All patients are not alike, and we must be able to vary our agents, sequences, mixtures, and amounts according to the individual requirement. Also we should be sufficiently conversant with surgical technique to be able to follow the operation and realize the reaction of certain procedures. We cannot always anticipate the

next step, and a word from the surgeon is invariably an aid. Our interest in the patient does not stop with the closing of the wound and the withdrawal of the anesthetic. Having watched the patient as to his condition throughout the operation, we should be able to advise as to post-operative measures, which may be necessary.

I wonder if we are always able to get the patient's viewpoint. We, working in and familiar with hospital atmosphere, may find it difficult to realize the impressions an individual may receive amid these unfamiliar surroundings, not always the most reassuring to the lay mind. Sometimes in our hurry we seem to forget the individuality of the patient and the various factors that may increase his nervous tension, and, all on edge, he is more or less hurried into unconsciousness amid strange sounds and conversation that are anything but soothing.

Do we not lose a great deal in attempts to hurry? During a crowded day, the temptation to do so is almost irresistible. Speed is a requisite in the successful carrying out of our work, and is only retarded by hurry. For instance, it does no good to hurry a patient to the operating room and then have him wait fifteen or twenty minutes before the anesthetic is begun. It does no good to hurry the anesthetic, though the combination of a refractory patient and a rushed impatient surgeon will sometimes make one try it, always to one's regret. It takes about so long to obtain surgical anesthesia, and when we try to rush it we usually find we haven't saved time, but have overdosed the patient. The use of local anesthesia by modern technique and the use of nitrous oxide, either alone or in combination, have shown us the advantages of gentle and unhurried manipulations. We have found, too, that with the more potent anesthetics that a little patience and gentleness will let us obtain the necessary relaxation without unduly saturating the patient.

In all instances proper pre-operative preparation of the patient should be insisted upon. There should be a complete physical examination and urinalysis. Too often we guess the kidneys are normal. Blood examination and blood pressure give us valuable aid in estimating the patient's condition. The advisability of using a preliminary narcotic is still perhaps somewhat of a moot subject, though most of us use one, believing that its advantages far outweigh its disadvantages.

It should be seen to that the patient is adequately protected from cold at all times, most especially during and after the operation. The position of the patient deserves more importance than it usually receives. Slight and simple adjustments can easily make it one of ease to the patient then and after, and by taking the muscles off the stretch, aid greatly in obtaining relaxation.

It should be seen to that our anesthetic apparatus is in perfect order with an adequate supply of anesthetic, and that whatever may be needful is at our finger-tips. Also that the means of stimulation or resuscitation are ready for use at all times and may be applied with the least confusion and delay.

Much in the way of preparation, examination, and various procedures for the patient's safety and com-

* Chairman's Address, Section on Anesthesiology.

fort seem most of the time to be rather small points, but if one of them is omitted at the wrong time the consequences may loom extraordinarily large.

Much benefit is to be gained by conference with the surgeon as to the progress of the case, noting the effect of the anesthetic after the operation as well as during it.

I have tried briefly to indicate various points whereby the anesthetist may co-ordinate his efforts with those of the surgeon, to the end that the patient may more certainly recover. By education, training, and a broader conception of anesthesia we become as skillful in our specialty as the surgeon is in his. Our knowledge of the subject must be that of a physician. It must be recognized that there is a close relationship between anesthesia and surgical procedure. Surgery is a therapeutic measure, done not for the sake of doing an operation, but in the interest of the patient's health. We work with the surgeon, sharing the responsibilities and co-operating with him, to the end that his success in getting the patient well may be assured. Our attempt is to render a service to both patient and surgeon in administering an anesthetic as skillfully and safely as our present knowledge and equipment will permit, co-ordinating our efforts with his toward the recovery of the patient.

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More About Tryparsamide in Neurosyphilis—John H. Stokes and Louis F. X. Wilhelm (Archives of Dermatology and Syphilology, May, 1925), after an exhaustive discussion of the benefits and dangers from the use of tryparsamide in combating the most damaging enemy to human health, arrive at the following conclusions among others: 5. "Tryparsamide treatment is superior to other forms of treatment for neurosyphilis on the score of minimal expense, inconvenience and loss of time, and maximal symptomatic gain in mental cases." 6. "Eye complications constitute a definite risk, of which patient and physician should be fully aware. An examination of the eyes by a competent ophthalmologist, with special reference to visual acuity and perimetric fields, must precede the first administration of the drug, and be repeated several times, especially during the first injections of the first course, when complications seem most likely to arise." 10. "Tryparsamide produces a definite Herxheimer-like flare-up of symptoms in mental cases which must be allowed for in making plans for treatment, and may necessitate temporary custodial care of the patient with special nursing, restraint, and precautions against violence and self-injury." 11. "The social values in a given case should be considered with reference to increased sexual activity in certain patients, and with reference to the possibility of the conversion of an unobjectionable and harmless patient into an objectionable and dangerous one." 12. "Tryparsamide appears to have a beneficial effect on patients with resistant tabes, including gastric crises, even though the spinal fluid may be negative." 13. "Our results in the treatment of late paresis by tryparsamide in an institution for the insane are disappointing and do not lead us to continue it in this field. The unfavorable progress of certain unfavorable cases may apparently be hastened by the drug." 14. "We are still disposed to regard tryparsamide, because of the possibility of eye complications, as a last rather than a first therapeutic resort in asymptomatic neurosyphilis. In obvious early paresis, we recommend its use after or in conjunction with other forms of treatment. The experience of other observers has established its unfitness for use in most other aspects of syphilis, owing to its lack of spirillicidal power."

INJURIES TO THE URINARY ORGANS IN RELATION TO INDUSTRIAL ACCIDENTS

By ROBERT V. DAY, M. D., and HARRY W. MARTIN, M. D.,
Los Angeles

A resume of the diagnosis and treatment of injuries to the urinary organs in relation to industry.

Fractured pelvis and ruptured urethra, direct bladder injury, trauma to the spinal cord with secondary bladder involvement, direct injury to the kidneys, and epididymitis, constitute the greatest number of cases for which claims are filed for compensation.

Fractures of one or more vertebrae or injuries to the cord without fracture sometimes produce the so-called spinal cord bladder.

Kidney stone following injuries of the spinal cord is not an uncommon sequel.

The important and essential findings in severe injuries of the kidney are pain in the loin, extending through to the abdomen, fullness, dullness and tenderness in the kidney area, and hematuria.

The most numerous class of patients referred to the urologist for examination and report, on which may be based the question of compensability, are those with epididymitis.

If there is no existing source of bacteria, even though there is an injury to the testicle or epididymis, inflammatory reaction will not result.

DISCUSSION by Granville MacGowan, Los Angeles; Charles P. Mathe, San Francisco; Miley B. Wesson, San Francisco.

TRAUMATIC injuries involving the urogenital organs, as seen in Southern California, have increased apparently several hundred per cent in the past ten years. The development of new industries, particularly shipbuilding and oil production, and the enormous increase in population, together with the popularity of the automobile, are the principal factors causing the increase. Fractured pelvis and ruptured urethra, direct bladder injury, trauma to the spinal cord with secondary bladder involvement, direct injury to the kidneys, and epididymitis constitute the greatest number of cases for which claims are filed for compensation.

If the bulb and membranous urethra are injured, it is usually the result of falling astride some hard, firm object or in connection with fractured pelvis. As a rule, the prostate urethra escapes serious injury, and injury to the pendulous urethra is also rare. When the urethra is injured the symptoms are pain, bleeding, disturbance of urination and tenderness, with tumefaction. The location of the tumefaction, the point of obstruction to the catheter, and the consideration of the mechanical circumstances and causative force attending the accident will usually determine the point of injury and, in a rough way, its extent. The tumefaction is primarily due to extravasation of blood, to effusions, and secondarily to extravasation of urine and inflammatory exudate. Extravasation follows the fascial planes, usually discoverable in the perineum; also the scrotum and penis, and may involve the rectovesical space toward the peritoneum if the prostate urethra is much torn. Altogether, the extent of the extravasation is problematical. It may ascend to the diaphragm retroperitoneally, as in one case observed at a coroner's necropsy. In this case the rectum and peritoneum were torn somewhat. With injuries of the ilium and sacro-iliac joint, immense retroperitoneal hematomas over the psoas muscle may develop. (We saw this once in a case that recovered perfectly, where

the peritoneum was opened and examined by an abdominal surgeon just previous to our taking up the urological procedure as soon as he had closed the peritoneum.) The wide extravasation causes shock, and the extravasated blood and hematomas are apt to become infected. The extravasation sometimes extends down the inside of the thigh, requiring subsequent drainage. Knowing the extent of the injuries, the authors believe, if the patient is not greatly shocked, that the best procedure is to immediately open the bladder suprapubically, pass a retrograde staff through the bladder out to the perineum, and buttonhole the perineum down to the staff; a rubber perineal tube is then slipped over the end of the staff, which, when withdrawn into the bladder, carries the rubber perineal tube with it. When the tube is well in the bladder it is slipped off the staff and fixed with a skin suture in the perineal incision. The suprapubic bladder opening is finally sutured water-tight around a Pezzer catheter, with rubber tissue drainage in the prevesical space. This prevents further urinary infiltration, allows the extravasated blood and urine, plus the infiltrating exudate of cells and serum, to leak out, and thus prevents its final organization into thick dense scar tissue, which would otherwise result in a bad traumatic stricture if the patient in the meantime did not succumb from infiltration and sepsis. The classical procedure, of course, is to perform perineal section, insert a catheter into the bladder and suture the urethra if possible. We do not do this, as a rule, and especially in case of fractured pelvis, for the following reasons: First, it requires the exaggerated lithotomy position which, if the pelvis is fractured, might drive spicules of the fractured pelvic bones farther into the tissues; second, it consumes considerably more time; third, the edges of the urethra are usually so torn and contused that the sutures almost never hold. When the exudate has disappeared and the tissues lose their friability, a secondary suture may be attempted; but it is seldom necessary, since the great cause of the scar constituting traumatic stricture is the organization of the cellular exudate in the presence of infection into fibroblasts and adult scar tissue.

When the suprapubic incision is made, marked bloody extravasation in the loose prevesical and perivesical cellular tissue is usually found. Direct injuries to the bladder, particularly if the bladder is full, may in rare instances result in rupture—occasionally so small as not to be recognized, but allowing extravasation of blood and a little urine. In these latter cases, insertion of a rubber tissue drain into the prevesical space and the use of a retention catheter will usually suffice. Cystoscopy is justified only when the symptoms point to rupture of the bladder with little or no urethral injury and no fracture of the pelvis.

Prostatism: Occasionally, a man of prostatic age sustains a slight injury to some region of the body and suddenly develops difficulty in urinating, hematuria, perhaps epididymitis, or acute retention. He stoutly maintains that he has never had any previous urinary troubles and that the injury is entirely responsible for his condition. What really happens is that the psychic shock has so diverted his atten-

tion or so benumbed him that he neglected to urinate at the proper time; then his bladder became distended and he was unable to urinate. (As a matter of fact, most prostatitics have their condition brought home to them acutely by neglecting to urinate at the proper time, and the distention causes prostatic engorgement, pain, and reflex spasm of the cutoff muscle, resulting in partial or complete retention. If the urine is infected, epididymitis may result.)

Fractures of one or more vertebrae or injuries to the cord without fracture, sometimes produce the so-called spinal cord bladder with residual urine, paradoxical incontinence, infection, and the typical cystoscopic picture. These cases really belong to the neurologist and neuro-surgeon. Their urinary symptoms will improve exactly in proportion to the regeneration of the nerve tissues involved.

It has been noted repeatedly by men doing much industrial compensation work that kidney stone following injuries of the spinal cord is not an uncommon sequel. This is not surprising, since residual urine and stasis, with resulting infection, predispose to both ascending and hematogenous infection.

Few men have had large experience with fractured or ruptured kidneys. Keyes, in the 1923 edition of his text-book, states that he has operated on four cases. Connell, in 1916, was able to gather only 841 cases, in a review of the literature. Tuffier and others have collected a series of cases—not their own—but these were of wartime injuries to combatants and, of course, are not quite comparable to industrial accident cases. The literature on the subject is somewhat meager. One of us (Day) has performed nephrectomy on four cases, with no deaths. In addition to these four, we have seen six other cases in which there was no doubt of injury to the kidney, but which recovered under expectant treatment. Still another two cases were seen at operation several years after the injury. The important and essential findings in severe injuries of the kidney are pain in the loin, extending through to the abdomen, fullness, dullness and tenderness in the kidney area, and hematuria. Hematuria often ceases in a few hours, even if the injury is considerable, due to the clotting of the escaped blood in the perirenal space, as well as blocking of the ureter by clots.

The amount of shock depends on many factors: First, associated injuries, particularly to the other abdominal viscera, diaphragm and lower chest; second, extent of injury; third, loss of blood; fourth, temperament, age, general health and associated chronic diseases of any other important organ.

It is amazing to observe how comparatively little shock is associated with the most extensive fracture of the kidney, provided the case is otherwise uncomplicated. For example, in two of our cases, in which the kidney was completely bisected about midway between the poles and in which nephrectomy was done in each instance about forty-eight hours after the injury, there was surprisingly little shock at any time preceding or after the nephrectomy. The injury may result in a rupture of the main renal vessels or the kidney may be shattered to a pulp. In case of complete rupture the blood

and urine escaping may be confined to the perirenal space. Again, it may rupture through the perirenal fascia and extend as an extravasation retroperitoneally, even down to the true pelvis. This happened in one of our cases and clinically resulted in a psoas abscess requiring secondary operation for drainage two weeks following nephrectomy. The rupture may be slight and result in only a subcapsular hematoma, which later becomes cystic. Many years ago one of us (Day) assisted the late Dr. N. H. Morrison in such a case. There had been little injury to the kidney itself, but we found a subcapsular cyst the size of a small lemon. On the other hand, the kidney may be entirely destroyed and converted into a cystic tumor—pseudo-hydronephrosis, and may later become calcified. For example, a boy 18 years of age sustaining injury to the back seven years previously, had aspiration of a cyst in his loin three times during the year following the injury; six years later he applied for compensation, claiming an injury to his back. X-ray revealed a calcified cyst in the region of the left kidney, the size and shape of the head of a new-born babe. Urological findings were negative, except that the ureter on this side could not be catheterized beyond 15 cm., and no urine or cyst fluid could be obtained through the catheter. The mass was excised piecemeal and with great difficulty, and consisted of a calcified fibrous wall containing clear fluid. All kidney tissue had disappeared. Some cases which, from the clinical aspect do not appear extensive at the time of the accident, may result insidiously in serious or complete destruction of the kidney. MacGowan cites a case in which he performed nephrectomy thirteen weeks after injury for a large mass in the flank with pronounced sepsis. In one case seen by the authors nine weeks after injury, nephrectomy was performed a few days later. At the first visit his temperature was 102.4, pulse 148, hemoglobin 40 per cent, and there was great bladder tenesmus. Cystoscopy was attempted, but the great mass of blood-clots in the bladder, both old and new, entirely interfered with vision. An attempt at evacuation of clots failed, partially because many were quite adherent to the bladder wall. It was necessary to do a suprapubic cystotomy and evacuate more than a pint of clots. The patient nearly died from shock. We hoped the hemorrhage would not recur, and decided that removal of the ruptured kidney would be a highly dangerous procedure at that time. However, he had another hemorrhage two days later. Evacuation of the clots through the former suprapubic incision was done. We still hoped. Two days later he had still another hemorrhage, and after a transfusion his hemoglobin was only 35 per cent. A nephrectomy was then done, followed that night by another transfusion. Convalescence was rapid and uncomplicated. This kidney had sustained a rupture extending from the pelvis into the perirenal space. The perirenal fat was cicatricial and the kidney itself markedly fibrotic. It was necessary to do an intracapsular nephrectomy. The patient rapidly took on weight and the rise in his hemoglobin was rapid.

Another patient seen recently was injured in the oil fields February 4, 1924. Shock was not pronounced and his pulse was under 100. Frank hema-

turia for the first eighteen hours. After that only microscopic blood. During the second night his pulse was feeble and intermittent, but never over 110. Operation following morning. After the kidney was delivered, a hole large enough for one to insert a thumb through the lower pole into its pelvis was seen. Much free bleeding when and after the lumbar fascia was incised, and much free oozing from kidney-bed as kidney was being delivered. Profuse bleeding from the rent in the kidney. Therefore, nephrectomy was decided upon. Uneventful convalescence except for the advent of diarrhea from fifth to tenth day post-operatively. He had 79 per cent hemoglobin the first day after the injury, with 50 per cent the morning following operation without loss of blood from the pedicle during the nephrectomy.

If the kidney is not too severely damaged, conservative surgery should be practiced; that is, incision, gauze packing, and drainage. Sometimes when the pressure is relieved by opening up the perirenal space, hemorrhage may be serious. It is up to the surgeon at the time of operation in this class of case to determine whether or not it is safe to leave the bleeding kidney in. In Watson's series, 27 per cent of simple ruptures resulted fatally with expectant treatment. Nephrectomy resulted in 22.5 per cent mortality in 132 collected cases of simple rupture. Conservative operative treatment—gauze packing, drainage or suture—gave a mortality of 8.5 per cent in 107 cases.

Unless loss of blood or some other reason demands immediate operation, the authors believe that it is wise to wait at least forty-eight hours before nephrectomy for the following reasons: First, it allows the opposite kidney to compensate; second, there is usually a superficial necrosis of the fractured surface so that bleeding will not be alarming while delivering the kidney; third, it gives time for associated injuries of other organs to produce symptoms indicating such complications; and fourth, by waiting the operation may sometimes be avoided.

The most numerous class of patients referred to the urologist for examination and report, on which may be based the question of compensability, are those with epididymitis. They usually have pus in their prostate and seminal vesicle juice obtained by massage; whether this preceded or was caused by the infected epididymis is not always easy to determine. Others have morning drop or cloudy first glass, often containing gonococci. Most have undoubtedly latent or active infection of the prostate, seminal vesicles or urethra, or any combination of these. Others have, in addition, infected urine from other causes, as in case of pyelonephritis associated or not with stone or tuberculosis or, as in the case cited above, hypertrophied prostate. The latter was riding in an interurban bus which suddenly swerved into a shallow ditch, injuring no one, but shaking up the passengers a bit and giving them a scare. This happened just out of San Diego. The old gentleman had been getting up at night to urinate for several years, and he had been in the habit of urinating frequently in the daytime. No doubt he was considerably dulled by reason of the excitement, and he didn't attempt to urinate again until he got to River-

side, sixty miles farther on, at which time he had difficulty. He came on to Los Angeles, developed more dysuria, then epididymitis, after which he was referred by the State Compensation Insurance Fund for examination. He was 70 years old, had a greatly hypertrophied prostate, his urine full of pus, and had a residual of six ounces. He had not been physically injured at all in the accident. It appears to us that in practically every suddenly occurring case of epididymitis in industrial accidents there is a latent or active infection in the urinary tract or its adnexa, or more rarely a focus of infection elsewhere in the body from which pyogenic organisms are carried through the blood stream to the more or less susceptible epididymis. In other words, if there is no existing source of bacteria, even though there is an injury to the testicle or epididymis, inflammatory reaction will not result.

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DISCUSSION

GRANVILLE MACGOWAN, M. D. (Brack Shop Building, Los Angeles)—I have given careful consideration to the opinion and advice of Doctor Day, with relation to traumatic injuries to the organs concerned in urination as set forth in this article. It is not usual that those who have to look after industrial accidents have sufficient experience with the surgery of the urinary organs to decide, without embarrassment, upon the best method of procedure in cases of grave injury. To avoid prolonged invalidism, sometimes lifelong, often to save life, for the injured person, and always to save the money of the employer or the insurance carrier, an intelligent decision as to what to do should be quite promptly made. This article of Day's, let us hope, may serve as a guide to those of less experience.

CHARLES P. MATHE, M. D. (Phelan Building, San Francisco)—Doctors Day and Martin have given us a very good resume of the treatment of injuries to the urinary organs sustained in the industries. They have pointed out the importance of conservatism in the treatment of renal injuries, such conservatism often saving the kidney by avoiding nephrectomy. Recently, in a spontaneous ruptured hydronephrosis due to complete block at the ureteropelvic junction by a wedge-shaped stone with tumefaction of the affected side, severe jaundice was noted. The urine was contained within Gerota's fatty capsule, and had caused tumefaction, pressing on the gall-duct. Following operation, by which about 120 cc. of urine was liberated from the fatty tissue surrounding the kidney and the stone removed by pyelotomy, the jaundice entirely cleared up. This is significant because one might confuse this symptom for gall-bladder disease.

Acute symptoms in persons affected by prostatism and movable kidney developing after accidents often occur. The average layman is prone to blame his affliction to an accident. How frequently does one woman attribute a breast cancer to an injury, and another a tubercular knee to the trauma of a fall. I have seen acute retention develop in prostates due to congestion of the gland following excesses in alcohol or voluntary retention of urine over a long period of time.

The question of the influence of trauma on the production of movable kidney was not discussed. It would be interesting to have the opinion of the authors on this diversified subject. J. J. Bell of England, who has had a large industrial practice in a manufacturing town, states that he has observed three hundred movable kidneys develop in girls whom he claims were employed too early in life, stood for long hours, and bore heavy weights. The girls having a congenital shallow, funnel-shape renal niche, however, were the ones usually developing the nephroptosis. Harris, on the other hand, doubts the sudden or acute origin of movable kidney, and states in order that a normally fixed kidney be injured, crushed or displaced, it is accompanied by a laceration of the perirenal tissue. He does not voice his opinion on repeated trauma or strain.

The authors have pointed out that, in order to have epididymitis resulting from a trauma, there must be a pre-existing source of infection. I have seen normal uninfected athletes repeatedly injured in the testis by a fast-moving hard rubber handball, causing tremendous pain at the time of injury, fail to develop acute epididymitis. On the other hand, an epididymis previously infected, subjected to the slightest trauma, often develops inflammation.

MILEY B. WESSON, M. D. (Flood Building, San Francisco)—This paper is an excellent and timely one, and is most instructive to the surgeon who sees an occasional industrial case. Two points are brought out that are vital ones to the insurance carriers, one being the question of responsibility for traumatic epididymitis and the other the treatment of closed traumatism of the kidney.

Any person with a prostatitis or seminal vesiculitis has a potential epididymitis, which may flare up after any sudden exertion, be it jumping on a street-car, falling off a scaffold, lifting a heavy weight, or receiving a direct blow on the testicle; whereas the same injury in the ab-



sence of an infected seminal vesicle will not affect the epididymis. In other words, it is very doubtful if epididymitis should ever be considered an industrial injury.

The treatment of rupture of the kidney has not yet been standardized, and unfortunately those organs are being handled today as were ovaries a generation ago, when it was a fad to remove them for trivial reasons. Insurance carriers want, when possible, their risks put back to work with both kidneys. Of all the internal catastrophies a ruptured kidney treated under modern conditions offers the best prospect of a complete recovery. In those unfortunates with a single kidney a severe injury to that organ is probably always fatal. The indications for exploration are (a) immediate severe renal hemorrhage which endangers the patient's life; (b) steady hourly rise in pulse rate; and (c) continuous moderate hemorrhage over many days, with consequent anemia. Conservative surgery consisting of gauze packing and drainage may be sufficient. The recognized indications for nephrectomy are (1) tearing of the renal pedicle; (2) laceration of the kidney in several places; (3) a tear extending toward the renal pelvis in a kidney whose short pedicle prevents delivering it so as to expose the rent for suturing; (4) an extensive tear in the renal pelvis which cannot be repaired or a complete tear across the ureter; and (5) hydronephrosis or other severe disease of the injured kidney.

Aside from severe hemorrhage there is no other justification for operation except infection. Since hematomata are easily infected, faithful supervision of the case is absolutely necessary if conservatism is attempted.

I have recently seen five cases of acute traumatic rupture of the kidney, all of which recovered under expectant treatment and were promptly returned to full duty, with sterile urine. One case had hematuria for thirty-three days, and the bleeding was stopped by injecting by gravity with a twenty-four-inch column of 13½ per cent sodium iodide solution to make the accompanying pyelogram. At that time the function of the damaged side was 50 per cent normal (total phthalein now normal). A sixth case was first seen six months after injury, and the pyelogram showed the scar of a complete perpendicular tear that had destroyed the middle calyx. This kidney was saved, although all rules of procedure were violated; the patient fell three feet and had hematuria; for twenty-two days he was treated for pneumonia because of the leucocytosis and fever, then was operated upon by a general surgeon because of a tumor mass in the left lumbar region the size of a "small watermelon," and a "gallon of urine" was evacuated; cystoscopy seven days later showed that all of the urine from the affected kidney was being discharged through the drainage tube, and the opposite kidney was infected. This man is back at work with two kidneys, both uninfected, and the damaged one has a function of 50 per cent normal.

Doctors Day and Martin have clearly shown that the mortality of traumatic rupture of the kidney has been reduced to a vanishing point by: (1) Operative intervention for the arrest of hemorrhage which otherwise rapidly proves fatal; (2) an appreciation of those signs which heralded the failure of expectant treatment; and (3) the prevention of infection.

USE OF SODIUM THIOSULPHATE IN METALLIC POISONINGS *

By GEORGE F. ROBERTS, M. D., Salt Lake City, Utah, AND
ANDREW J. HOSMER, M. D., Midvale, Utah

Sodium thiosulphate is the logical drug of choice in the treatment of acute and chronic poisonings by a group of the heavy metals.

It materially shortens the length of disability caused by these poisons.

Moist applications of a 1 to 2 per cent solution of sodium thiosulphate are beneficial in the treatment of burns and dermatitis caused by arsenic and mercury.

DISCUSSION by Gayle Mosely, Los Angeles; C. O. Sappington, Oakland.

FOR many years chemists have used non-metallic sulphur as a precipitant for a group of heavy metals, among which are found arsenic, mercury, lead, copper, bismuth, and zinc. Toxicologists, however, apparently overlooked this precipitant action of non-metallic sulphur, and it is of only recent date that some of the non-metallic sulphur groups have been successfully used in medicine as a precipitant for these metals when taken into the body, either as a means of attempting death as a therapeutic agent, or as the result of occupation.

The chief non-metallic sulphur derivatives are calcium sulphide, calcium sulphite, and sodium thiosulphate. Sodium thiosulphate is a white crystalline substance slightly alkaline in reaction, and readily soluble in water. It is prepared by heating sulphur with sodium carbonate, dissolving this resultant in water, filtering, boiling the filtrate with sulphur, refiltering and concentrating. It converts all of the

soluble toxic metals mentioned into insoluble non-toxic compounds.

The work on which this report is based, covering the treatment with sodium thiosulphate of acute and chronic poisonings by metals of this group, has been carried out at the Salt Lake County Hospital, St. Mark's Hospital, and the plant of the United States Smelting and Refining Company at Midvale, Utah.

The first cases we will report are those of two typical ones of arsphenamin dermatitis.

Case No. 1—Mr. J. H., American, age 53. Gave a four plus Wassermann test. He had a chronic syphilitic osteomyelitis, which had been operated upon several times, with a resultant suppurating fistulae. He was given .400 of salvarsan. In five days this dose was repeated. The day following this dose he developed a macular rash upon the face and hands. The next day the entire body was red. His hands, legs, and face were swollen. There was a serous exudate involving principally his face and arms. He was immediately given sodium thiosulphate .500 intravenously in 20 cc. of water. The following day he was given .900. With the second dose his symptoms began to disappear. By the time he had received five doses his symptoms were gone, and by the twelfth day he had completely recovered.

Case No. 2—Mr. W. W., age 52, was suffering with a syphilitic gummas of the arm and leg. Anti-syphilitic treatment was started. He received, covering a period of two months, nine doses of salvarsan. The first course consisted of six doses, and the second three. Three days following the last injection the skin of the face and neck became red, dry, and itching. Two days later the eruption spread to cover his body. The skin was red, swollen, and weeping. The first day he was given .3 gm. of sodium thiosulphate intravenously, the second day .3 gm., the third day .45 gm. By this time the edema had practically disappeared and the redness was diminishing. He was given subsequent doses of .6, .9, 1.2, and 1.8 gms. By the fifteenth day his symptoms had all disappeared and his skin was normal.

These cases illustrate the effectiveness of this preparation in shortening an attack of arsphenamin dermatitis from two months or longer to as many weeks.

The success which we have had in the treatment of local dermatitis and burns due to the external application of arsenic have been equally as gratifying, as has that of treating arsphenamin dermatitis. These cases are too numerous to tabulate, and one case will probably suffice for the entire group, as all have reacted practically the same.

Case No. 3—Mr. C. P. O., American, age 37, employed in the bag-house at the smelting plant. He complained of stiffness of arms, legs, fingers, and toes. The exposed surfaces of his body were very red. There were several ulcers on his hands. Lotions had been applied to the skin, and ointments and boric acid dressings to the ulcers. Very little progress was noted. The skin continued to itch and burn, and the ulcers refused to heal. He was given six doses of sodium thiosulphate intravenously, ranging from .3 gm. on the first day to 1.8 gms. on the sixth day. By the sixth day the redness of the skin had diminished, and by the eighth day the itching had all disappeared. The stiffness and soreness of the muscles had completely gone. The ulcers on the hand had been treated additionally by moist applications of sodium thiosulphate and a solution of the drug had been given by mouth. The ulcers rapidly cleared and by the end of the second week had completely healed.

Previous to the use by us of sodium thiosulphate, the men who worked in the bag-houses and arsenic plants were required to take a shower and a complete change of clothing when coming off shift. Despite these precautions, there were numerous arsenic

*Read before the Salt Lake County Medical Society.

burns and arsenic dermatitis. Noting the very favorable effect of solutions of sodium thiosulphate externally, we recommended that the employes in the bag-house and arsenic plants be required to take a daily shower in a solution of sodium thiosulphate. The men are now required, when coming off shift, to take a shower bath from a tank containing a 1 per cent solution of sodium thiosulphate. After this they then take their cleansing bath and change of clothing. They are also given an ointment of 1 gm. sodium thiosulphate to the ounce. This is put in the nostrils, around the eyes, and in the ears. Since the introduction of these precautions, arsenic burns, dermatitis and irritations of the nose and eyes, and abdominal colics, have become the exception rather than the rule; the men are happier, do better work, and little complaint is heard concerning their occupation.

Our experience with acute and chronic lead poisoning has been more phenomenal than has been that of arsenic; in fact, it has now become the routine that all men applying for treatment and complaining chiefly of vague abdominal pains, even before the blood shows any change, are immediately given intravenous doses of sodium thiosulphate, with the result that, after two to three doses, they are completely free from pain. As with arsenic, so with lead, these cases have been too numerous to give a complete tabulation here, but two cases, one from the smelter and one from a city plumber, will probably suffice as typical group pictures.

Case No. 4—Mr. J. S., Serbian, age 40, had been away from duty for one week on account of abdominal pain. His family physician had used all of the better known remedies for lead poisoning, with practically no effect. At the beginning of the second week he applied to us for treatment. The first day he was given 1.2, 1.6 and 1.8 gms. of sodium thiosulphate intravenously. The second day the dosage was repeated. By the third day his pain had all disappeared. The third day he was given two doses of 1.6 and 1.8 gms. each. The fifth day he returned to work a well man, and has not applied for any treatment since that time.

Case No. 5—R. J., negro, plumber, age 32. For two months he had been practically incapacitated on account of abdominal pain. One month of this time had been spent in hospitals. On admission to the county hospital, he was in such pain that his thighs were almost completely flexed on his abdomen. His bowels had not moved for four days. He was given $\frac{1}{2}$ grain morphine, 2 ounces of magnesium sulphate, and three doses of 1.6 gms. each of sodium thiosulphate the first twenty-four hours. The next day his pain was greatly relieved. The sodium thiosulphate was again repeated. The second day his pain had practically disappeared. The third, fourth, and fifth days he was given two doses each day of 1.2 gms. By the sixth day his pain had all gone, and he left the hospital to return to his work.

Our experience with mercurial poisonings has not been as extensive as it has been with arsenic and lead, but we believe that the results have been sufficient to warrant the recommendation that this chemical be kept on hand in all emergency hospitals where a dose could be immediately given in any case of mercurial poisoning.

Case No. 6—Mrs. J., American, age 23, took by mouth thirty 1-grain tablets of bichloride of mercury. She was found about four hours later. She stated that she had vomited about one hour after taking the tablets. She was taken to the Emergency Hospital, where she was given a stomach lavage, and later was brought to the County Hospital. At this time she was passing blood from the

bowels and vomiting blood and bile. The urine was scanty and smoky. The abdomen was distended and tender, especially over the ileocecal region. By March 1 the tongue was so swollen that it practically filled the mouth. The teeth were loose and there was marked necrosis of the gums. March 7 she aborted a six weeks' partially macerated foetus. March 8, patient in partial coma. Refused all food or liquid by mouth. March 10, .3 gm. sodium thiosulphate was given intravenously. March 11, 45 gms. March 12, 6 gms. March 13, 9 gms. March 15, 1 gm. March 17, 1.2 gms. March 19, 1.8 gms. By March 11, the day following the first dose, the patient was some brighter, the tongue not as badly swollen, and she asked for food. March 15, appetite good. Tongue decreasing in size. Teeth very loose, but necrosis of gums is improving. March 20, tongue practically normal. Gums greatly improved. Loose teeth and some necrotic bone removed. April 1, sent to the county jail. The mouth is a little tender, but otherwise she is practically normal.

Case No. 7—J. B., American, age 24, took two tablets of bichloride of mercury, $7\frac{1}{2}$ grain, in mistake for other medicine. He discovered his mistake in about one hour. A stomach lavage was immediately given and an intravenous dose of 1.6 gms. of sodium thiosulphate. This dose was repeated in four hours. The following day the urine gave a test for mercury. He was given eight doses averaging about 1.5 gms. of sodium thiosulphate. He made an uneventful recovery with no symptoms of mercurial poisoning, except a looseness of the bowels and some tenesmus.

Case No. 8—R. H., age 28, took 100 1-grain tablets of bichloride of mercury. He was found about one and one-half hours later. At this time he was vomiting blood, and passing blood from the bowels. He was sent to a hospital, where he was given sodium thiosulphate both by mouth and intravenously. The hemorrhage from the bowels, bladder and stomach continued, and he died twelve hours later.

Case No. 9—D. H., age 45, had scabies. He put one heaping tablespoonful of powdered bichloride of mercury in a pint of water and rubbed it on his body. When seen by us four days later he had a complete suppression of urine which had been present for two days; practically the entire surface of his body was burned. He was given sodium thiosulphate, 1 gm. intravenously every eight hours, and was given 15 gms. the first day by mouth and afterward 5 gms. daily. Moist applications of a 2 per cent solution were applied to the burned surfaces. The first two days after treatment was started he continued to pass blood from the bowels. This disappeared, but the bowels remained very loose. The burned areas greatly improved, but he died on the ninth day, having then had a complete suppression of urine for seven days.

Some of the earliest work on the use of sodium thiosulphate in metallic poisonings done by McBride and Dennie, they advocated the following dosage: .3 gm. first day; .45 gm. second day; .6 gm. third day; .9 gm. fourth day; 1.2 gm. sixth day, and 1.8 gm. the eighth day. We have found that these dosages can be greatly increased with a resultant more rapid modification of the symptoms and with no unfavorable manifestations or discomfort to the patient. In our earlier work we followed the dosage of McBride and Dennie, but in our later work we have been using, as an original dose, 1 to 1.2 gms. and as high as 1.8 gms., and have repeated this dose from two to three times daily. In all cases treated we gave sodium thiosulphate by mouth daily. The first day the patients were given 15 gms. in 500 cc. of water, and daily thereafter 5 gms. in the same amount of water, distributed as small drinks throughout the day.

CONCLUSIONS

1. Sodium thiosulphate is the logical drug of choice in the treatment of acute and chronic poisonings by group of heavy metals.

2. It materially shortens the length of disability caused by these poisons.

3. Its more general use by corporations where the health of employes is influenced by these metals should be urged.

4. Moist applications of a 1 to 2 per cent solution of sodium thiosulphate are beneficial in the treatment of burns and dermatitis caused by arsenic and mercury.

5. In acute cases of poisonings by these metals, the original dose of sodium thiosulphate should be 1 gm. intravenously given once, twice or three times daily, depending upon the symptoms.

6. In our series of over one hundred cases we have had no reactions in either large or small doses, and the only effect we have seen between the large and small doses is a more rapid amelioration of symptoms.

DISCUSSION

GAYLE G. MOSELEY, M. D. (National City Bank Building, Los Angeles)—The paper of Drs. Roberts and Hosmer serves to emphasize the importance of scientific medicine to industry. I hope in the near future some ethical way may be found to bring to the attention of industry the developments in medicine and surgery that have a direct relation to business. This could be done through the publications of the various trade associations. Any measure that serves to lessen the period of disability of a sick or injured employe not only lessens the suffering of the employe, but means an actual saving of money for both employer and employe. If the employe receives compensation during his period of disability it is much less than would be his actual earnings.

I am particularly interested in the results obtained from the sodium thiosulphate in lead poisoning. Notwithstanding the great advance made in the prevention of this trouble, it is still seen quite frequently in industrial cases. Many of the smaller concerns, such as small plumbing and painting contractors, take no special precautions to prevent this disease. Sometimes special conditions arise in large plants that cause much sickness and suffering to the employes, as well as expense to the employer, before the necessary steps can be taken to prevent the trouble. Within the past year one of the largest shipbuilding concerns in the bay district had a contract to tear down a number of Government vessels. These boats, of course, had all been painted many times with white lead, and the result was a very large number of cases of lead poisoning, some of which were quite serious. In fact, the condition was so bad that the insurance carrier had to cancel the risk, at considerable loss. This example is cited simply to show that lead poisoning is always with us.

It seems to me that early recognition of these cases is of great importance, in order that treatment may be administered before changes take place in the blood. Doctors engaged in industrial medical practice should always be on the lookout for cases of lead poisoning, as they often occur unexpectedly and from plants where ordinarily one would not expect such cases to occur. If the readers of the Journal will bear in mind that lead poisoning is much more common than generally supposed, and make early diagnosis and apply the treatment recommended in this paper, it will be another long step forward in showing the business man that he needs the doctor in this business.

C. O. SAPPINGTON, M. D. (Hutchinson Building, Oakland)—Drs. Roberts and Hosmer have brought to our attention a very interesting chemotherapeutic reaction. The administration of calcium sulphide to workers exposed to lead is not new, and is alluded to in the literature by Sir Thomas Oliver, Marvin Shie, Alice Hamilton, and other experts on lead poisoning; but the intravenous injection of sodium thiosulphate as a rational therapeutic procedure in cases of metallic poisoning, is new and certainly seems full of promise, in the light of the experience of Roberts and Hosmer.

It appears that sodium thiosulphate would be the logical drug of choice in acute and chronic cases of poisoning from the heavy metals, with the exception of chronic plumbism. We know from the excellent researches of the Harvard Lead Unit, which recently completed three years of experimental and clinical work on various phases of lead poisoning that, in the chronic type of lead intoxication, the lead is stored in the compact portion of the long bones. Various substances were tried, in order to ascertain just what was most efficacious in releasing the stored lead. Among other factors, it was discovered that a distinct change in the acid-base equilibrium toward the acid side would release the combined lead and set it free in the circulation so that it might be eliminated (of course, this is a dangerous process and may give rise to acute symptoms). Phosphoric acid in dilute solution was found to be the substance causing the setting free and excretion of lead in greatest amounts, as checked by estimations of lead in the urine and stools. I must confess my ignorance as to the relative merits of the thiosulphate of sodium as a compound which will cause lead excretion; but if it was possible that the insoluble, non-toxic compound formed by the thiosulphate could be eliminated by way of the urinary or gastro-intestinal tracts, after lead had been set free in the circulation by the use of dilute phosphoric acid, it would appear that the procedure of Drs. Roberts and Hosmer would be a very valuable adjunct in the deleating process in cases of long-standing chronic plumbism.

Dr. Moseley has spoken about the importance of lead poisoning as a problem of industrial medicine. I should like to add just a few words to what he has said. Many cases of lead poisoning are not recognized in industry because the industrial physician has not taken the trouble to familiarize himself with the progress made in the recognition of early signs and symptoms of this affection. Lead intoxication contributes over half of all the cases of poisoning due to contact with metallic substances used in various industrial processes. Where a lead hazard is definitely known to exist, certainly all the intelligence possible should be brought to bear on the aspect of prevention.

Transfusion of Lymphocytes—A patient in an advanced stage of generalized lymphosarcoma, whose white blood cells were 6400 per cubic millimeter and lymphocytes 15.5 per cent, was transfused by G. R. Minot and Raphael Isaacs, Boston (Journal A. M. A., June 6, 1925), with 450 c.c. of blood from a patient with chronic lymphatic leukemia, whose white blood corpuscles numbered 89,000 per cubic millimeter and lymphocytes 95.6 per cent. This transfusion produced no greater benefit than one with normal blood. The transfusion caused the percentage of lymphocytes in the recipient's peripheral blood to be increased immediately about threefold, and their absolute number nearly four times. The number and percentage of lymphocytes dropped almost to their pretransfusion level within thirty-five minutes of the completion of the transfusion, and reached this level within at least two and a quarter hours without a subsequent significant change. There was no evidence that the transfused lymphocytes were destroyed in the peripheral circulation.

Tryparsamide in Treatment of Neurosyphilis—Continued observation, with a larger number of cases and over a longer period of observation, has convinced Udo J. Wile and Lester M. Wieder, Ann Arbor, Mich. (Journal A. M. A., June 6, 1925), of the value of tryparsamide in producing clinical betterment in almost 30 per cent of a carefully selected group of cases. In the main, clinical improvement was not paralleled by striking changes in the spinal fluid, many of the most strikingly improved patients retaining, after protracted treatment, the changes in the fluid that were found at the original examination. In a small group of cases in which spinal fluid change was noted, clinical betterment was found to be associated with such improvement. When improvement occurred clinically, this was indicated in a large majority of the cases during the first and second courses of treatment.

BACKACHE IN GYNECOLOGY—A STUDY OF ITS FREQUENCY AND MEANING

By FRANK W. LYNCH, M. D., *San Francisco*

(*From the Department of Obstetrics and Gynecology, University of California Medical School*)

As a result of a preoperative and follow-up study of 608 gynecologically operated cases, we believe we are justified in the following conclusions:

1. Sacral or sacrolumbar backache constituted a complaint in 48 per cent of 608 gynecologic cases, being found in 8 per cent of the ovarian tumors, 31 per cent of the fibroids, 46 per cent of pelvic inflammatory disease, 58 per cent of suspensions, 75 per cent of relaxed vaginal outlets, and 23 per cent of procidentia.

2. Backache may be ascribed to gynecologic pathology because it remained cured for periods ranging from one to eight years in 77 per cent of the 48 per cent of the 608 gynecologic cases that had this symptom.

3. Backache which was cured by gynecologic operation occurred in the following percentages of the cases that had this preoperative symptom: 100 per cent in ovarian tumors, 84.5 per cent in marked retroflexions, 81 per cent in extensive vaginal relaxations, 73 per cent in chronic pelvic inflammations, 68 per cent in fibroids, and 36 per cent in complete procidentia.

4. Backache in gynecologic conditions is due chiefly to pelvic congestion.

5. Orthopedic conditions were responsible for between 17 per cent and 23 per cent of the total number of backaches of the series.

DISCUSSION by Alfred Baker Spalding, *San Francisco*; Titian Coffey, *Los Angeles*; Walter I. Baldwin, *San Francisco*.

MODERN medicine clearly demands that anyone who attempts a study of backache should proceed with the greatest caution, because the individual with backache usually has a number of co-existent conditions, any one of which may cause the complaint. The student of backache in gynecology must keep in mind that, while the symptom may arise from a number of bone, joint, visceral or pelvic lesions, it may come equally well from muscular or mental fatigue alone and without any associated condition, or from several of them in combination. Fatigue is often urged as the most common cause of backache, and, because nearly all gynecologic cases complain of fatigue, many writers urge that backache in gynecology is due rather to fatigue than to the pelvic condition.

In older times, backache in women was ascribed usually to some pelvic disorder and little attempt was made to find any orthopedic condition. More recently the pendulum has swung the other way, and the orthopedist now is often at fault for failure to rule out pelvic pathology by a routine vaginal or rectal examination. There is considerable excuse for this, however, since many contributors to medical literature urge that backache is only rarely due to a gynecologic condition. A review of several of these articles strongly suggests that many of them present the author's *impressions* rather than deductions from a series of well-controlled observations.

From the standpoint of pure theory, it seems reasonable to believe that pelvic disorders may cause backache, since women with comparatively slight pelvic pathology frequently complain of backache only at the time of menstruation or of menstrual

congestion. There is abundant proof to show that many women complain bitterly of backache until they are relieved by the cure of their dysmenorrhea, or of a marked uterine retroflexion. Backache in these cases is confined to the sacral or lowest lumbar region and most commonly is referred to the upper sacrum. It is not likely to be confused with the backache of fatigue which is usually referred to the dorsal region, but is frequently confused with orthopedic conditions.

Our study of backache in gynecology is developed from a series of 608 cases which have been studied sociologically and medically before operation, and who have been followed accurately for a minimum of one and a maximum of eight years. The cases comprise 505 laparotomies, many of which had vaginal work in addition, and 103 cases in which vaginal repair work only was done. In calculating our results, we have considered that when the patient was permanently cured of backache by gynecologic operation we were justified in concluding that the backache was due to the pelvic pathology, although there is the chance that the good result might be due occasionally to an improved general condition. We are fully conscious of the many errors that may attend such a paper, largely because the cases were not developed years ago primarily for this investigation. We realize that our series, to be of the greatest value, should be studied in similar groups of like postural defects, of stance, etc., as long since advocated by Dickinson, or after they had been arranged in various subdivisions, according to their nervous reactions. Our cases, moreover, should have been contrasted with normal controls. While we could have arranged a series on this general plan, it would have been too small to be of much value, and for that reason we have confined our study of backache to groups of similar pelvic pathology.

Backache in the sacrum or in the lower lumbar region was a pre-operative symptom in 48 per cent of the 608 cases, and did not constitute a complaint in 52 per cent of the cases. Our follow-up suggests that it was due to a gynecologic condition in 37 per cent of the entire series, since the complaint disappeared following operation and did not again constitute a symptom during the one to eight years' follow-up period after operation. This 37 per cent of the total series constitutes 77 per cent of the cases complaining of backache. There are, in addition, 17 per cent of the cases having backache whose backache was not cured by the operation, and another 6 per cent whose backache was only improved after operation. We believe these figures indicate that orthopedic conditions may have been responsible for at least 17 per cent of all the sacral lumbar backache in this series, and possibly for part of the 6 per cent of cases whose backache was only improved following operation. At any rate, the backache was diagnosed as orthopedic prior to operation in a very considerable number of cases in the series, all of which were included in this review which attempts a study of the frequency and meaning of backache in gynecology.

Our 608 cases consisted of 12 ovarian tumors, 60 fibroids, each tumor being of more than 8 cm. diam-

eter, 267 pelvic inflammatory diseases, 166 marked retroflexions, 56 generally relaxed vaginal outlets, including cervical lacerations and infections, and 47 cases of complete prolapse. The cases were first studied in the above divisions. In order to study the influence of injury and defects of the pelvic floor as a cause of backache, the various groupings were further subdivided as (1) the pathology was entirely intra-abdominal, or (2) presented only cervical pathology in addition, or (3) combined vaginal relaxations and cervical pathology, with intra-abdominal conditions, or (4) was confined entirely to cervical lacerations and infections, together with vaginal relaxations.

The pelvic inflammatory cases consisted entirely of chronic cases. They were studied in two general groups, accordingly as they were mild or more severe cases. The former consisted of 134 cases, in which at operation it was necessary to remove only one tube and ovary, or rarely both tubes and one ovary, with or without vaginal work in addition. Nearly all of this group presented posterior displacements of the uterus which were brought about by the inflammatory process. Such cases must be carefully distinguished from the non-inflammatory type of displacement, to which they bear no resemblance. The more severe type of pelvic inflammatories were represented by 133 cases, in which it was necessary to perform a hysterectomy. These were studied in groups of supravaginal (83), and panhysterectomies (50), subdivided again according to the treatment of the adnexal disease and vaginal floor.

Low backache was present in but 8 per cent of the ovarian tumors, in 31 per cent of the fibroids, in 46 per cent of the pelvic inflammatory cases, in 58 per cent of the retroflexions, in 75 per cent of the marked vaginal relaxations in women in the menstrual age, and in only 23 per cent of the complete prolapse cases. Taking the series as a whole, backache was cured by operation in 8 per cent of ovarian tumors, in 22 per cent of fibroids, in 33 per cent of pelvic inflammatories, in 50 per cent of retroversions, in 60 per cent of vaginal relaxations, but in only 8 per cent of the complete prolapse cases. Of the cases in which backache was a pre-operative symptom, the complaint was cured by the gynecologic operation in 100 per cent of the ovarian tumors, in 84.5 per cent of the retroflexions, in 81 per cent of the relaxed vaginal outlets, in 73 per cent of the pelvic inflammatories, in 68 per cent of the fibroids, and in only 36 per cent of the procidentias.

Detailed study of our cases shows that sacral-lumbar backache in gynecology follows closely upon chronic disturbances of the pelvic circulation. Thus, low backache is uncommon with uncomplicated medium size (more than 8 cm. diameter) ovarian tumors and fibroids unless there are degenerations, or incarcerations, or the fibroid is a submucous growth with hemorrhage as a prominent symptom. Backache is often absent even when the circulation is developing rapidly in quickly growing but otherwise uncomplicated tumors because there is, we believe, no chronic passive pelvic congestion. Backache often disappears when a rapidly growing uncomplicated tumor rises from the pelvis into the

abdomen, reminding us of the similar finding in the third and fourth month of pregnancy.

Added support is given to the above theory by study of the retroversions and retroflexions. By simple retroflexion we mean the retroflexions not complicated by pelvic inflammatory disease or by cervical or vaginal lacerations or infections; that is to say, the cases in which the grossly apparent pathology is limited entirely to the retroflexion. We are perfectly aware that there is not complete agreement that the so-called simple retroflexions and retroversions cause symptoms. We have, however, elsewhere *proved* by a follow-up study of a considerable number of cases that retroflexed uteri of the third degree cause definite symptoms when the uterus is enlarged, and the displacement has followed parametrial injuries during parturition; also, that the following conditions are factors in the development of symptoms: enlargement of the uterus because of chronic passive congestion, varicose veins in the broad ligaments, and the prolapse of enlarged ovaries into the pelvis. We do not believe that retroflexions of other types are a cause of symptoms.

An entirely different type of retroversio-flexions is found in pelvic inflammatory cases. In this group, the retrodisplacement is secondary and represents nature's effort to wall off a pelvic infection. The uterus is not usually enlarged, since the chief lesion is in the tubes or ovaries. Backache is not a frequent complaint in the latest stages of these infections, since the pelvic circulation has been cut down after the infection has become limited. Our study shows that backache was frequent in chronic pelvic inflammatory cases when the uterus was enlarged and congested, and there was frequent or severe bleeding. It is worthy of emphasis that backache was present in 58 per cent of the simple retroversions and in only 46 per cent of retrodisplacements associated with tubo-ovarian inflammation. The backache was cured by gynecologic operation in 85 per cent of the uncomplicated retroflexions, in 87 per cent of the mild inflammatories associated with adherent enlarged uteri in retroflexion or retroversion, and in only 64 per cent of the latest stages of the more extensive types of pelvic inflammations.

The influence of pelvic circulatory disturbance in causing backache is shown in another phase of retroflexion. A retroflexion which for years has caused symptoms will become symptomless after the menopause has cut down the pelvic circulation.

A review of the relaxed vaginal outlet and endocervicitis cases gave interesting findings. Backache was present in 75 per cent of women under 40 years who presented only this type of pelvic pathology. It was cured by gynecologic operation in 81 per cent of the cases. Study of our tables also shows that the percentage of backache is increased in any group of intra-abdominal pelvic pathology if the cases have vaginal relaxations in addition. In marked contrast to the findings in relaxed vaginal outlets are those in prolapsus, which is, of course, the last degree of vaginal relaxation. Backache in complete prolapse was present in only 23 per cent of the cases, and was cured by operation in but 36 per cent of them. This is opposed to a frequency of backache in 75 per

cent of the vaginal relaxations in the comparatively young, of which 81 per cent were cured by operation.

The marked difference in the percentage of backache in relaxed vaginal outlet cases and in those of prolapse can be explained only on the basis of circulatory restrictions and loss of function in the procidentia cases. Many of the prolapse cases stated that they had backache when they were younger and before the uterus "came down." The large number of backaches in procidentia remaining uncured by operation calls attention to the fact that these women usually have markedly relaxed or pendulous fat abdominal walls, with bad posture and other static conditions.

As a result of a pre-operative and follow-up study of 608 gynecologically operated cases, we believe we are justified in the following conclusions:

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4. Backache in gynecologic conditions is due chiefly to pelvic congestion.

5. Orthopedic conditions were responsible for between 17 per cent and 23 per cent of the total number of backaches of the series.

University of California Hospital, San Francisco.

DISCUSSION

ALFRED BAKER SPALDING, M. D. (Stanford University Hospital, San Francisco)—Doctor Lynch should be congratulated for his statistical study of sacral backache in women. No doubt to many gynecologists it will be interesting to learn that with a large group of clinic patients suffering from marked pelvic lesions, 52 per cent failed to mention sacral backache as one of their symptoms. From my clinic and private experience in gynecology, I had come to the erroneous opinion that practically all women in the child-bearing period have sacral backache.

Keiffer in 1900 described special cells found in the uterus of women which resemble ganglion cells of the sympathetic type, a majority of which are on the surface of, or near the uterine blood vessels of all sizes. Though existing throughout the mucosa they are especially found along the vessels and under the epithelium of the glands. Keiffer states that the uterine ganglia undergo certain changes as do those of the cerebrospinal system in general as a result of pathological changes within the uterus such as growths, suppurative conditions or inflammation.

The sacral plexus separated from the pelvic viscera only by the pelvic fascia readily receives its share of general pelvic infection. It is well to remember that after operation, these nerve changes being chronic, demand

many months of rest before returning to the normal. After the menopause or after operations or treatments which reduce or stop the periodic pelvic congestion, women are less disturbed with sacral pains.

I agree with Dr. Lynch that much relief can be given younger women by procedures which aim to lessen pelvic congestion. Also I agree with the statement that about 25 per cent of backaches are associated with conditions outside the pelvis, and when a patient complains of backache I urge that the doctor should examine her back. Some of our most grievous errors have been due to this oversight.

TITIAN COFFEY, M. D. (1136 West Sixth Street, Los Angeles)—The symptom and complaint of backache in women is one of the most trying and obstinate conditions the gynecologist or obstetrician has to deal with. Doctor Lynch's careful study gives us many interesting points and much of value in helping these cases.

His record of relief of pain by operation in selected cases is very encouraging, but we all know a certain number of cases are not relieved by operation. Many cases with extreme retroflexion of the uterus never complain of backache at all, while others, especially women who have borne children, may have a well involuted uterus in proper position following confinement with apparently no pelvic pathology and yet complain severely of backache. In these cases we must look for another cause for the trouble and we find it is frequently due to some focus of infection elsewhere, either in the teeth, the tonsils, or an unrepaired cervix giving rise to an endocervicitis. A more frequent cause, however, in my opinion, is the strain put upon the pelvis at the time of confinement, especially in operative cases where a large fetal head has come through a small pelvis either after a long hard labor or the use of forceps. Here we get a stretching of the pelvic ligaments, a relaxation of the pelvic floor following the delivery and a loosening of the ileo-symphyses. This later is frequently shown and the small amount of displacement that takes place by the x-ray picture. These cases should be referred to the orthopedist for necessary corrective measures. Frequently the backache will be due to improper posture or to flat-feet.

Again the same condition comes in women with loose, flabby abdominal walls that give practically no outward support to the intestines, and here we have a condition of weight pressing upon the pelvic organs which increases the discomfort materially, if the pelvic floor is overstretched and loosened and not giving the proper support.

In studying these cases we must always keep in mind the important point that Doctor Lynch brought forth in the first of the paper that many other causes than pelvic congestion may give rise to this condition.

WALTER I. BALDWIN, M. D., 380 Post Street, San Francisco)—Doctor Lynch is indeed to be congratulated for the presentation of such a splendid statistical paper on backache in relation to gynecologic conditions. While his statistics bear out the impressions held by many orthopedic surgeons, it is valuable to have such a splendid piece of work to give such impressions a basis of scientific fact.

That the disturbance of pelvic circulation is fundamentally the final factor in the incidence of "pelvic backaches" seems logical and is an established fact.

That the character of the backache should be determined is also important. In acute lumbosacroiliac backaches due to trauma the symptoms are nearly always exaggerated by menstruation, and where the patient has been suffering from dysmenorrhea, oftentimes pelvic treatment may be imperative before a cure of the symptoms can be had.

The large number of backaches encountered and cured by correction of relaxation in the pelvic floor in Doctor Lynch's series is indeed instructive. I believe this condition has probably not been given sufficient attention by orthopedic surgeons, whereas a reference to the gynecologist might have produced the result. Undoubtedly a closer co-operation between the gynecologist and the orthopedic surgeon is greatly to be desired, but there will always be cases where such consultation is difficult

or impossible to obtain. In such instances it may be noted, for instance, that pain localized in the midsacral area is almost always traceable to an intrapelvic cause in women, and to prostatic and seminal vesicle conditions in men. The back pain is reflex in character and may be projected at any point along the reflex arc of the root innervation of the particular pelvic organ involved.

A marked deviation of the spine to either side should indicate that there was an orthopedic condition, at least co-existent.

One cannot but feel in Doctor Lynch's debt for much enlightenment on a very important subject.

THE DOCTOR IN INDUSTRIAL MEDICINE

By EDWARD F. GLASER, M. D., *San Francisco*

Industrial medicine is with us and has come to stay, and every day the industrial physician or surgeon is coming to a more and more prominent position in the profession.

Industrial medicine is not simply a field for the ordinary practice of general medicine and surgery; it is a development which, in its broader sense, takes in preventive medicine.

The industrial surgeon of today believes in and advocates physical examination of all applicants for work and the keeping of exact records of those examinations.

Industrial medicine has an active business side requiring organization.

There is a struggle on now to prevent industrial medicine becoming an industry rather than a science.

The business manager for doctors is a somewhat abhorrent idea to me. It seems the last word in commercializing the profession.

There can be no finer contribution to society than speedily to return to their occupations those who, unfortunately, are overtaken by industrial catastrophies.

The final test of an industrial surgeon is the value of the service he renders. The capacity of the industrial physician to serve is measured by the man himself, his preparation, his vision, and most of all, his attitude toward his job.

DISCUSSION by E. C. Fishbaugh, *Los Angeles*; Philip Stephens, *Los Angeles*; E. W. Cleary, *San Francisco*; C. W. Clark, *San Anselmo*.

THE more one thinks about the subject of the doctor and industrial medicine, the more complex and involved it becomes. It may seem simple at first if you only consider the doctor and his material interests, while in fact, and in the larger human sense, the question has other important factors besides the doctor—there is the patient himself, the industry and the public, and these interests are all entangled with each other. The medical brain is trained to seek out a pathological condition, to diagnose it, to treat it, to cure it if possible, and receive adequate compensation for so doing. Rarely does the medical brain recognize any duty beyond that—rarely does it acknowledge any duty to the community. It is somewhat unfortunate that medical men are, by reason of the intensive study that they give their profession and the necessary limitations in the training at the medical schools, seldom endowed with a broad comprehensive constructive grasp or viewpoint on questions. Doctors are taught to understand scientific facts, but not the fundamental and ordinary things of life, which is preparatory to saying that doctors are handicapped when they come in contact with the highly trained executives of a commission, a corporation, or an insurance company,

just as they are, generally, in dealing with the legal profession.

Industrial medicine is with us and has come to stay, and every day the industrial physician or surgeon is coming to a more and more prominent position in the profession. Industrial medicine is young, but it is growing by leaps and bounds, and promises very soon to become one of the leading, if not the leading specialty of medicine. But it will call for and will produce a highly specialized, a differently constituted and educated doctor from the old family physician.

The doctor who merely accepts employment to render emergency services in cases of accident, and often to protect the interests of the employers as to claims, is not an industrial physician in the truest sense. This type was the old-time doctor who was primarily a first-aid man. It was this class of medical men who earned the stigma of the "company doctor" and did not command the respect of either the employers, the employes, or of his professional colleagues. This type, while we may always have some of them with us, still is gradually growing less, and the industrial surgeon forging forward to the foremost rank of the profession, is honorable and is honored and is rich in opportunities for human service.

Industrial medicine is not simply a field for the ordinary practice of general medicine and surgery, it is a development which, in its broader sense, takes in preventive medicine (sanitation in prevention of disease, control measures for communicable disease, safety first for prevention of accidents)—it takes in the rehabilitation of the injured man, the restoration as nearly as possible to his former place in the economic world. It must consider the means for better health and contentment of the workers, means for increased production and decreased labor turnover. The industrial surgeon of today believes in and advocates physical examination of all applicants for work and the keeping of exact records of these examinations. This examination, if done with the proper thoroughness, is of great value to both employer and employee. The industrial physician comes into intimate contact with almost every branch of the industry, not only with the required medicine and surgery, but with the safety and welfare departments, and should with the employment office. But on the other hand physicians and employers must realize that industrial medicine is, in a measure, a compromise between the ideals of medicine and the necessities of business. Physicians have reluctance in accepting the materialistic viewpoints of employers, and conversely have difficulty in persuading employers to accept their professional points of view. In approaching the compromise, the fact should not be overlooked that medical service in the industries, to be of the greatest possible usefulness, must benefit primarily the working people, and then the benefit to industry naturally follows and the industrial surgeon justifies his existence. But we must recognize that industry exists, not primarily for ideals, but for the production of an output for a profit.

Industrial medicine has an active business side requiring organization. The corporations and insur-

ance companies must have an income and are often concerned in that more than in the patient or his efficiency. They must think of getting the injured man back as quickly as possible and with the least possible expense. Of necessity, they must continue organizing and concentrating, learning to give humane consideration, as they find it pays. Organizations that have grown up must make terms to deal with the small employer, with the result that, in having to give much service, it must make the good doctor work too cheaply or must employ doctors lacking in experience and, therefore, cheap in price.

There is a struggle on now to prevent industrial medicine becoming an industry rather than a science. Where the cold commercial side is considered and emphasized, doctors with ideals do not care to go into it, or, if they do, they find soon they cannot express themselves. They must put one side, ideals, for money consideration in the creating of efficiency of business rather than that of science. As a rule, the doctor has no business training and cannot compete in the world of business as in the world of science. Unfortunately, sometimes the doctor's ideals of giving humane service are changed by the pressure of commercialism and by our social system. He desires to meet the standards of his neighbors—must have an automobile, play golf, and have membership in clubs.

The business manager for doctors is a somewhat abhorrent idea to me. It seems the last word in commercializing the profession. Advance in medical science has been along the humane, and not the commercial line, and the great things in medicine have been done by individuals with a purpose. Still, the American people are running wild over organization. William Allen White said that if two Americans fell out of a balloon they would form some sort of a group before reaching the ground. In groups, too often, one or two big men who are outstanding are used for advertising purposes and then many small men to fill up. In groups there are always some men who have made their reputations outside the group, and with their reputations bring up the group standard. The group argument to employers may include more scientific service, but always does include cheaper medical service and saving of money. It has to be recognized that the financial prospects in industrial medicine are not always alluring. However, it is far better to have a fixed income under workmen's compensation than to have to send bills to injured and out-of-work employees who are unable to pay. The charging of the cost to industry, either directly or through insurance, is so sound that some of us wonder why it wasn't seriously thought of long before a short decade ago. The discerning doctor would strongly oppose a return to the old way of doing business. He recognizes that whatever benefits society places him, in the long run, in a position where he is the gainer.

Another factor in giving emphasis to the doctors' status in industrial medicine came out of the World War. Surgery for war wounds and surgery for peace wounds are not dissimilar—in fact, their genesis is the same. The quick attention, the instant use of the surgeon's instruments—these and other re-

sponses to urgent needs become reflected in fewer casualties and more repaired human beings. It has been recognized that the more specialized the treatment, the more dependable the outcome. This naturally followed the experience that can only come from doing the same class of work over and over and meeting the exigencies of such work.

So out of the horrors of war has come an appreciation of the relationship of war and peace in destroying or marring human beings. The purpose to restore one group to efficiency in order to fight can be followed to an even better end by planning to place the second group back into employment to resume their positions.

There can be no finer contribution to society than speedily to return to their occupations those who, unfortunately, are overtaken by industrial catastrophes. This gives the industrial doctor a unique status. If he is big enough to grasp his opportunities and follow the gleam, he will have the real satisfaction that follows work well done.

There are several outstanding factors or essentials that apply to the doctor in industrial medicine.

First—He must know his business. Absence of ability, of technical knowledge and failure to have learned from experience, leave behind in their wake too many losses that cannot be overlooked. This is especially so in industry, because society has laid down well-defined obligations for the treatment and care of injured workers, and the personal relation of doctor and patient has added to it a state dictum that is mandatory in character.

Second—The doctor in industrial medicine needs a human understanding, a healthy outlook on his fellow-citizens. He should realize his position is more than the one generally assumed between doctor and patient. He should realize the importance of winning men by fair treatment, by taking them into his confidence, so far as is possible, and by instilling into them self-reliance and respect for themselves.

Third—Care must be taken to eliminate the least taint of the charity idea in connection with surgical and medical treatment. Industry pays the bills, including the doctors' bills, but the hurt men make the painfully definite contributions of arms and legs and eyes and sometimes of life itself. The doctor must avoid any appearance of indifference or superiority to these generally super-sensitive patients. The injured man deserves a certain uniform courtesy, and he is sensitive to sympathy, which is valuable if of the wholesome type.

Fourth—The doctor in industrial medicine needs to keep up with the best in his profession, to find out the superior practices of others and to willingly give whatever may prove of gain in securing the great purpose of repairing the injured. He must be a student of prevention of disease and a follower of safety first in order to aid in the prevention of accidents.

The final test of an industrial surgeon is the value of the service he renders. The capacity of the industrial physician to serve is measured by the man

himself, his preparation, his vision, and, most of all, his attitude towards his job.

391 Sutter Street.

DISCUSSION

ERNEST CLYDE FISHBAUGH, M. D. (Pacific Mutual Building, Los Angeles)—Doctor Glaser has emphasized many of the salient features in the successful utilization of the doctor in industrial medicine. The doctor in industrial medicine is here to stay. Many physicians in California have already specialized in this branch of medicine. Others will have to give greater study and preparation for industrial work or be supplanted by more capable men.

The small compensation permitted by the state does not permit most physicians to specially equip themselves for this branch of practice. The small remuneration requires the employment of underpaid and oftentimes poorly trained assistants.

The business manager is obnoxious to many progressive and successful practitioners, but the definite remuneration is oftentimes most attractive to the poorly trained and less successful physician.

The personal qualifications as so admirably stated by Glaser are essential to the successful practitioner of industrial medicine.

This paper is timely and more such communications should be encouraged in order to advance the status of the present day industrial specialist.

PHILIP STEPHENS, M. D. (1136 West Sixth Street, Los Angeles)—The tendency toward commercialism in all phases of the industrial question is strong, and growing stronger each year. Groups, or so-called "service corporations," which are rapidly appearing in the field and competing with each other for business, are using, I am sorry to say, methods for fighting competition which apparently tend to squeeze out the individual industrial surgeon and his personal contact with the working man.

Doctor Glaser's plea for the old ideals, with their human touch, which under any and all circumstances must be preserved, is timely. We must preserve these ideals if we wish to hold the respect of ourselves, and all who must necessarily be served, and this great and good compensation law.

The traumatic surgeon or the general surgeon doing traumatic work must necessarily, under the present compensation law, get most of this class of work from either the industrial employer or the insurance carrier, and it behooves the industrial surgeon with special training along these lines to be a better general surgeon fundamentally, and the general surgeon to strive for more adequate knowledge and practice necessary to care for the injured man.

Many a good general surgeon falls far short in his effort to treat the industrial case, by reason of his failure to recognize certain fundamental principles, incident to what we might term ordinary routine, so absolutely necessary to make industrial work successful. They do not, and apparently will not, furnish accurate descriptive, anatomical records and reports of cases. Added to this is a total disregard for necessary promptness in rendering report at time of accident, with promptness thereafter in reporting progress of the case.

Another failure, as Glaser has cited, is due to the surgeon's lack of human touch with his patient. It is absolutely necessary for him to get the viewpoint of his patient, and he must use rare tact and judgment in the handling of this maimed and injured one who is making his sacrifice in the great onward rush of progress.

Doctor John Moorehead has said of the traumatic or industrial surgeon that he has long been of the opinion that cases of injury have not received the same care and attention accorded other surgical patients, and has often realized that a properly treated Pott's fracture or infection of the hand is a far greater manifestation of surgical art than the successful removal of an internal appendix.

E. W. CLEARY, M. D. (177 Post Street, San Francisco)—Doctor Glaser has given us a valuable paper. The doctor in industry should be a specialist in understanding

and knowledge of the problems peculiar to the medical care of workmen. There is, however, nothing in the position of the doctor in industrial practice which justifies his considering himself sort of super-specialist. The oculist, the physician, the dermatologist, the neurologist, the urologist, the orthopedic surgeon and, in a lesser degree, other specialties in the field of medicine should be recognized by the doctor in industry just as readily as if he were in private practice. A doctor may specialize in industrial practice and, at the same time, be well qualified as a specialist in any one of the above fields, but not in all of them at the same time. There is no greater menace to proper standards of industrial practice than the doctor in industry who treats every patient himself.

At this time the field of industrial surgery is particularly menaced by a pernicious type of organization which is aimed not at the achievement of any high degree of efficiency of treatment of the injured, but at the control of a large volume of work. The promoter of such an organization usually derives a profit from the activities of a corps of hack-workers whose handling of the injury is likely to be devoid of sympathy and low in efficiency. Such promoters contend that their position toward their hired staff is similar to the ordinary and time-honored relation of the chief to his assistant. The relations are, in no true sense, analogous. It is true that the chief pays his assistant a salary and charges the patient for the assistant's services, but the assistant has a very valuable additional compensation in the teaching which the chief gives him out of the wisdom of his more extended experience. The patient, too, is better served where he gets the benefit of the quick keenness of the younger man and the mature wisdom of the elder. The dealer in industrial medicine brings to his hired staff no valuable teachings. The doctor on such a staff gets nothing but his salary, and the patient gets, as a rule, a perfunctory service, because the man who renders the service gets less pay for it than even the small fee which the industrial schedule allows.

Wherever sharp business practice has lowered the fee of the doctor who actually serves the patient, whether such reduction of fee be by directly cutting the price below the accepted schedule or by diversion of a part of the recognized fee to an organizer or promoter who does not serve the patient, industrial surgery is degraded and the patient is wronged.

Glaser has mentioned the important results of the war surgery. There is at present a deplorable tendency on the part of many doctors in industry to ignore the better methods taught by the war experience wherever these methods are more expensive and time-consuming. I agree thoroughly that, granted proper training, the most important question concerning the doctor in industry is his attitude toward his job. Whatever his special field of experience, no doctor should take up industrial surgery unless he is willing and able to make industrial surgery a major consideration.

Finally, although the peculiar situations which occur are often difficult to handle and sometimes embarrassing, there is nothing in the relations of the doctor in industry which either justifies or makes necessary a departure from the proven and time-honored ethical standards of his profession.

C. W. CLARK, M. D. (San Anselmo, California)—The paper by Doctor Glaser is worth the earnest consideration of all physicians and surgeons of our state and nation, as industrial medicine is here to stay. Under present conditions the employer must protect himself, and the wage-earner must be protected, so compensation insurance has made adequate protection for both possible.

All goes well until the accident happens, then the physician is called. He then must decide the issue with the unfortunate one, as a physician to the patient; but, on the other hand, he must make detailed reports to the insurance carrier and compensation boards (details distasteful to the busy physician).

As the case progresses reports are constantly being required. These reports of necessity require time to fill out. The compensation is not sufficient for the best men to bother with. So in the course of events, the poorly trained, the hack members and the unscrupulous doctors take up the industrial side of medicine. They make out

reports and care for cases, or hire it done as if they had no interest in them.

The innocent victim resents this and, in turn, goes to his own physician, or he may go to some cultist, and the treatment he has received is reflected by him upon the profession at large, thus making a bad impression.

The cold commercial side of industrial medicine is not pleasant to most scientific men, so the best men in industrial medicine must not shirk, but assume the responsibility as any other. They must render the best possible service with the aim in view of getting the injured man back to work as soon as possible with the minimum of disability.

Carelessness and ignorance in treating injuries cause much more suffering and loss of time than is necessary in many cases. Thus, the insurance companies soon discover where they get the best service, and the unfit company doctor will, no doubt, soon be replaced by the specially trained industrial surgeon. There seems little doubt but that this will be developed into a specialty, as the others, in the very near future.

RADIOGRAPHS OF THE HEAD IN CHILDHOOD FROM THE CLINICAL STANDPOINT

By H. DOUGLAS EATON, M. D., *Los Angeles*

Radiography of the head in childhood is a valuable aid in diagnosis, both in chronic neurological and accident cases.

Up to the present time erosion of the sella is the only well-established evidence of pituitary disorder.

Roentgenologic evidence of pressure does not satisfactorily correlate with clinical findings.

DISCUSSION by E. B. Towne, *San Francisco*; Cecil E. Reynolds, *Los Angeles*; R. G. Karshner, *Los Angeles*.

DURING the last three or four years we have been making radiographs of the head in all children referred to the neurological department of the Children's Hospital in Los Angeles. The cases radiographed include both outpatient and inpatient cases, irrespective of a history of accident or injury. A comparison between the x-ray picture and the clinical findings has been undertaken, with the hope that it might lead to something of value, either in diagnosis or treatment. This paper is an analysis and discussion of our findings, and is to be considered as a preliminary report. Many interesting leads were opened up which will be the subject of further study.

The x-rays were reviewed and diagnosed without reference to or any knowledge of the clinical history of the case. The evidence seen on the x-ray plates was then correlated with the clinical records.

Roentgenology of the skull is a form of investigation, an aid in neurological diagnosis, that has advanced greatly in use and in value in the last few years. Prior to this time, the technical difficulties in taking satisfactory pictures, particularly in children, interfered with the use of this procedure.

The early radiographs of the skull were directed principally toward an attempt to study the sella turica. Oppenheim first called attention to the possibility of this work in 1899, and noted the changes produced in the sella by pituitary growth. Other early workers, as Erdheim, Kohler, Jaugeas, Fuchs, Beclere, together with some English workers, notably Holland, continued this work. In 1912, Harvey Cushing gave a complete discussion of radiographs of the sella in his work on the pituitary body

and its disorders. Fearnside, Keith, Gilbert, Scott, Finzi, Hampson, Johnson, and Schuller, as well as Heuer, Dandy, and Carr, have also written extensively on the subject.

During the last few years, while these special studies have been continued, there has been an increased appreciation and study of radiography of the skull as a whole. In the present paper, Schuller's classification, as found in the English translation of his work by Stocking, has been used. In our series of cases, however, the variety of recognized lesions was found to be much less than those included in Schuller's classification. The pictures were taken at a tube distance of approximately twenty-two inches and an exposure varying somewhat on account of the child's movements, but about two and one-half seconds. All the patients were under 14 years of age, and a great many of them under five, so there has been considerable difficulty in taking satisfactory pictures. No ventriculograms are included in this study. In all, 207 x-rays of the head were taken, and 101 of these, or roughly 50 per cent, we felt should be classed as normal skulls, from the radiological standpoint. All authorities, as mentioned by Schuller and Pacini in their review of skulls from the anthropological standpoint, recognize the fact that normal skulls show marked variations in size and shape. As guides to our estimation of size and shape, the relation of the fissures and the proportion between the vault and base were used. The writer does not feel competent to discuss Pacini's work on angles, in relation to the sella turica and pituitary disorders which was published in 1922 and for which he received the Leonard Research prize. In a review of the literature, however, many competent observers have been unable to confirm his work.

Anomalies, in shape and size of the skull, may occur as the result of disturbances in development. In our present series we found nine such cases, of which five were actual defects; one of these only being due to surgery. In two of these cases the records were incomplete. Of the remainder, four were girls and three were boys. Four of the cases showed extra sutures, in the frontal or parietal bones, without clinical symptoms. Two cases showed clinical evidence of increased intra-cranial pressure; a meningocele with an associated spina bifida and a megaloccephalus, hydrocephalic type, also showing a meningocele.

Ten cases of size and shape variations produced by disturbance in growth, this disturbance in its turn due to anomalies of the contents of the skull, were found. Three of these were microcephalies, seven megaloccephalies; the latter, with one exception, associated with hydrocephalus. Two of the three microcephalies were associated with impairment of mentality; in the last case, a malnourished child of a year's age, the x-ray was taken as part of a rachitic study. It is probable that this patient was also deficient. The megaloccephalies were of interest only in confirming other observers that the cause of this condition is practically always hydrocephalus. All these patients showed evidence of pressure clinically, indeed the x-ray was of only confirmatory value in the diagnosis. The seventh case of megaloc-

cephaly occurred in a boy of six. Here the diagnosis was a tumor in the mid-brain region. This patient showed optic atrophy, increased pressure of the spinal fluid, severe headaches, and projectile vomiting, with absence of evidence of infection. Operative procedure and autopsy study were refused.

There is an interesting class of cases due to premature synostosis of the skull. Various authors use various classifications for this group. Pacini, for example, quotes Luceas as using a classification involving twenty-four varieties of shape changes due to this condition. It seems to the writer, on the basis of the present study, sufficient to group such skull changes under the three headings of dolichocephaly (long head); brachycephaly (short head); turriccephaly (turret head), the latter preferable to the oxycephaly (or steeple head), which Sutherland and other writers have described.

Schuller quotes the following figures as normal for the obliteration of the sutures. The base at birth. Spheno-occipital at 13, facial at 30 to 35, and the remainder soon after 35, with the exception of the sagittal and coronal, which begin between 50 and 55. The cases in our series obviously show a great variation from these figures.

The definite etiology of this condition is not known. It has been suggested that it is the result of the pressure of the edges of the bone against one another, occurring in utero or during labor, or that it is due to a constitutional skeletal disease, such as rickets or syphilis. The clinical records of our cases do not warrant us in drawing definite conclusions on this point. Sutherland groups his cases as being congenital, acquired during the first few months, or acquired from the second to the sixth year, but throws no light on the etiology. In our series we found only three definite cases. One brachycephaly (or short head) and two turriccephalies (or turret heads). One of the patients was a definite mental defective, with a possible mild hypo-pituitary syndrome. Another was quite a marked case of rickets, while the third showed a defect in the occipital region, with a meningocele, a habit spasm and two cervical ribs; this child was normal mentally. None of the cases were proved to be luetic.

Schuller's class of changes in the skull, due to habitual attitudes or soft tissue anomalies, seems to the writer impractical. In our present series, we did not suspect any cases of belonging in this group.

Deformities of the skull in systemic diseases do not appear to be easily recognizable from a study of the x-ray plates alone, the method pursued in our present study. We did not recognize a case of cretinism, Mongolian idiocy, chondrodystrophy, or disotosis, which are the first four diseases listed by Schuller in this group. Rickets, we only felt sure of in two instances from the plates alone. It is to be recognized that our estimation of the age of the patient was from the plates, and that some cases would have unquestionably been called rickets, had we known the actual age. Schuller's other two headings of dwarfs or giants were not present in our series.

Turning to anomalies in the structure of the skull, we find our first group to be inflammatory conditions of the skull bone itself. We found no

cases of active osteomyelitis in our series; there was one case which seemed definitely luetic, though the child had a definite acute osteomyelitis elsewhere. No cases of tuberculosis of the cranium were recognized. One calcified area was found in a left temporal lobe associated with the clinical picture of a mixed, but largely sensory aphasia. The parents of the child refused further investigation, so the final diagnosis was not made. It is possible this may have been a calcified solitary tubercle. The literature indicates that tuberculosis and actinomycosis of the cranium are both rare conditions, while acute osteomyelitis occurs most frequently after wound infections.

Schuller's atrophic and hyperostotic changes in the skull were not found in our series, as is to be expected, for we studied only children's skulls. Acromegalic changes were also lacking in our series. Schuller further mentions neurotic atrophy, a condition with changes in the skull and skeleton he considers due to a trophic nervous disease. Other observers consider such a condition of little importance. Basilar invagination is another rare condition reported. This is said to be caused by undue weight of the skull added to improper development of the atlas or some nutritional disturbance in the bone surrounding the foramen magnum. The result is distortion and atrophy of the base of the skull. Virchow and Grawitz considered the etiology of this condition to be rickets, osteomalacia, or possibly hydrocephaly, but states there must also be a congenital anomaly in the formation of the skeleton. No cases of this sort were recognizable in our present series.

Tumors of the skull may be those involving bone or soft tissue. In our present series, five cases were found; all proved soft tissue growths save one. This case was in all probability a soft tissue growth, but operative and autopsy procedures were refused.

It is of interest to note that four out of five cases occurred in male children. In all five of these cases, the x-ray picture was of only confirmatory importance. Each case showed definite clinical evidence of increased intra-cranial pressure, and had focal symptoms.

Changes in skull structure may also be caused by injury to the skull. In our present series we found eight such cases. In all the cases but one, there was a definite history of an accident; the one exception was a child of eighteen months, and it seems probable there had been an unnoted injury. In fracture cases, radiographic study is of distinct importance, both in diagnosis and in the determination of treatment. In 4 or 50 per cent of these cases, we found so-called general erosion or convolitional atrophy markings—two generalized, one occipital only, and one frontal and occipital. Two we called first degree, and two second. The ages of these cases were: First degree, four and five; second degree, six and nine. We will discuss these findings a little later.

As we mentioned early in our discussion, a great deal of work has been done on the radiographic study of the sella. Spurred on by the hope of being able to recognize disorders of the pituitary, numerous writers have discussed varying methods of technique, and have drawn what seems to the writer

decidedly overenthusiastic conclusions from questionable evidence.

Obviously, the determination of variations from normal must be preceded by a determination of the normal. In the recognition of a normal sella, we find widely differing opinions. Someone has said that all scientists are divided into two schools—the “lumpers” and the “splitters.” This certainly seems true in regard to descriptions and classifications of the normal sella. The “splitters” school has listed some seven hundred type variations; the “lumpers,” three. The writer prefers the “lumpers” for the purposes of the present discussion.

Gordon and Bell conclude that there is no definite shape of the sella in normal children. These observers attempted to classify the sellas examined into three shape groups, but not only found it extremely difficult to fit a majority of cases in these groups, but note that the groups, when determined, are of no clinical value. The same writers conclude, as the result of their study, that no definite relationship exists between the size of the head and the size of the sella. They did find the sella in girls to be larger in both height and length than in boys. They also found a fairly definite relationship between height and length, and noted that the most rapid growth in the sella took place in the first and second years. I have quoted their findings at length, for they seem to me rational and based on satisfactory evidence. Knox, writing recently in the *British Journal of Radiography*, on the other hand finds a definite relationship between the size of the head and the size of the sella. His apparatus is most elaborate, and the opportunity for technical error is so great that the writer questions the value of his conclusions.

In our present study we did not attempt any elaborate measurements or shape-grouping, for the reason that we considered them valueless. We grouped our cases as (1) large, (2) small, (3) closed in, the latter being the type where the anterior and posterior clinoid processes seem to roof in the sella; here, of course, the angle at which the plate is taken is of great importance.

Of large sellas, we found eight. In contradiction to Gordon and Bell, all of these but one were found in males. The age incidence was from four to twelve. Six of the cases were between eight and twelve. Two of the eight cases were classed as idiopathic epilepsy; there were three cases of brain tumor, one of multiple exostosis; one of epilepsy due to birth injury, and one of hydrocephalus. No signs of erosion of the sella were found in these cases. Inasmuch as these sellas showed a general enlargement, the possibility that they were simply broadened by pressure seems to be ruled out. In this group of large sellas, no evidence was found of relationship between the size of the sella and the clinical picture.

In the small sella group, we had six cases, evenly divided between the sexes. One of these cases was a normal child, studied on account of an accident. One case had a sixth nerve paralysis, etiology unknown. The other four cases were deficient mentally, one a hydrocephalic, one a hemiplegic, and one seemed pretty definitely a hypopituitary case, complicated by an evident birth injury and spastic paralysis.

Our so-called “closed in” groups consisted of ten cases, again equally divided between the sexes. The age varied between two and eleven, with no definite age incidence. Five out of ten of these cases were definitely deficient, two were classed as idiopathic epilepsy, one had a fractured skull, but otherwise was normal. One was a case of encephalitis lethargica, and one a case of progressive muscular dystrophy. Six of these cases showed definite clinical evidence of increased intra-cranial pressure, four showed signs of focal irritation. Only one of these, an imbecile, showed signs of deficient pituitary secretion. Surely, from the clinical standpoint, large, small, or closed-in sellas, cannot represent any definite pituitary syndrome.

It is to be noted further that, of 207 heads studied, only twenty-four, or 11 per cent, showed sufficient variation in the sella to be considered remarkable. Of these twenty-four cases, 2 or 8 per cent showed clinical evidence of pituitary disorder. Possibly this means that there is a relationship between abnormalities in bony structure and disturbances in the gland. I do not feel, however, that we are justified in any conclusion at the present time other than that evidence of erosion indicates tumor growths. Clinically, these cases, with several others showing clinical evidence of pituitary disturbance, have been treated with pituitary by mouth and hypodermically without results.

Schuller recognizes many possible causes for calcification in the skull. Aside from one case already mentioned, possibly tubercular in origin, no cases of calcification occurred in our series. Calcification in the pineal gland has occurred infrequently in my adult cases.

Changes of the skull, in consequence of intra-cranial disease, occurred but once in the present series. In a probable slow-growing mid-brain tumor previously described, there was some circumscribed thinning, with evident absorption of bone.

Under changes in the skull, due to chronic excessive intra-cranial pressure, Schuller mentions the following: generalized erosion, commonly spoken of as convolutional atrophy, shape changes, widening of the sutures and venous canals, and thickening of the skull. Chronic hydrocephalus, tumors, cysts, tubercles, gummata, are the usual diseases causing erosion of the inner surface of the skull. Diseases causing a rapid increase produce, in Schuller's opinion, roughness unrecognizable by radiography. A slow increase in the contents of the skull produces a mottling with numerous roundish light areas, local or generalized. These markings are said to appear within a few weeks of the onset of clinical symptoms, and in childhood are said to be seen earlier and to a greater degree. Schuller's conclusions in this regard are quite sweeping. He states: “Roentgenologic proof of erosion of the inner surface of the skull is a sure sign of an increased intra-cranial pressure which has existed for a long time.”

In our study of this phenomenon, we were forced to some sort of classification, and consequently grouped our cases as showing first, second, third, or fourth degree of general erosion. It is realized that such a classification is an arbitrary one, but as all

the x-rays were re-read in two sessions, it is felt that the readings were reasonably consistent.

In our first degree series there were twenty cases in which we had complete records. Of these, eight were girls. There was no particular age-grouping. The cases ran from two to nine. Twelve were between five and nine. Eight of the cases were mentally deficient; two were retarded. Three were fractures occurring within ten days of when the plates were taken. The remainder showed varying degrees of birth injury or epilepsy or both. These clinical findings are not incompatible with Schuller's idea of increased pressure. It is to be borne in mind, however, that over 50 per cent of our x-rays did not show the convolutional markings to any degree, yet their clinical diagnoses ran practically the same as those in this first degree convolutional pressure group. Three of these cases were proved to have increased pressure clinically.

Our second degree cases numbered twenty-three, fourteen males. Twelve of these cases were definitely deficient, there were three fracture cases and, curiously enough, one rachitic case. A progressive muscular dystrophy, a dysuria, and a cervical Potts seem out of place in an increased pressure grouping. Six of these cases showed clinical evidence of increased pressure.

The third degree cases numbered eight, of whom seven were boys. Only two of these cases rated mentally deficient, another case of rickets occurred, there was one recent fracture, a cervical Potts, a brain tumor, and a hydrocephalus. The other case was a habit spasm with a double cervical rib. Five of these cases showed clinical evidence of pressure.

Our fourth degree cases, of whom we had complete records, numbered but three, all boys. Two of these cases were brain tumor cases with clinical evidence of generally increased intra-cranial pressure, as well as signs of focal irritations. The other case was one of osteomyelitis of the tibia. In this case clinical evidence of pressure—indeed, of head disturbance—was lacking as far as our records go. The age incidence in the last two groups did not vary from that in the first and second.

It is suggested to the writer's mind that convolutional markings, so-called, cannot be explained solely on the theory of increased long continued pressure. General nutritional changes seem a possible etiological factor which it is hoped to investigate more fully in a further study.

Shape changes, apparently due to increased pressure, were rare in our series. Only one such case was noted—a male child of three months, who had pyloric stenosis. This case also showed suture changes, but clinically gave no evidence of increased intra-cranial pressure, if the vomiting was to be explained by the pyloric stenosis. No neurological study was made of this case.

Changes in the sutures occurred in eleven of our cases. Thickened skulls in seven. Widening of the venous canal was found in twenty cases. Widening of the venous canals and suture changes were found together in but three cases, while in none of these cases were more than two of Schuller's signs of generalized increased intra-cranial pressure found in the same case.

The clinical findings did not correspond very satisfactorily with the x-ray evidence. For example, in the class of widening of the sutures there were six cases out of twenty who presented no evidence whatever of any increased intra-cranial pressure or anything remotely allied to it.

In the thickened skulls, one case was a normal child at least as far as his head was concerned. Suture changes seemed to be more constantly associated with mental conditions, for in this group every case but one showed mental symptoms. This one case was the one previously mentioned which was diagnosed as pyloric stenosis; it seems possible that a brain condition may have co-existed. The child did not survive, and no autopsy was permitted. Of the total number of cases in these last three sub-grouping, namely, widening venous canal, suture changes and general thickening of the skull, thirty-nine in all, definite clinical evidence of increased intra-cranial pressure was obtained in eight only; clinical evidence of brain irritation or deficiency in twenty-three.

When the writer undertook this study he rather expected to reach some definite conclusions. The study has served, however, rather to open up interesting fields for further work in correlating radiological with clinical findings.

CERTAIN CONCLUSIONS SEEM WARRANTED

1. Radiography of the head in childhood is a valuable aid in diagnosis, both in chronic neurological and accident cases.
2. Up to the present time erosion of the sella is the only well-established evidence of pituitary disorder.
3. Roentgenologic evidence of pressure does not satisfactorily correlate with clinical findings.

I ask that you consider this a preliminary report, for there are many points which further study will, I am sure, elucidate. My deep appreciation is expressed to Rolla G. Karshner for his co-operation in this study.

1136 West Sixth Street.

DISCUSSION

E. B. TOWNE, M. D. (Stanford University Hospital, San Francisco)—Dr. Eaton's interesting paper brings up many points for discussion. I will confine myself to two x-ray findings, which are of importance in neurological surgery.

Eaton found in this series only one example of calcification in the brain, and he has infrequently seen calcification of the pineal gland of adults. Our experience is quite different. R. R. Newell reported the findings of the Department of Roentgenology of Stanford University Hospital for the year 1922. There were nine cases of brain tumor which were microscopically verified, and six cases which were not verified, but which were, on the clinical findings and course, undoubtedly brain tumors. Six, or 40 per cent, of the fifteen tumors were localized by the x-ray because of calcification. Two of the calcified tumors were in children aged 6 and 10 years. Two other calcified lesions were demonstrated in children—a teratoma invading the cranium, and an inspissated abscess of the parietal cortex. Forty-five per cent of adults in Newell's series showed calcified pineal glands. Newell attributes the high incidence of pineal calcification entirely to improved x-ray technic.

I agree with Eaton that slight or moderate convolutional atrophy of the skulls of children needs clinical confirmation before it should be interpreted as indicating in-

creased intra-cranial pressure. I have observed several children who were suspected of having brain tumors because of epileptic attacks and convolitional markings, who have shown no further evidences of increased pressure after three or four years. The very marked examples usually do have other signs of pressure. The most advanced atrophies which we have seen have been in two 12-year-old boys; one of them had an extreme turriccephaly, and the other an enormous meningeal tumor weighing 345 grams. Both of them had normal optic disks. I feel that marked erosion of the inner table of the soft cranial bones of children is a valuable sign, not to be discounted by negative optic disks.

CECIL E. REYNOLDS, M. D. (Pacific Mutual Building, Los Angeles)—This paper is of great value and interest in a somewhat neglected field. In my own practice, x-rays of the skull are taken almost as a routine, and out of a very large number I will direct my comments, especially to such as illustrate the points brought out by Eaton in regard to cases that are clinically most obscure.

In regard to microcephaly and synostosis, I adduced reasons for believing that many such cases were due to intra-uterine encephalitis or basal meningitis during early life. Either of these conditions will cause an excess of extracerebral fluid, with consequent shrinking of the cerebrum in the case of meningitis, the excess of extra-cerebral fluid being secondary in the case of encephalitis. In both instances there is a diminished expansile pulsation of the brain, which is a necessary factor in the proper development of the skull, and maintenance of the open suture. Benefit from operation in such cases can only be expected from differentiating the meningitic from the encephalitis and treating early. Primary encephalitis is obviously most unfavorable. In non-inflammatory cases, by the formation of new sutures, I first obtained benefit in 1912 (Southern Calif.: Pract.: May, 1914).

The study of osteoporosis or convolitional markings is of great importance in epilepsy. It cannot be too much emphasized that the brain is apt to respond to pressure by fits when that pressure is insufficient or too intermittent to produce the coarse clinical signs of pressure. Most gratifying results have ensued in my experience from taking due note of the fact that x-ray reveals that a chronic pressure has at one time existed. Take, for example, occult hydrocephalus, a fairly common cause of so-called "typical essential epilepsy." If it remains "internal" it is most likely to show osteoporosis, especially when there is no pathological enlargement of the cranium. If it is primarily "external," no help will be given by x-ray, but many cases of external hydrocephalus have commenced as the internal variety, being later converted by a giving way of the tela choroidea, and these will show convolitional markings. Moreover, the fits of external hydrocephalus are more easy to diagnose clinically than those of the internal, hence radiography has a useful place in epilepsies from these causes where there is no enlargement of the skull.

In regard to the sella turcica, information may be obtained which is inaccessible in any other way. Two most striking cases will illustrate:

Mr. J. W. T. consulted me April, 1922, for petit mal with prolonged automatism since August, 1918. X-ray showed marked closure of sella turcica. He was fed on Burroughs and Wellcome pituitary, and had no attacks for a year after May 22, although before he sometimes had several a week. Then the gland extract was stopped and he soon after had an attack. Recommenced pituitary, and he remained well for another year, until it was stopped when he had another attack. He has remained well again since resuming the extract.

L. L. had severe whooping cough at the age of 7, and thereafter did not grow an inch in four years and had fits several times a week and clonus of the neck (nodding) nearly every morning. X-ray showed sella very enclosed and small. Pituitary extract had no effect. Suboccipital deduralization (complete) performed, and during the following year he grew a foot in height and has had no fits for two years. I do not attempt to explain this; it is interesting, in view of the very definite x-ray findings.

In regard to tumors, we have had some deep gliomas revealed by their slight calcification around the margins before confirmation by ventriculography. We have also found marked osteoporosis in some Mongolian defectives,

but decompression in one such case was not followed by appreciable benefit. Very extensive calcification of the falx cerebri was revealed in one case with mental symptoms. In numerous cases changes of the membranes and local collections of fluid have been revealed.

From what has been said today, and from what has been written in the past, it is evident that there is a fertile field for radiography of the head beyond the more obvious manifestations of fractures and erosions by new growth.

R. G. KARSHNER, M. D. (1136 West Sixth Street, Los Angeles)—It is my privilege to have reviewed the radiographs upon which Dr. Eaton's paper is based. In many of the cases the failure to elicit pathology from these radiographs may be excused because of the technical inadequacy of the examination of the individual patients. The great majority of the radiological reports were rendered solely upon one or two lateral views of the head, not always of the best quality. Consequently, many of the examinations were passed as negative when careful radiography using an exacting technic with modern apparatus would have demonstrated changes from the normal. In other words, radiography of the head requires the expenditure of time and effort, which is not always compatible with the accomplishment of the volume of routine work that passes daily through a busy children's clinic somewhat handicapped by lack of direction, personnel, and equipment.

Eaton states that no case of cretinism, Mongolian idiocy, chondrodystrophy or dysostosis was recognized from the films. To my knowledge, more than half a dozen cases of chondrodystrophy have passed through the clinic, and have been diagnosed by the x-ray during the period covered by this series of cases. It is too well established that changes in the base of the skull in chondrodystrophy are demonstrable by the x-ray to challenge controversy. Failure to find such changes in this series is due to failure to include the cases in the series, or failure to make the proper roentgen examination of the head.

Dr. Towne mentions the report of Dr. Newell, regarding calcified pineal glands. In our private work we have noted a decided increase in the incidence of such findings, due to the employment of improved technical methods which were not afforded in Dr. Eaton's series.

Dr. Eaton seems justified in his third conclusion. Certainly, the presence of convolitional markings in the heads of childhood are not in the light of our present knowledge of the same clinical significance as the same findings in the skull of an adult. Many explanations suggest themselves. The cause, however, does not as yet seem clear.

DOCTOR EATON (closing)—In closing the discussion, I wish to re-emphasize my previous statement as to the technical difficulties in our series. Since reading this paper, we have had three cases of chondrodystrophy recognized by radiography without access to the clinical records. The previous cases mentioned by Dr. Karshner must have been omitted because of imperfection in the head film.

During the coming year we are planning to continue the study, and hope to have some conclusive data on one or two of the questions opened up in the present study.

Nu Sigma Nu Fraternity (reported by Miley B. Wesson)—During the course of the recent meeting of the California Medical Association, five acquaintances discovered that four of the group were members of the Nu Sigma Nu Fraternity, and it was suggested that a dinner party be given. A notice was posted on the bulletin board, and the following twenty-four men assembled. The manager of the Lodge simply pushed tables together and selected from the regular menu card a dinner which I have never seen equaled at any banquet.

It was unanimously decided to make this dinner an annual feature of the state medical meetings. Those present were: Stanley Stillman, William E. Stevens, Harry Alderson, George D. Culver, Morton R. Gibbons, J. Marion Read, Carl L. Schaupp, Percival Dolman, Curtis E. Smith, John H. Woolsey, Miley B. Wesson, San Francisco; F. S. Dillingham, Peter O. Sundin, Los Angeles; C. B. Jones, Sacramento; A. M. Meads, Sumner Everingham, Frank S. Baxter, Oakland; Robert T. Legge, Berkeley; A. L. Brankamp, Banning; Joseph H. Shaw, Santa Rosa; Keith S. McKee, Bakersfield; D. H. Murray, Napa; Irvin H. Betts, Visalia; Fred R. De Lappe, Modesto.

THE INFERIORITY COMPLEX AND ITS PSYCHIATRIC SIGNIFICANCE

By HAROLD W. WRIGHT, M. D., *San Francisco*

If a child survives the periods of infancy, childhood or adolescence without becoming inoculated with the inferiority complex, what happens later has little chance of fixing such a complex to any serious degree.

The survival of the physically inferior now does not conflict greatly with the interests of the herd, for the complex modern world has a place for all of them in its industrial scheme, providing they are psychologically fit to cope with their environment.

In some instances this complex is only the result of lack of proper vocational guidance and the adolescent or young adult becomes a misfit in the busy world, with consequent discouragement and failure. There must be many cases of this sort.

Illustrative case reports.

Neuropsychiatry has now reached a crossroads or turning point in its development. Its field of work, although broader now, is being encroached upon more and more by psychologists who have no medical education, some of whom are very superficially trained in their own line, some actually charlatans.

DISCUSSION of the type that brings out important phases of an important subject by Ross Moore, Los Angeles; Aaron J. Rosanoff, Los Angeles; Ray Lyman Wilbur, Stanford University; V. H. Podstata, Livermore; Christine M. Leonard, Los Angeles.

SINCE the beginning of any social contact of human beings this complex has existed. It began as soon as man had the opportunity to compare himself or be compared with other men, as soon as the interests of one conflicted with those of another, as soon as one surpassed another in any way. Thus was fear and jealousy bred, fear of others and fear of self.

As time passed and human relationships, both in the family unit and in the larger unit of community life, became more difficult this complex became more subtle and refined into forms less obvious to the sufferer from it.

The survival of the fittest, in the physical sense, was secured, and the non-survival of the supposedly unfit was made sure by very primitive methods in the days of savagery and barbarism; but later on the unfit, in the physical sense of that term, have more and more been enabled to survive. The survival of the physically inferior now does not conflict greatly with the interests of the herd, for the complex modern world has a place for all of them in its industrial scheme, providing they are psychologically fit to cope with their environment. Consequently, it is no longer true that this complex is inevitably associated with physical inferiority; it now arises much more from post-natal psychological impressions.

This post-natal psychological causation can, and usually does, begin very early in life; in infancy or early childhood. If a child survives the periods of infancy, childhood, or adolescence, without becoming inoculated with the inferiority complex, what happens later has little chance of fixing such a complex to any serious degree. This complex must be considered as something inoculated into the child by parents, teachers or other adults, or by fellow-children. Because of the impressionability of a child, all later tendencies have their roots in the plastic years. This is but an obvious truism, though one which is

frequently forgotten in favor of laying the blame for everything on heredity.

Naturally, such complexes can be induced in a variety of ways which may be summed up in such descriptive terms as excessive "spoiling" with inculcation of dependency on father or mother, unwise and needless repressions of natural and innocent activities, nagging and scolding, physical cruelty and unfair punishments, ridicule and unfavorable comparisons with other children, marked social inequality of opportunity, high-handed moral attitudes on the part of adults toward faults or habits in the sexual sphere without calm explanation and frankly helpful advice, pessimism and irritability in the home atmosphere which reveals to the child parental inferiority and failure. All these influences tend to induce depression and loss of initiative with lack of fearless and confidential relations between the child and the adult world. In some instances this complex is only the result of lack of proper vocational guidance, and the adolescent or young adult becomes a misfit in the busy world, with consequent discouragement and failure. There must be many cases of this sort.

Undoubtedly, children react differently to such influences according as they are constitutionally vigorous or not, according as they are naturally inclined to be introverted or extroverted, aggressive or shrinking in nervous makeup, physiologically speaking. Consequently, in the aggressive type the psychoneurosis, which grows out of an induced inferiority complex, will differ in symptomatology from that which occurs from the same cause in the introverted type. And so we have later on the psychoneurosis with paranoid symptoms or with criminal behavior representing a defense against inferiority, and the psychoneurosis with depression, anxiety, diffidence and withdrawal from healthy social contacts; or the psychoneurosis with symptoms of a very complete withdrawal from the conflict and a satisfaction in solving the personal problem through hysteria. As any of these psychoneuroses progresses or as some other factor comes into play to break down the general nervous resistance (a toxic, exhaustive, or an organic factor), there may develop a psychosis of the paranoid type, the manic-depressive type, the schizophrenic precox type, or the hysterical type. Thus we may consider that psychoneuroses and psychoses are sometimes phases in the progress of the same fundamental complex—stages in a long-standing disorder of the personality.

ILLUSTRATIVE CASE REPORTS

1. A male child of intelligent parents witnessed from infancy the frequent quarrels between his parents, the father being at times violently irritable, due to chronic physical ill health and financial strain. As the child grew older he was always aware of some impending disaster in the home, which usually had an atmosphere of gloom and anxiety. An example of fear, doubt and indecision over any new problem was set before him by the father, who also vented his irritability upon the child for any trivial thing, making him feel thereby that he did not amount to much, that he was stupid, etc. The boy grew to love solitude and to shrink from taking part

in social pleasures with other children because he felt depressed, and his ill-concealed depression was misunderstood by the other children who thought him unfriendly. As time went on he developed the habit in his turn of showing irritation at trifling events and of putting off decisions because of his lack of self-confidence. By the time manhood was reached he had no definite plans for his future career, was inclined to take the path of least resistance, often being moody and changeable in purpose. He felt that other people thought him queer, that others were unfriendly. Not being very robust in physical constitution, he became asocial rather than actively anti-social. Energies of a physical sort found no outlet in healthy sports, and being shy of women he had difficulty mastering the habit of masturbation, which began at adolescence. He was afraid to marry. So he drifted along in a routine occupation much beneath his natural intellectual ability and, of course, was not satisfied in his work. He was sensitive to the criticism of his fellow-workers and his superiors to an extreme degree, and also jealous of those who were more successful than he. Middle age arrived with a realization that he was still a failure, and by the time he was 48 he had a severe attack of depression resembling the involution type of melancholia.

2. A young woman gives the history of having been brought up to think that anything connected with the sexual instinct was most deplorable. In childhood her first questions about such matters were side-tracked and received by her mother with embarrassment and evasion, also rebuke. As she matured she became very shy of boys, but her curiosity and thoughts along sex lines continued quite active. She felt that her thoughts were very wicked and that she must be different from other girls, for they did not appear to be bothered by such matters and seemed quite at ease with boys. She grew more and more self-conscious and diffident in trying to express herself in the social world. Naturally, offers of marriage were slow in coming. However, after a time she became infatuated with an unscrupulous fellow who seduced her. This experience produced a profound depression with anxiety symptoms, followed after some weeks by an acute excitement in which she had delusions of persecution, spoke of herself as the Virgin Mary, showed flight of ideas with prolific talk, and had to be confined in a psychiatric hospital. There she ran the typical course of an acute mania and recovered with a residual state of emotional apathy and indifference toward her family, to whom she has not yet been able to adjust herself. There also ensued a certain lowering of her standard of morality.

Many more illustrations of this complex might be given if time permitted. We are all familiar with the fact that hauteur and reserve and also their opposites, undue familiarity and aggressiveness, may cover up a feeling of inferiority or inadequacy, and that supposed modesty and humility may at times be a cloak for "cold feet." The two cases reported serve to indicate that a psychoneurosis or a psychosis is a

condition of gradual onset and progress, and may arise from preventable psychological causes.

PREVENTIVE WORK IN NEUROPSYCHIATRY

It is quite apparent that these disorders are productive of much unhappiness, friction and failure, to say nothing of more serious consequences. They affect adversely the home life and industrial life and all with whom the individual comes in contact. We who work in the field of neuropsychiatry have some workable knowledge of the mechanism of these disorders. Indeed we have quite a store of theoretical knowledge, and we can have a much greater store of practical information which can be made available to parents and teachers for prophylactic purposes, provided we continue to get at the roots of these disorders in all patients that come to us.

Neuropsychiatry has now reached a cross-roads or turning point in its development. Its field of work, although broader now, is being encroached upon more and more by psychologists who have no medical education, some of whom are very superficially trained in their own line, some actually charlatans. The field is also invaded by all sorts of religious cults and narrow-minded philosophers. On the other hand, the citizens who are more discerning are looking to the medical profession for a solution of the problems of crime and juvenile delinquency, and many educational problems. They are ready and eager for our assistance, and often expect of us the impossible; and yet we have much to give them which we do not make clearly available.

We may well consider at this stage in the development of our specialty which, by the way, is so broad that it is inappropriately termed a "specialty," where to place the emphasis in medical education and research; whether to give less attention to refinements in the diagnosis and treatment of organic nervous disorders which we know have already wrought permanent pathological changes and more attention to the early detection of functional nervous disorders and the early treatment of them by sound methods; or to neglect the psychopathology of children and adults while worrying over tables of height and weight and nutrition or the chemistry of the cerebrospinal fluid.

We might consider also how we may formulate our growing knowledge of functional disorders of the nervous system so as to make it helpful to parents, teachers, and college students. To a slight extent this is being done here and there. It is not to be expected that many medical students can be made interested in neuropsychiatry if their vision of future work in this field is narrowed down to the palliative treatment or passive care of the end-results of chronic organic disease; but if their vision can be enlarged further by presenting to them the dynamic, social aspects of psychiatry in an attractive way, there should be no difficulty in providing this field with enough well-trained and enthusiastic laborers.

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DISCUSSION

ROSS MOORE, M. D. (520 West Seventh Street, Los Angeles)—It occurs to me to wonder whether the manifestations of the inferiority complex so clearly and broadly sketched by Wright are not after all really conservative.

I am not saying that they ought to be conservative. Theoretically they ought not to exist. In the future they will not exist practically because then there will be enough square pegs for all the square holes and square holes for the square pegs. Our growing knowledge will make this possible and our growing tax rate will make society demand it. For the present the psychopathically inferior will have to remain largely ignorant of his own inferiority and retire within his own psychosis.

Methods of training the handicapped child are fairly far advanced both in school and home. There is much enthusiasm in both places to help these unhappy ones. But there is no enthusiasm in the home when it comes to recognizing and admitting the poor material out of which the child is made. I believe this admission will be forthcoming only when we force its presentation and at the same time show more clearly the social means available for its proper handling.

Stressing heredity is still the important thing.

AARON J. ROSANOFF, M. D. (Westlake Professional Building, Los Angeles)—The inferiority complex probably plays a part in the mechanism of all mental disorders of a functional nature. It is strange that no one had chosen it as a topic for special emphasis and discussion, as Dr. Wright has now done.

It is always a difficult matter to distinguish clearly hereditary or inborn factors from acquired ones. Dr. Wright deserves credit for pointing out that one factor in the bewildering complexity of mental mechanisms, namely, the inferiority complex, is always an acquired one. The significance of this is obvious for the practice of mental hygiene.

Wright has said that the field of neuropsychiatry is being encroached upon by persons without medical training. He seems to regret this fact, and I am in sympathy with him as far as this encroachment is by incompetent or insincere persons, whether with or without medical training. But I rather welcome all possible participation by psychologists, criminologists, social workers, teachers, and others. In my opinion, without such participation the larger ends of mental hygiene can never be attained, as they are beyond the unaided powers of the mere handful of neuropsychiatrists; and this not only because they are a handful, but also because some phases of the work require training and specialization which is not a part of medical curricula or practice.

RAY LYMAN WILBUR, M. D. (Stanford University, California)—As a rule all of the children in a given family are exposed to practically the same conditions at home, on the street and in the school. It hardly seems complete to me to lay all of the stress upon certain happenings of childhood in the child that later on shows certain psychopathic peculiarities. *I have the feeling that the psychopathologists in working backward for explanations of their patients are apt to forget the ability of many individuals to throw off environmental effects that disturb those who are mentally tainted.* All young people have a difficult problem in getting on with the adults with whom they are associated. It takes a good deal of skill on the part of a child to understand just what the parents want, why they want it, and why they vary so in their demands. I cannot escape the feeling that while the inferiority complex is of great significance it is the individual rather than the experience that is the predominating factor in turning mental reactions in an abnormal direction.

Dr. Wright's paper strikes me as particularly interesting and of real significance in developing a proper approach to the problems of the neuropsychiatric individual.

V. H. PODSTAT, M. D. (Livermore, California)—The paper of Dr. Wright leaves with me three impressions:

First—A keen appreciation of the endeavor of Dr. Wright to impress upon the medical profession the great influence of the early surroundings upon the moulding of the child's personality. Much has been written upon this topic, but the body of the medical profession has failed to be impressed by the facts. A small proportion of the physicians in general practice has been unduly influenced by the extremists in the psychoanalytic school; hence, embryonic and infantile sex conflicts and complexes. The larger number of physicians either cling to the ultra-

conservative views or are more or less bored with the entire topic of study of behavior. Wright's paper is practical and worthwhile to every physician seeking to be of service to humanity.

Second—The limits of the paper are undoubtedly responsible for his taking up the "inferiority complex" and not reaching out to cover the entire topic of the common prevailing depressive tendency. The "inferiority complex" is only one common expression of such depressive tendency. There are many fears, obsessions, doubts, worries, and anxieties growing from out of the soil of the fundamental depressive tendency which are not identical with the "inferiority complex." I trust that someone may concisely, yet effectively, present this "Multitude of the Unhappy."

Third—No physician will question that Wright did well in emphasizing environmental psychogenic factors. However, they are not alone in the capacity to produce a tone of depression or the actual feeling of personal inferiority. Also, among the psychic causes it need not necessarily be the early surroundings of the child. There are many unsolved problems carried by adult people like millstones about their necks, producing perceptible and prevailing mental depression, also a variety of feeling of inferiority. Some of these unsolved problems may have been repressed below the level of consciousness, but that is not necessary to make them effective. Among the physical causes, toxic influences and endocrine unbalance should be mentioned. In short, every case of "inferiority complex" is an individual case compelling careful study of both physical and mental etiology.

CHRISTINE M. LEONARD, M. D. (1401 South Grand Avenue, Los Angeles)—I was present at the time Dr. Wright presented his paper, and enjoyed it. We had found in our study of children at the Child Guidance Clinic that the feeling of inferiority is a large factor in behavior problems. We have noted inferiority complexes with physical, intellectual and social bases. The child frequently attempts to compensate, and failure in this often results in overcompensation and definite maladjustment. These children are often problems both in the home and in the school. Physically they feel inadequate and do not take part in play with their companions. Sometimes they will not fight, swim or enter into active games; they are unable to compete successfully with their classmates. Because of feelings of social inferiority, they often will not bring their friends to their homes to play.

In children who have inferiority complexes the sense of self-confidence and power is missing and we have developed then, either a quiet, depressed, perhaps sensitive and reticent child (introvert type), or an egocentric, overcompensated child who is perhaps the bully of the neighborhood (extrovert type). Are we not warranted, then, in uncovering this complex early and helping the child overcome what Dr. Wright so clearly shows in his paper to be a large factor in adult maladjustment?

Witter Water—This is a product put out by Witter Medical Springs, San Francisco. It is advertised as a remedy for "high blood pressure." The public is warned of the tragic consequences of this condition and given the usual line of testimonials, telling how Mrs. A. with high blood pressure and one foot in the grave took Witter Water and recovered. Among other constituents, Witter Water is claimed to contain nitrites and it is stated that this "undoubtedly accounts for its direct action in the reduction of blood pressure." Witter Water is also claimed to contain sufficient iodide to produce beneficial action. According to an analysis, the amount of sodium nitrite present in Witter Water is one and one-half grains per gallon, and for \$30 the sufferer from high blood pressure would get approximately ten grains of sodium nitrite. According to the analysis there is seven one-hundredths of a grain of potassium iodide in each gallon of Witter Water. Thirty dollars' worth of Witter Water contains less than one-half grain of potassium iodide. Yet the exploiters seem to think that the sodium nitrite content and the potassium iodide content are something to talk about (Journal A. M. A., June 27, 1925).

ACUTE PANCREATITIS

By CLARENCE G. TOLAND, M. D., *Los Angeles*

Acute pancreatitis can be conveniently divided into three types: acute interstitial pancreatitis; acute suppurative pancreatitis; acute hemorrhagic pancreatitis—pancreatic necrosis or gangrenous pancreatitis.

The consensus of opinion seems to be that the cause of the acute interstitial form is extension of infection through the lymphatics from an acute inflammation in some neighboring organ, such as the gall-bladder, the appendix, or a duodenal ulcer.

Acute hemorrhagic pancreatitis is generally considered to be a distinct disease and is thought rarely to be infectious in origin.

The diagnosis of acute pancreatitis in any stage is very difficult.

We must differentiate between this acute disease and incarcerated epigastric hernia; acute gastric dilation; ptomain or mineral poisoning; angina pectoris; spasm of the mesenteric arteries; mesenteric thrombosis; ruptured aneurysm of the abdominal aorta; acute intestinal obstruction; acute hemogenous infection of the left kidney; perforation of undescended retrocolic appendix; ruptured ectopic pregnancy and Pott's disease.

DISCUSSION by Dexter N. Richards, Oakland; A. R. Kilgore, San Francisco; William Henry Gilbert, Los Angeles; Herbert A. Johnston, Anaheim; E. T. Rulison, Sacramento.

THE most serious of the acute abdominal diseases with which we, the surgeons, have to deal is acute pancreatitis. The symptoms are acute, the diagnosis is obscure, the treatment is radical, and the results are not satisfactory, many cases terminating fatally—about 60 per cent.

No one has been able to definitely prove the exact cause of acute pancreatitis, and as a result there has appeared a large mass of experimental work and speculation on the subject. A number of men have produced acute hemorrhagic pancreatitis by injecting various substances, such as bile or duodenal contents into the pancreatic ducts, while others have worked out a lymphatic connection between the pancreas and appendix and gall-bladder. They have shown that infection could extend from an acute process in either of these organs through the retroperitoneal spaces to the pancreas. The pancreas is subject to the usual inflammations affecting parenchymatous organs, but it is unique in being affected by a special inflammation due to a chemical action or an enzymic activity. Therefore, acute pancreatitis can be conveniently divided into three types: acute interstitial pancreatitis; acute suppurative pancreatitis; acute hemorrhagic pancreatitis—pancreatic necrosis or gangrenous pancreatitis.

Unless the condition is marked, producing a large pancreas, acute interstitial pancreatitis is often not recognized. Not infrequently it progresses to suppuration with localized abscess formation—the acute suppurative pancreatitis. "In some cases of acute hemorrhagic pancreatitis the hemorrhage remains localized; in others it bursts through the serous covering into the lesser or greater sac, producing what is known as 'perforation of the pancreas.' In this stage fat necrosis is found." "In cases where the hemorrhage remains in the peritoneal capsule of the pancreas, secondary infection occurs later, producing a pancreatic abscess."

The consensus of opinion seems to be that the

cause of the acute interstitial form is extension of infection through the lymphatics from an acute inflammation in some neighboring organ such as the gall-bladder, the appendix, or a duodenal ulcer. A lymphangitis of the interstitial portion of the pancreas results.

Acute hemorrhagic pancreatitis is generally considered to be a distinct disease and is thought rarely to be infectious in origin. The common cause is a retrojection of abnormal bile; that is, bile rich in salts, into the duct of Wirsung or to a retrojection of duodenal contents into the duct of Santorini. Either of these agents in the pancreatic ducts activates the proteolytic ferment, trypsin, resulting in digestion and necrosis of the parenchymatous cells, erosion of blood vessels, and hemorrhage.

In a recent study of 100 necropsies, Cameron and Noble have produced an obstruction in the common bile-duct by the lodging of a biliary calculus in the ampula of Vater. In 65 per cent of the specimens studied, they demonstrated that the biliary and pancreatic ducts were converted into a common and freely communicating system and proved the possibility of a reflex of bile up into the pancreas.

Woring of London believes that all cases of acute pancreatitis are due to infection, and the bacillus coli communis is nearly always the infecting organism; occasionally streptococci may be found. He believes, through the study of fifteen cases, there is little doubt that the primary source of infection is generally the gall-bladder or the duodenum. The infection is spread from these organs to the pancreas by the lymph vessels or by the pancreatic or common bile-ducts. We feel that in the majority of cases this is true.

Fat necrosis is present in all cases of acute pancreatitis except in the acute interstitial type. It is thought by most of the medical profession that fat necrosis is due entirely to the local action of pancreatic juice; but cases are on record in which the process has been found both in the pericardial and extrapleural fat, leading one to believe that fat necrosis may be attributed to ferments liberated by the diseased pancreas and circulating in the blood.

SYMPTOMS

The symptoms of acute pancreatitis may, for convenience, be tabulated as to Woring—pain, vomiting, rigidity of the abdominal wall, rise of temperature and pulse, cyanosis and jaundice, localized abdominal swelling, diastase in the urine and glycosuria.

The pain is usually very sudden, located in the epigastrium or left upper abdomen and in the left lumbar region, often radiating to the left shoulder, left flank and anterior lower chest. It is usually so severe and sudden as to cause immediate collapse. In Case 2 the patient was so shocked it was feared she would die immediately.

Vomiting occurred in all of our cases immediately, the vomitus containing the stomach contents and bile; nausea persisted throughout the attack until the operation was performed or, as in Case 2, the stomach distress continued until death.

Rigidity of the abdominal wall was noted in three of our patients during the first twelve hours except in Case 3, where it lasted for four days; finally the

rigidity disappeared except in the upper abdomen and on the left side near the left costal margin.

Temperature at first is subnormal, the pulse is rapid and thready during the first five hours, becoming fuller as the temperature rises.

Cyanosis is very marked, especially of the extremities and face; this, to our minds, associated with sudden pain as described above, is almost pathognomonic of acute pancreatitis. We have never noticed jaundice; however, many writers say in the less acute cases a very slight icteric tinge of skin may be noted.

Localized Abdominal Swelling—It is occasionally noted that a distinct mass is felt in the upper left abdomen, extending across the spine to a few inches to the right; however, this is noted in only a few cases. We found it in Cases 1 and 3. In Case 3 a distinct rounded mass extended into the lesser peritoneal cavity; also it was distinctly outlined by x-ray examination.

Diastase in Urine—Normal urine contains 10 to 20 units of diastase. In disease of the pancreas, associated with pancreatic insufficiency, the diastase may amount to 100 to 200 units. Woring says that many cases of acute pancreatitis show this increase of diastase; but often in the very acute cases enough time has not always elapsed between the onset of the disease and examination of urine for this to be manifest.

Glycosuria—The cases are often so acute and need such immediate attention surgically, that enough time has not elapsed between the occurrence of the symptoms and time of treatment for sugar to show in the urine. We found no sugar in any of our cases. However, Case 3, which we still have under observation and treatment, only this week showed 138 mgms. to 100 cc. of blood, showing a slight increase above normal.

DIAGNOSIS

The diagnosis of acute pancreatitis in any stage is very difficult. The most important thing to keep in mind is the onset of the pain, its character and localization, associated with a cyanosis of extremities and face; the increase of diastase in urine; occasionally glycosuria and a slight icteric tinge of the skin; however, many cases occur in which the signs and symptoms are not sufficiently pronounced at first or their character has been so obliterated by giving morphine, that a correct diagnosis could not be made except by exploratory operation.

We must differentiate between this acute disease and incarcerated epigastric hernia; acute gastric dilatation; ptomain or mineral poisoning; angina pectoris; spasm of the mesenteric arteries; mesenteric thrombosis; ruptured aneurysm of the abdominal aorta; acute intestinal obstruction; acute hematogenous infection of the left kidney; perforation of undescended retrocolic appendix; ruptured ectopic pregnancy; and Pott's disease.

Cases 1 and 4 belong to the group classified as acute interstitial pancreatitis. Case 1, secondary to acute appendicitis, Case 4 followed acute cholecystitis with stones.

Case 2, that of a woman 38, belongs to the type of acute hemorrhagic pancreatitis. No operation was

performed because patient was too sick to attempt surgery, as far as we believed.

Case 3, a woman 41, belongs to the type of acute suppurative pancreatitis developing following acute cholecystitis with stones.

TREATMENT

The treatment of acute pancreatitis is always surgical, if the patient is not in extremis. Usually the sooner operation can be performed after the onset of the affection, the greater are the chances for recovery.

The greater sac of the peritoneum is opened and exploration immediately made. The pancreas usually feels rather soft; at times the color is cherry-red, again very pale. There is usually present in the abdomen a beef-broth fluid and fat necrosis.

After the pancreas is exposed, free incisions should be made into the swollen gland, usually parallel to the long axis of the organ. Drainage tubes are inserted down to the incised areas and the wound closed in the usual manner.

Case 1—Male, age 14, school boy. Referred to us March, 1922. Acute interstitial pancreatitis.

Present Illness—Following an attack of influenza, developed an acute perforative appendicitis with abscess formation. He was operated upon, the appendix removed, and the abscess drained. Aside from a troublesome cough, he made good progress and on the sixth day his temperature was normal. The next day the temperature began to rise and he noticed soreness in the upper right abdomen; the soreness gradually increased, and he soon developed a tender mass in this region. This mass steadily increased and resisted treatment, such as local hot applications. The thirteenth day the temperature was 104, and the pulse rapid and weak. Operation for a secondary collection, sub-hepatic or retrocaecal abscess, was decided upon. The laboratory tests showed normal urine; Hb. 70; R. B. C. 4,500,000; W. B. C. 20,000; and 90 per cent polys.

Operation—An incision was made to the outer right edge of the mass and a greatly enlarged pancreas was exposed. The pancreas was hard and tense and did not fluctuate. The capsule of the gland was incised to relieve the tension, and drainage tubes were inserted. There was immediate improvement in the boy's condition—his convalescence was smooth and rapid and in one week he was able to return home. At present, two years later, his condition is excellent.

Case 2—Female, age 38, housewife. Consulted us July 15, 1923. Acute hemorrhagic pancreatitis.

Present Illness—For about ten years has had attacks of what patient termed "stomach trouble," causing vomiting and occasional pain in the epigastrium. Six weeks previously, after eating an apricot, developed sudden acute pain which radiated over the whole abdomen; she vomited profusely and became distended. The symptoms persisted, and for five days there was no bowel movement. A doctor was called and an opiate given to relieve the pain. A profuse diarrhea developed which was very offensive. Her symptoms persisted unchanged for five weeks, at which time we first saw her. There was extreme emaciation; she was sweating and her limbs were cold; the abdomen was distended; had almost constant bowel movement; moderate tenderness in upper left abdomen and left flank. The pain radiated to the left shoulder and back. *Past History*—Operation for appendicitis, eighteen years ago. *Physical Examination*—Anemic, emaciated female in state of marked shock. Blood pressure, 120/70. Temperature, 101. Pulse, 140. Eyes showed dilated pupils. Considerable tenderness of posterior neck muscles with some rigidity. Rapid respiration. Lungs clear. Heart showed poor muscle tone.

Abdomen—Marked general distension from gas. Tenderness in epigastrium. No rigidity; no masses. Patient was sent to hospital. Laboratory tests showed negative *Widal*.

A diagnosis of diffuse peritonitis and acute pancreatitis

was made, but patient was too ill for operation. She was treated as a peritonitis case and improved somewhat. Continued to have frequent bowel movements with some blood; odor very offensive. On the fifth day she developed a profuse hemorrhage from the bowels and died four hours later, apparently from hemorrhage.

Autopsy showed an unusual condition. On opening the abdomen, the typical beef-broth fluid of acute pancreatitis was noted. There was fat necrosis everywhere; all the abdominal organs were acutely congested. No stones noted in gall-bladder nor common duct. There was a large retroperitoneal collection of blood and pus containing the pancreas free in the cavity. The lower left portion of the collection had formed a communication with the descending colon, and the colon was filled with blood and pus—Nature's attempt to evacuate the collection. Grossly and microscopically, the pancreas showed diffuse necrosis.

The autopsy diagnosis was acute hemorrhagic pancreatitis.

Case 3—Female, age 41. Referred to us September 10, 1923.

Present Illness—Well until ten years ago when she had a sudden attack of severe pain in the epigastrium; lasted about twenty-four hours and was associated with vomiting. Similar attacks two years ago and another six months ago; the latter required a hypo for relief. The last attack came on three days ago without apparent cause. There was sharp, cutting pain in the epigastrium followed by upper abdominal cramps. Took a saline purge, which was followed by vomiting, pain increased and required a hypo for relief. The acute pain recurred and has appeared at intervals up to the present. Marked tenderness in upper abdomen between attacks. The pain radiates to the right shoulder. Associated symptoms are meteorism, vomiting, chills, fever, and constipation. Patient feels very weak and ill.

Past History—Diseases of childhood. Malaria at 12. Menstrual history normal. Physical Examination. Anemic-looking female in state of moderate shock. Blood pressure, 120/50. Temperature, 101.3. Pulse, 98. Head, neck, heart, and lungs normal. Abdomen shows a tender mass in the epigastrium about the size of an orange; it is not movable; it pulsates and fluctuates on palpation. No bruit heard. Moderate rectus rigidity. Mass does not move with respiration and is dull to percussion.

Patient was hospitalized and treated by applying ice to epigastrium. Her condition improved for a week and remained stationary, when operation was decided upon.

Laboratory tests showed normal urine; negative Wassermann. Hb. 75; R. B. C. 5,000,000; W. B. C. 12,000; and 86 per cent polys.

Fluoroscopic by Dr. Granger—Tumor mass in the position of the pancreas, about the lesser curvature of the stomach and behind it, displaces stomach a little; not connected with stomach or intestines; may be inflammatory mass in the lesser peritoneal sac.

Operation disclosed an acute cholecystitis with distended gall-bladder containing many small stones. The pancreas was about three times its normal size, was hard and tense. There was an abscess in the midportion which extended into the lesser peritoneal cavity, and was attached to the posterior wall of the stomach. The abscess was exposed through the gastro-hepatic omentum, its wall sutured to the parietal peritoneum, and it was then opened. Drainage was maintained by iodoform gauze surrounded by gutta percha tissue. A cholecystostomy was then performed.

The convalescence was stormy, with chills and temperature up to 103. It was noticeable that her condition was worse when the gall-bladder did not drain and that she improved when the bile drainage was re-established. The symptoms gradually subsided, and in about four weeks she went home with a small opening in the upper angle of the wound discharging a clear serous, slightly irritating fluid.

At the end of three months the sinus closed. There followed immediately a distinct painful mass in the epigastrium. The mass was very tender and the patient, a nurse, was not able to follow her usual work. Several times the old sinus opened spontaneously, giving sudden and complete relief from pain; tenderness and the tumor

disappeared completely. The sinus, however, would close again and immediately the former symptoms would return.

Five months after operation patient was re-operated for a tender mass in the pancreatic region. The former sinus had closed and could not be opened. The pre-operative diagnosis was "pancreatic cyst."

At operation a cyst was discovered, evidently involving the body of the pancreas. The cyst was about the size of an orange and contained clear fluid. Because of dense adhesions and its intimate relations with the pancreas, the cyst could not be removed.

The cyst was opened, the cut edges sutured to the edges of the abdominal incision, and the cyst cavity lightly packed with gauze.

Convalescence was uneventful, and patient went home in four days. She obtained complete relief from pain and at present is able to do her work as nurse, and has regained normal weight and strength. There is still a small packing of gauze in the wound and considerable watery drainage.

Case 4—Female, age 35. **Present Illness—**Three years ago patient complained for the first time of sharp pain in right upper quadrant which remained localized for a few hours. She had some nausea, but did not vomit; was feverish and had poor appetite. On November 30, 1923, patient had a similar attack; pain did not radiate, but remained localized in epigastrium. There was vomiting and considerable nausea. Between attacks of sharp pain the patient felt a distress in the epigastric region. There was no jaundice. Patient stated she had never been sick, but her bowels had been constipated for many years, and her appetite poor. Family history showed no tuberculosis, cancer, insanity, nor diabetes. **Physical Examination—**No abnormalities except moderate upper abdominal rigidity with marked tenderness; no mass.

Pre-operative Diagnosis—Perforated du. or subacute cholecystitis.

Operation—On December 1, cholecystectomy for acute cholecystitis was performed, and showed the gall-bladder about four times normal size, very white, great deal of edema. Marked edema of the mesentery of the transverse colon and omentum. Marked amount of beef-broth fluid in the abdominal cavity. Pancreas about twice normal size, but extremely soft. Exploration of stomach, appendix and spleen negative. A small cyst size of hen's egg right ovary, which ruptured on examination. Marked deformity of the cystic duct to the common duct—runs parallel with the common duct for about one and one-half inches.

Microscopic findings were subacute cholecystitis, multiple mixed gall-stones.

Recovery was uneventful. Profuse bile drainage at first with considerable abdominal pain, but each day showed less drainage and less pain.

Patient left the hospital December 19, wound clean and patient feeling well.

On March 1, patient returned for examination. She was apparently in good health, and there was no drainage from the wound.

Pacific Mutual Building.

DISCUSSION

DEXTER N. RICHARDS, M. D. (Medical Building, Oakland, Calif.)—My personal experience with acute pancreatitis has been limited and the correct pre-operative diagnosis has been rare. I would mention in the list of diseases to be differentiated from it, acute perforation of gastric or duodenal ulcers. The suddenness of onset, the severity of the symptoms leave little doubt that there has been an upper abdominal catastrophe.

Personal history aids in a differentiation, and the physical signs not characteristic of perforated ulcer or other acute diseases mentioned by Toland, leads one by exclusion to a diagnosis of acute pancreatitis—sometimes.

Immediate operation, exploration, is always indicated. Convalescence is often protracted and may end fatally after recovery seems to be in sight.

A. R. KILGORE, M. D. (391 Sutter Street, San Francisco)—One fact stands out from Toland's paper and from the reading of other articles stimulated by it—sudden, agonizing pain in the upper abdomen, accompanied by signs of

collapse, ought to make the abdominal surgeon put acute pancreatitis high in his list of differential diagnoses. Accompanied by persistent vomiting, absence of fever, and the presence of epigastric prominence, the indications are sufficiently definite to warrant examination of the pancreas first in exploratory operation.

It is equally clear that early operation is indicated. Balch and Smith reported eleven operated cases with three recoveries, and ten unoperated cases with one recovery. Several of their operated cases were not explored until from two to three days after onset, and one cannot help but feel that a 70 per cent mortality might have been reduced by earlier interference.

The operative procedure of multiple longitudinal incisions in the gland capsule and drainage through the lesser cavity and gastro-hepatic omentum seems well founded and standardized.

WILLIAM H. GILBERT, M. D. (Brockman Building, Los Angeles)—I am satisfied that inflammatory conditions of the pancreas—more or less acute—exist with greater frequency than we suspect. It is not unusual for "stomach trouble" to manifest itself for which we can find no definite cause, the attacks coming and going with irregular frequency. Pressure in the upper left abdominal quadrant will many times elicit pain in these cases, and they may be a low-grade type of pancreatitis. As a consequence, the pancreas, as well as the gall-bladder and appendix, is coming into its own as a causative factor in obscure stomach derangements.

Toland's paper in a masterly way calls to our attention that particular brand of acute pancreatitis which belongs among the explosive type of acute abdominal conditions and requires boldness and prompt surgical skill in handling.

Violent pain in the epigastrium radiating upward and to the left, with Arthur Bevan's "wooden belly" accompanied by a highly resistant left costal arch, persistent vomiting, and pronounced signs of shock with cyanosis of the extremities, are the cardinal symptoms (if there be any) of this condition. It is indeed a question calling for rare surgical judgment and diagnostic acumen as to the advisability of operation with these conditions confronting one. That this is a surgical abdomen, goes without question. My own experience in two of these cases leads me to believe that surgical intervention offers the only rational method of procedure, and that it should be resorted to as soon as the physical condition warrants. The sooner the better, consistent with the well-established principle of non-surgical intervention, when shock is existent. On the other hand, unwarranted procrastination can only add to the already high mortality.

The procedure of multiple longitudinal incisions in the pancreatic capsule, accompanied by drainage, is the operation of choice, and I believe it to be the only method that holds out hope of lowering the high death rate that goes with these cases.

HERBERT A. JOHNSTON, M. D. (Clinic Building, Anaheim, Calif.)—During the last quarter of a century, diseases of the pancreas have received sufficient study that now the so-called "drama" of acute pancreatic disease is recognizable. It has been largely through the study of this organ, permitted by the surgical work performed on the gall-bladder, that its acute pathological processes are better understood.

Dr. Toland, in his estimable paper, emphasizes the importance of early diagnosis, though usually difficult. The sudden onset of upper abdominal pain, cyanosis of lips with pallor of face, and a tender mass in the pancreatic area are highly suggestive. A recent case operated upon here presented the following: Sudden, deep-seated, pain just above the umbilicus in a woman 24 years of age, six weeks after a normal delivery, and three weeks after an attack of mumps, the upper abdomen slightly rigid, and a diffuse tender mass palpable in the pancreatic region, marked cyanosis of lips, anxious expression and restlessness. At operation, twenty hours from onset, we found very marked fat necrosis, and more than a quart of the characteristic fluid in the peritoneal cavity. The pancreas was much enlarged and of a gray color. Tissues of the gall-bladder region were engorged and edematous. Multiple longitudinal incisions in the pancreas, and very lib-

eral use of rubber drains relieved the acute condition. The patient's life was in the balance for weeks. The secretion of fluid seemed to be almost unlimited, and the condition of the skin, surrounding the incision, became unbearable. After ten weeks in the hospital, the patient was discharged in a very weak and emaciated state, but at present is improving and will recover.

E. T. RULISON, M. D. (California State Life Building, Sacramento, Calif.)—Dr. Toland states "cyanosis is very marked, especially of the extremities and face; this, to our minds, associated with sudden pain as described above, is almost pathognomonic of the acute pancreatitis."

Cyanosis must be due to sub-oxygenation caused by the spastic fixation of the muscles of respiration. That this important sign may be associated with acute epigastric pain and a board-like rigidity of the abdomen in a condition other than acute pancreatitis is illustrated by the following case:

In August of this year I saw, at the Sutter Hospital, a man who had just been admitted with a diagnosis of perforated duodenal ulcer. The patient was prostrated, distinctly cyanosed, skin moist, suffering excruciating pain in the epigastrium and left flank, abdomen of board-like rigidity; temperature subnormal, pulse 84; vomiting of the stomach contents had occurred. In other words, the patient presented the picture Toland has so clearly drawn of acute pancreatitis.

Careful questioning of the patient, however, brought out the following: At the time of the onset he had been seated in an outdoor toilet; the initial transitory pain had been in the glans penis, but an instant later was felt in epigastrium and left flank, where it persisted. Examination of the glans revealed a tiny lesion which about three hours later developed a transitory urticarial wheal. Cyanosis and abdominal rigidity disappeared after forty-eight hours, and pains shifted to extremities and slowly decreased in severity.

The condition was due to the bite of the most venomous of our American spiders, *latrodectus mactans*. Kobert has isolated a toxalbumen from this species which, if introduced directly into the blood stream, as no doubt occurred in the case cited, produces symptoms and signs which simulate closely an acute abdominal lesion. Death has been known to ensue.

The Treatment of Diabetes Mellitus in Children—While many adult diabetic patients can get along without insulin, A. Graeme Mitchell, Cincinnati (Journal A. M. A.), says that practically all diabetic children will be benefited by its use, the severity and progressive character of the disease in them making it difficult to give a diet that will keep them sugar and ketone-free while supplying enough food for growth and development. The diabetic diet for children should be planned with three definite factors in mind: (a) The protein content; (b) the relation between ketogenic and anti-ketogenic substances, and (c) the glucose tolerance of the patient. It may be assumed that a child will require at least 1 gm. of protein for each pound of body weight. Protein-containing foodstuffs are selected that will furnish this amount. Ketogenic food substances must be balanced against anti-ketogenic food substances. If the diet contains not more than 2.5 gm. of fat for each gram of carbohydrate plus each gram of protein, ketosis will not occur. In continuing the planning of the diet in which protein has already been supplied in the proportion of 1 gm. per pound of body weight, the remainder of the food must be added so that there is 1 gm. of carbohydrate and not more than 2.5 gm. of fat for each pound of body weight. Children are especially prone to the development of acidosis, and it is well to keep the fat lower than would be permissible in adults, not much more than 2 gm. of fat being allowed per pound of body weight. This is particularly important in initial diets until the glucose burning power of the body is known. Mitchell gives details for the treatment of uncomplicated cases—cases in which there is diacetic acid in the urine and cases in which severe acidosis and threatening coma are present. Children must be under close surveillance lest they supplement their restricted carbohydrate allowance in a surreptitious manner.

EDITORIALS

PRESIDENT MACGOWAN'S ADDRESS

Our much honored and beloved retiring president, Granville MacGowan, crystallizes the ripe experience and the meditations of a mature and remarkably acute mind in his presidential address published on page 833 of this issue. Doctor MacGowan raises a number of problems that every doctor has thought about and he gives us the benefit of his experience and judgment in the solution of some of them.

One of the most hopeful signs in our many-sided medical progress is, that more and more physicians are becoming actively interested in the broader, and probably the more important, problems of physicians as classified usually under medical economics, ethics, medical politics, and public health. All physicians admit that one of our greatest failings in the past consisted in devoting our talents too exclusively to bedside interest in sick people, thereby overlooking the necessity for carefully planned and homogeneous mass action in solving some of the broader problems that reflect upon communities as a whole and by which physicians en masse are more likely to be judged than by the striking individual successes of individual physicians in the care of individual patients.

"COLD SCIENCE, EFFECTIVE BUT NOT ALWAYS CONVINCING, has come into nursing and medicine, as sentiment has been squeezed out. It has been remarked that in the beginning medicine was all art and no science, while now we are trying to make it all science and no art."

There is a whole essay in the above epigram quoted from Edward N. Ewer's inaugural address as president of the California Medical Association (page 838). It was difficult to select this outstanding quotation from this unusually able and thoughtful address, every sentence of which has had the care and attention that makes literature—and authors. Our new president has something to say, and he says it in a way that makes light work for an editor and easy and profitable reading. His wholesome message should—and no doubt will—have the thoughtful attention of physicians individually and of organized medicine.

A WARNING!

In calling the attention of doctors to the upgrade tendencies of poliomyelitis, the California State Board of Health Weekly Bulletin says:

"In the weekly bulletin for April 11, 1925, attention was called to the undue prevalence of poliomyelitis. It was pointed out in that issue that poliomyelitis is ordinarily more prevalent during the early fall than during any other season of the year. Attention was called to the fact that experience has shown that, in those years when more cases than usual appear during the spring months, pronounced outbreaks of quite extensive proportions nearly always occur during the fall of the year. Since the

publication of these statements last month, still more cases of poliomyelitis have appeared. About thirty cases have occurred in California during the past four weeks, as many as twelve and thirteen cases having been reported during separate seven-day periods."

"There has not been an extensive outbreak of poliomyelitis in California since 1915. *The present trend of the disease, however, indicates the necessity for providing every possible safeguard against an epidemic of the disease next fall.* Prompt reporting is essential, for this is the first and most important step in the control of this disease, and unless all suspected cases are reported and investigated without delay, the control of the disease is made extremely difficult."

The physician who is thoughtless or negligent assumes a responsibility that should cause him unhappiness—at least.

SOME PROBLEMS OF DOCTORS

"Dear Editor," writes one of our good doctors, "When you have time and opportunity, will you be so kind as to give us an editorial or other comment, telling us what is our duty, and what is our best policy in handling a certain type of case. This inquiry comes to mind as a result of two incidents that have happened to me; in order to make my request plain it will perhaps be best to relate these incidents in detail.

1. "Some months ago, I was asked by one of our leading men to see a case of diphtheria with a man who is a —, although he has a P. & S. license. This proved to be a case of laryngeal diphtheria in a child of 8 or 9 years who had been under treatment for four days. No antitoxin had been given. I used very straight talk to the parents and I was successful in my argument, so that they allowed me to give 60,000 units, in spite of their religious opposition. I did not see the child again, but was told that he recovered from the local symptoms of diphtheria, but died four days later of heart paralysis. THE ANTITOXIN WAS GIVEN THE ENTIRE BLAME FOR THE DEATH. As a result of this occurrence, I resolved that in the future I would not be quite so positive in my arguments, but would state the case and let the parents decide.

2. "A few days ago, I was called to see a boy of 9 years who had had diphtheria six days without treatment. The parents said they wanted me only to make a diagnosis, *that they would treat the case.* I told them they were letting the boy die from neglect, and left it to them to decide. They said they would call me up later if they changed their mind. The culture from the throat was positive; also a smear taken at the same time. So, without waiting for the culture, the matter was reported to the health officer, who placed a quarantine on the house. Two days later an undertaker called me over the phone and asked me to sign a death certificate in this case. I refused to do so.

"The other day, while discussing the above with some of the other doctors, I was rather severely criticized by a man for whose opinion I have great respect. He told me that I did not do my whole duty; that I should have taken the matter up with the coroner at the time, instead of with the health officer.

"Since death resulted in each of these two cases, the matter is serious. If it were a matter of adults who were refusing treatment for themselves, I should not worry much, but as it was a child in both cases, I do not feel comfortable if I have not done all that was possible.

"I would appreciate, and perhaps others might also appreciate, a statement from you as to what one should do in such cases. If one urges the use of antitoxin and is successful in his argument, one is blamed for a death

if one occurs; if one urges the use of antitoxin and does not carry his point, he is guilty of neglect in the view of his confreres.

"Does the coroner, or any other officer, have the power to compel treatment of children in such cases?"

COMMENT

One of the oldest of known epigrams is to the effect that one cannot work in a stable without carrying the odor of manure. It is equally true that an educated ethical physician cannot consult with nor connubiate with a cultist—licensed or unlicensed—without attaching to himself the odor of cultism. Unquestionably, our correspondent, whom we personally know to be a competent physician of the highest integrity, made his first mistake in "seeing his patient" *with an inadequately educated "doctor."* It is true that too many otherwise educated, useful and often older physicians, some of them high in popular esteem, furnish examples of such unethical conduct in their relation with cultists. But all such men are either unbelievably stupid or mercenary beyond hope. Stupid, because no matter how deeply they think they have buried their heads in the sand, they fail to appreciate that their weird odors travel further and faster among their colleagues than do their virtues, be these ever so numerous and valuable. See your patient, yes, by all means, but refuse to recognize or consult with any cultist or so-called "doctor," even though licensed, who will treat a diphtheria patient for four days without using antitoxin.

It is difficult, it is true, to see an irresponsible child going to almost certain death with diphtheria, without having the marked advantages that all physicians *know* accrue from the intelligent use of antitoxin. Nevertheless, our correspondent was perhaps overly insistent, in view of the peculiar religious and medical beliefs and practices of the parents. It is well in circumstances of this kind to insist upon the presence of some other safe intelligent witness and follow-up worker—*preferably a reliable nurse*. And once having assumed the proper responsibility of administering antitoxin to an obviously desperately sick child, the doctor should have followed this step up by frequent subsequent visits. *This should have been one of the stipulations made before the antitoxin was given.* It is not enough to throw a lifeline to a drowning person; the service must be followed up.

Our correspondent's conduct of the second case was above reproach. Having very properly refused service under the conditions imposed and having reported the matter to the official public health authority, his duty was fully discharged. It was the duty of the official health department, once in charge with their yellow card on the house, and not that of the doctor, to see that justice was served, including a report of the matter to the coroner, if they believed, as apparently they had reason to suspect, that someone ought to be prosecuted for manslaughter. Our correspondent does not tell us *who did* sign the death certificate.

The trick of asking doctors to sign troublesome death certificates to protect incompetent cultists, self-medicators, and those fortunately rare parents who want to treat their own children, whether by

prayer or pills, is an old one. Public health officials claim that too many doctors jeopardize their standing, and in several instances recently, their freedom, by acceding to such requests. Our correspondent expresses the universal sentiment of good doctors when he particularly deplores neglect, or worse, of sick children, but it is well to remember that the contractual relations between the personal health physician and his patient are private and, to a degree, privileged. Society has established and maintains public health services, courts and coroners to see that the interests of the state in the child are maintained, and to punish when necessary. It, of course, is the duty of the personal health physician to report such matters as he mentions to the public health authorities and it is wise to do so in writing, retaining a carbon copy of the letter. Of course, no harm is done and sometimes the cause of humanity is better served by also sending a copy to the coroner or district attorney.

No, doctor, neither the coroner, nor any other official or person, except the parents or guardian, has the authority to *compel* intelligent treatment of children in California, even though they may be strangling to death from a growing diphtheritic membrane as certainly as they would suffocate if thrown into a river. Courts in several other of our states have recently convicted meddlers, cultists and *in instances, even parents, of manslaughter*, under conditions not far removed from those you describe. There isn't much chance for such successful enforcement of law in many places in California at the present time.

The columns of CALIFORNIA AND WESTERN MEDICINE, and even those of a few newspapers, are open for the publication of FACTS such as you mention in the unpublished paragraph of your interesting letter. Let us have more questions of such vital importance from good doctors who are troubled in spirit. The editor will welcome additional comment upon the question raised in this letter and editorial, and will use, with or without mentioning names, such matter as appears useful to the cause we all espouse.

Are Modern Public Health Departments Becoming Great Organizations for the Practice of Medicine?

A growing number of writers, medical and non-medical, believe that many health departments are going far beyond their legitimate business. Doctor C. D. Selby, in his inaugural address as president of the Ohio Medical Association (Ohio Med. Jour.), sums the situation up in a state where the issues have been much discussed: "The 'modern health department' wishes to perform all kinds of medical service for the public, vaccinations, Schick tests, the Dick treatment of scarlet fever, the treatment of tuberculosis, etc. It is hardly necessary to say that this policy is fallacious. It is our duty as physicians and as a profession to bring health officers to understand that *every physician is a health officer*, and that these treatments which health officers are attempting to apply en masse are treatments that can much better be applied by individual physicians. The best health officers are those who secure the co-operation of physicians and persuade them to become individual health officers for their clientele."

Dr. O. Pine queries: "Why all this frenzied haste to embalm the 'family physician' before he is dead? Only his purse has been lacerated, not his usefulness!"—Atlantic Medical Journal.

The Month With The Editor

Notes, reflections, extracts from correspondence, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

Curing Broken Legs by Prayer—The most audacious attempt of the unqualified to secure *legal* right to practice medicine, of which we are informed, was exemplified during the recent legislative session, when a well-organized attempt was made to allow "treaters by prayer" all the rights and privileges of educated licensed physicians.

Among other things, this proposed law was to grant "any employe" the right to select "treatment by prayer or spiritual means" in lieu of medical and surgical treatment.

And the "prayer" or spiritual "doctors" were to have full and complete authority in the preparation and signing of official documents upon which the consequences of injury, including compensation are based.

There is an interesting and more complete story of this and some other curious and significant measures which were before the last legislature, and what happened to them, and why, in the June issue of *Better Health* magazine. More of the story will be told from time to time.

"Why Patronize Your Family Doctor," asks one of our correspondents, "when our tax-supported public health authorities advertise to render important doctor's services *free* for you—regardless of your wealth—as they do in the following from the State Board of Health Weekly Bulletin: 'The Bureau of Child Hygiene of the California State Board of Health is sponsoring conferences in many counties throughout the state, where *pre-school children* may be brought for *free physical examinations*.'"

A "BEST SELLER"—A man went into Cohen's Book Store and asked: "Have you a copy of 'Who's Who and What's What,' by Jerome K. Jerome?"

Cohen replied: "No, sir; but we've got 'Who's He and What's He Got,' by Bradstreet."

MORE MESSAGES ABOUT THE HISTORICAL NUMBER

ON BEHALF OF THE SAN DIEGO COUNTY MEDICAL SOCIETY, permit me to express our sincere appreciation of and admiration for the splendid Journal which your untiring efforts have evolved and which is now known as California and Western Medicine.

At the recent meeting of the State Society in the Yosemite Valley it was with pleasure that we noted the commendations for the Journal which came from all sides and we feel that California has good reason to be proud of one of the foremost medical publications in the United States.

Very sincerely yours,

George B. Worthington, M. D., President.

"MY DEAR DR. AND TOO INDULGENT CRITIC," writes Doctor Adolph Barkan from Zurich, "may an octogenarian colleague be permitted to thank you for the few beautiful lines, and the sentiment expressed through them, which you have seen fit to put at the head of my sketchy remembrance of Macewen?"

When in the year 1869 I came to the Pacific Coast, in fulfillment of my boyhood's determination—to cure the blind and live in California—there appeared the Pacific Medical Journal in S. F., edited by that lovable man, Dr. Henry Gibbons, Sr. Will you put that alongside the historical number of California and Western Medicine? Let us—including myself into the ranks of the generation of medical men still young in spirit—be grateful for the progress achieved in our holy and beautiful profession, and under able leadership ever continue the good work. Again, my dear Dr., I thank you, and wish you well and many years more of progressive and encouraging work."

—THIS IS TO CONGRATULATE YOU AND THE AUTHORS on the very excellent articles which recently appeared on The Historical Number of California and Western Medicine. The articles were splendidly written and edited and made very interesting reading, in addition to being a change to many of us. I hope that in the future you may see fit to publish other similar articles.—J. Park Dougall, M. D., Los Angeles.

—ACCEPT MY CONGRATULATIONS on your interesting historical May number. Some of these pioneer physicians deserve our admiration for their courage and resourcefulness. Without the help of our modern laboratories some very good work was done.—Kaspar Pischel, San Francisco.

Preventing Babies—Doctor Pusey, ex-president of the A. M. A., in an address before the recent birth control conference, pointed out that legitimate practice in this field is a responsibility of physicians. "Doctors' methods," he said, "do not appeal to the mooning sentimentalists, or the so-called moralists, or to the ethical dreamers who would like to have mankind not as it is, but as their dreams would picture it."

—The 821 doctors who attended the convention passed this sensible resolution: "Resolved, That at this session of the Sixth International Neo-Malthusian and Birth Control Conference this meeting of American physicians affirms that birth control, being a very important and complicated problem requiring scientific study and guidance, comes properly within the province of preventive medicine, and that the subject should not only have a place in the programs of county and state societies and of the American Medical Association, but also becomes a part of the work of clinics, hospitals, and other medically supervised organizations engaged in scientific study and prevention of disease and crime."

THE 1926 A. M. A. session will be in Dallas, Texas. Let's begin to plan now and send at least 1000 California, 200 Utah, and 100 Nevada physicians to that convention.

Our New Trustee—Doctor Joseph A. Pettit, Portland, has been elected trustee of the American Medical Association to fill the unexpired term of Doctor W. T. Williamson of blessed memory.

Trusteeship of the American Medical Association for the West Coast section is a particularly important position, and we have every confidence that Doctor Pettit will represent us wisely.

Another Friend Honored—President-Elect Wendell C. Phillips of the American Medical Association is another of those "barefooted farmer boys" who have made good.

He plowed barefoot when he was so small, that the plow-handles would toss him in the air when the plow struck a rock.

—Did the hard work injure or benefit him? He believes the latter.

The Tonsil Crusaders—"Undoubtedly," believes the editor (Jour. Ind. Med. Assn.), "the pendulum has swung too far toward radicalism in the removal of tonsils to cure or relieve many diseases or symptoms of the human body, but this conclusion must be based on the knowledge that the worst offenders are the commercial operators who operate for the fee or the experience; or, on the other hand, by the class of physicians who are enthusiasts or faddists concerning a procedure that, while having its limitations, is considered to be beneficial in a large proportion of cases."

"When all is said and done, the point made by Barnes may be emphasized, and that is that the tonsils should never be removed without adequate cause, but when such cause exists the loss of a questionable functioning power should not be used as an argument against their complete extirpation."

—Certain clinics, health centers and groups of California health uplifters are still beating the bushes for children whose tonsils they want out on the say-so of technicians. *It takes a good a doctor to tell when a tonsil should come out as it does to take it out.*

Blood Money—Now that the Supreme Court of the United States has ruled that the Harrison Narcotic Law is *purely a revenue measure*, we find our country in an unenviable position, morally and socially speaking, in another of its tax practices.

Heretofore it has generally been denied by government officers that the law was primarily a revenue measure.

—It would look better to keep on being untruthful about it.

Balto!—The self-designated "Citizens' Medical Reference Bureau" is making itself again ridiculous in objecting to the proposed statue to the dog Balto because of his glorious run to Nome with life-saving antitoxin. *These people seem to think that Balto was a family doctor.*

Exercise, Work, Play—Queen Victoria never walked when she could ride, and exercise in general she avoided. She lived to a ripe old age. Walter Camp, who all his

life had kept himself in the "pink of condition," died much younger of cardio-vascular troubles. "What is one person's poison is another's food," is quite as true today as it was before we all became "educated."

Testimonial-Giving Again Becoming "Stylish"—When Chambers of Commerce made "leg shows" "stylish" and "theoretically respectable," they opened quite a "jack pot": they put a punch into the craving for publicity.

—Vanity looking about for its essential flattery discovered that the old custom of getting our names before the public by giving testimonials had been allowed to drift into obscurity, if not unrespectability.

—So, by reviving the custom and making it respectable by engaging the help of a few respectable people of prominence, a chance is provided to satisfy the publicity craving for another large group.

DR. STABEL MAKES THE STATEMENT (*Better Health*, June) that the successful country doctor requires more knowledge, experience and devotion than his city colleague. "The latter," says the doctor, "has specialists at his command to *divide* the responsibility which the country doctor has mostly to bear alone."

THE study of scientific medicine and the practice of it is a religion; it is a good deal nearer a religion than any other vocation on this earth. It ought to be kept far above the suspicion or the taint of commercialism.—Hubert Work.

Osteopaths "Educate" the Public—Some of the things said at the recent state convention of osteopaths that the newspaper men attached value to were:

"Professor Emery, widely known cancer expert," is credited with the startling statement that "The same influences that cause painful flat-foot, falling down of any of the organs, teeth-decay, and other breaking down of tissues, are the influences that cause cancer."

The old chestnut that cancer "is a disease of civilization" was polished up by Emery, who said: "It is not known among primitive people, nor was it known among the ancients—all of whom have the most perfect teeth, as I found in examining the skulls of the Egyptian mummies, those of the Peruvian Incas, those found in the catacombs at Rome, and in my world travels among primitive people."

There is plenty more of the same sort of misinformation about other subjects that some people no doubt will accept and act upon.

Oh Those Hollow Hairs!—"Progress of medical science, as developed by a New York barber and advertised by a sign in his shop, according to the *American Mercury*:

"After the hair is cut it should be singed in order to close up the ends. This prevents your catching cold in the head through the open ends of the hairs."

BOOTH TARKINGTON (*American Magazine*) makes the doctor say: "Why shouldn't we eat, drink and be merry, since tomorrow we die?" Well, the easiest answer is another question: But suppose you don't die? And the confirmation the world is seeking is confirmation of the ancient but shaken faith in that supposition. Man wants to know if there is eternal life and if there is God. If he finds an affirmative answer to either question, he'll accept it as the answer to both. If he finds that death is merely a change in continuous life, he'll know there is God. Isn't it curious that in the beginning man knew perfectly well that death was only a change in life, and not extinction of himself at all?"

There is much more in the essay by this delightful author that may be read with interest and profit.

It Is Said to Cure "Fear Complexes"—Mr. Samuel F. Rutter, Federal Prohibition Director, reports that Northern California residents legitimately consumed 1,200,000 pints of liquor in the twelve months ending May 1.

This represents the amount of spirits prescribed by physicians. There are 7300 physicians in California who

have the right to prescribe liquor, but proceedings are under way to revoke the licenses of forty-five of these.

California State Hospitals Establish Beauty Parlors for Patients—According to a recent news item from Sacramento, Mr. Walter D. Wagner, Director of State Government Hospitals, has established beauty parlors in state hospitals for their "wonderful psychological influence on the women inmates."

"The Tragedy of the Dirty Room"—Why tragedy instead of tragedies we don't know, but in any event **THE** tragedy is, that dirty rooms cause asthma, according to an amazing interview displayed in the press as being from one of our California doctors.

Your back aches because:

"Kidneys," said the herb man.

"Prostate," said the G. U. doctor.

"Flat-foot," said the shoe doctor.

"Pelvic trouble," said the gynecologist.

"Infected teeth," said the dentist.

"Mal-adjustment," said the osteopath.

"Impinged nerves," assured the chiropractor.

"It don't ache," emphasized the Christian Scientist.—*Medical Herald*.

FATE makes no free gifts; it sells, for a price. The price is heavy. Machine guns, cancer, slums, the penny newspaper—these are a few items of the tribute we pay to fate for the privilege of not being savages."—Aldous Huxley (*Vanity Fair*).

Our Sins Will Find Us Out—"The responsibility of diagnosing a healthy heart," says the *Medical Standard*, editorially, "should not be shirked because of the professional risk which the physician runs of giving a good prognosis in errors. . . . An attitude of playing for safety would be more justifiable if heart cases were doomed to end with the dramatic abruptness usually depicted by the novelist and imagined by the laity. . . .

"The tendency to excessive diagnosis of heart disease was rife during the war when thousands of men were rejected as unfit for service, or were invalidated out of the army, on the slenderest evidence of valvular disease and a mistaken notion of the ambit of cardiac manifestations. The morale of many ex-service men has been damaged to such an extent by this wrong diagnosis of heart disease that they will never again consider themselves fit for work. . . .

"Whatever the temptation to do otherwise, there is seldom any justification in the realm of heart trouble for other than a preliminary statement that either there is something wrong with the heart or there is not."

It takes a good doctor and an honest one to affirm that there is nothing important the matter with a given person's heart. It is much easier and safer for the unskilled to express a "strong suspicion," which is all the average patient needs to develop a first-class "fear complex." This most popular "fear complex" is surely being stimulated at present and, what is even worse, is being capitalized by people who are not adequately prepared in intelligence or experience to tell the difference between an emotional tachycardia and an arrhythmia. Ignorance, playing "safe," or cupidity explains an unknown amount of the "heart disease" statistics now so spectacularly featured.

An Unusually Intelligent Instrument:

"Dr. —, chiropractor, has equipped in his office a new nerve pressure register, which will register every degree of inflammation anywhere in the human body."

This is a copy of an advertisement clipped from a California newspaper and sent in by one of our members. We admit our inability to offer comment that would be understood by anyone who would fall for such bunk. We are informed that this chiropractor apparently is prospering, and in a community where at least the average amount of "health education" is passed around.

A Gruesome But Effective Health Measure—Scaring people into vaccination against smallpox by placing the sick, victims of this repulsive disease, near windows so that passersby may see them, is reported as proving an effective health measure in one place in New York. The health officer who introduced the innovation to help him overcome opposition to vaccination says: "During thirty-five years of continuous service as health officer here, I have never seen so marvelous a change in public sentiment on any such matter as occurred in the town referred to. Vaccination became, during the following week, a

popular pastime, and there are very few in this locality now who have not been vaccinated, although this happened twelve years ago."

THE docs do wrong when they protest against prohibition. No man should condemn an institution without first giving it a test.—Bugs Bear.

"Fake Prescription Forms"—So many counterfeit doctors' prescriptions for liquor are in circulation that the Internal Revenue Department has been obliged to issue an entirely new form, more difficult to duplicate.—*American Registered Pharmacist's Journal*.

66 **W**HAT a man does when he has nothing to do shows what he is."

Doctors are Citizens First—They are morally obligated to interest themselves in civic affairs and should be as active in promoting mental, moral and spiritual welfare as they are in promoting physical welfare.

"Short Turn Ahead"—That concern which is circularizing doctors and offering—for a price—to prepare and release articles to the public press under the doctor's name is finding some doctors who prefer notoriety to fame.

Who Said Fame!—Doctor W. E. Balsinger who, according to some newspapers, "gained international fame by transplanting one of Jack Dempsey's ears to where his nose should have been," was in San Francisco recently. He wanted an apology from Dr. George Warren Pierce, who has been quoted as saying that new noses built of paraffine won't last.

Does this confirm the old saying "that a prophet is not, etc."?

PROGRESSIVE INDUSTRIAL PHYSICIANS will find much to ponder over in Report No. 29, Industrial Fatigue Research Board of Great Britain.

The High Cost of Babies—Ida L. Allbright (Century) supplies food for thought in this well-told story of a "layman who acknowledges a large debt of affection and thankfulness to many men of the medical profession." Mrs. Allbright had her experiences with family doctors, specialists, groups, and clinics. Read her story, doctor; it may help you with your problems.

California Leads in Smallpox—Also in anti-vaccination propaganda. The two things go together. We led all the states during 1924 with 9425 cases of smallpox and fifty-six deaths. Ohio was our closest competitor, with 5597 cases and fifty-eight deaths.

Oh well, the anti's must spend some of their money, but why purchase a repulsive disease like smallpox with it? The pathetic feature of this *totally* (100 per cent) useless and unnecessary injury to health and sacrifice of life is, that many of the victims were children.

Deleting Babies—Extensive publication of the decreasing birth rate is now pointed to by some to prove how much more effective the modern birth control clinic is than was the old-fashioned doctor.

Mr. Ross, California's vital statistician, is quoted in the press as stating that: "Figures show that whether contraceptive methods are taught in clinics or not, their practice is general."

Mr. Ross also claims that: "The California average family of 2.68 persons is smaller than in any of the twenty-seven states that are in the registration area."

—Don't forget, Mr. Ross, that California must lead in "birth control," as well as in berries or anything else she attempts to do—or should I say not do.

Smith, being introduced to golf for the first time, had hit the ball a terrific whack, and sent it half a mile.

"Now, where do I run to?" he cried excitedly.

Are the Violet-Rays a "Nearly Cure-All"?—After reading that most remarkable, heavily headlined and illustrated interview with an M.D. from a Class A San Francisco Medical School the other day, we felt an inclination to turn over to the advertising "herbalists," "mental healers," and what not for some quiet reading.

Doctor, several of us are "over 40," our blood pressures

are higher than they should be, but we do hope you are wrong, at least, in your alleged statement that violet-rays "stimulate the growth of cells in the lining of the blood vessels."

When Is a Hospital Not a Hospital?—According to William C. Hassler, M. D., the official public health doctor of San Francisco, "*Christian Science Rest Homes*" are hospitals—at least from legal and public health viewpoints. The doctor elaborated his statement to say: "Unquestionably, this institution is a Christian Science hospital, but Christian Science does not recognize disease and so does not recognize hospitals as such and calls them rest homes."

—Nay, nay, holds Mr. McLeod of the Christian Science Publicity Department: "The statement that 'Christian Science does not recognize disease' is a complete misapprehension of its teaching and practice. In a relative sense, Christian Science recognizes disease as a mortal condition, to be rejected and destroyed *in accordance with God's law in the same manner as Jesus Christ destroyed it.*"

—This and other similarly significant statements from similar sources makes illuminating reading, particularly in connection with proposals to change the title of Christian Science practitioners to Doctors of Christian Science and with active attempts to give these people, BY LEGISLATION; all rights to treat patients under the Industrial Accident Law now included in physicians' licenses.

"That 'grand old man,' Dr. David Starr Jordan, has in no degree lost his sense of humor. His talk on 'Sciosophy' or the science of ignorance, was a scream."—San Diego County Medical Society Bulletin.

Why Some Leave Home:

"The city visitor was consulting the oldest inhabitant. 'How many people in this town now?' he asked.

'Twenty-five, sir.'

'How many did you have last year?'

'Twenty-five, sir.'

'That's strange, aren't there any babies ever born in this town?'

'Yes, sir. But most every time a baby is born, *somebody* leaves town.'

Birth controllers, take notice!

Catching Them Young—"Clinics for children of pre-school age which have previously been held at different homes will now be held in the association room *under the direction of the trained nurse and two assistants.*"

This quotation from an official tax-paid-for publication is representative of a type of quite familiar literature.

—A recent definition of a clinic is that it is a place where everyone but doctors practice medicine.

Playing Both Ends Against the Middle—According to a recent California Superior Court decision, chiropractors may now demand examination and license as drugless healers (if they pass) of the Board of Medical Examiners. Dr. Pinkham predicts that "there will be a rush of chiropractors to qualify under this ruling and he foresees great confusion arising from the dual jurisdiction. If a chiropractor holding licenses from both boards violates a medical regulation and has his license revoked by one, he can still operate under his license from the other."

—This dual convenience will provide many other kinds of *opportunities*. However, the outstanding fact is that even a drugless license from a board of educated physicians is more valuable to a chiropractor or other "doctor by law" than is the most attractive certificate that his own board can invent.

Another Fad Passing—Dr Matthias Nicoll, health commissioner of New York, has issued a warning against self-dosing with iodine. He points out that while this chemical may prevent goiter in children, it may also do harm to adults who have goiter already developed.

From numerous other reliable sources belated warnings are being issued against the indiscriminate use of iodine as a goiter preventive.

Iodine is a chemical and by no means a harmless one. Like other medicines, it should be prescribed by an educated physician when and where indicated, either for curative or disease preventive purposes.

—CALIFORNIA AND WESTERN MEDICINE has been preaching caution since the "iodine fad" first had its remarkable flare-up.

Medical Economics and Public Health

Both Timely and Important—The House of Delegates of the A. M. A. passed the following resolution at the seventy-sixth session:

"RESOLVED, That it is the sense of this House of Delegates that periodic health examinations should be conducted by medical men and neither dominated by nor controlled by lay organizations, for the reason that the relation between the patient and the physician is an individual matter, and anything that disturbs such relationship is detrimental to the best interests of the patient; and be it further

"RESOLVED, That it is the sense of this House of Delegates that every Fellow and member of the American Medical Association should live up to the spirit and letter of this resolution."

Health Officers Recently Appointed—According to the official bulletin of the California Board of Health, W. J. Quinn, M. D., of Eureka has been appointed health officer of Humboldt County to succeed F. R. Horel, M. D., of Arcata, who has held the office for many years. Doctor Quinn is licensed to practice medicine and surgery in California, and is a member of the California Medical Association.

J. W. Truxaw, M. D., has been appointed health officer of Anaheim, Orange County, to succeed George A. Paige, M. D. Doctor Truxaw is also a member of the California Medical Association.

Gilbert S. Bovard, M. D., has been appointed health officer of Sierra Madre, Los Angeles County, to succeed E. L. Jackson, M. D. Doctor Bovard is a member of the California Medical Association.

J. W. Camp, M. D., has received the appointment of health officer of La Habra, Orange County. Doctor Camp is a member of the California Medical Association.

Mr. M. B. Eaton has been appointed health officer of Sunnyvale, Santa Clara County, to succeed Mr. M. J. McGinnis. Mr. Eaton is not licensed to practice medicine and surgery in California, and is not a member of the California Medical Association.

The Physician and Narcotics—"The United States Supreme Court has just recently handed down an important decision dealing with the Harrison anti-narcotic law," says the Santa Cruz Sentinel, editorially. "The court holds," continues this editor, "that the law is strictly a revenue measure and must be so construed, interpreted and applied."

It also disposes of the more vexing problem, which has often been raised under that law, whether or not a physician may legally give small doses of morphine or cocaine to an addict under treatment.

"Dealing with this question, the court says: 'That a physician who in good faith dispenses small quantities of morphine or cocaine to an addict for the relief of conditions incidental to such addiction commits no offense within the Harrison anti-narcotic law.'

"Further on it says: 'The treatment of drug addicts and the wisdom or propriety of such treatment not being a matter for the determinates of Congress through the medium of a revenue measure.'

"The case upon which this decision was based was taken to the highest court of the land to test the powers of a physician under the law. That the court imposes the utmost trust in physicians in handling the dangerous drugs is shown by the fact that the decision does not even caution the physicians to exercise care, believing that under their oath when entering the profession they will do all in their power to aid an addict and will use wisdom and discretion in administering the treatment."

Another Health-Prolonging Group—A number of our members have sent in to us a most interesting document and return postcard on the stationery of a new "stay well," "positive health," "longer living," "college," "institute" association, or something of the sort. The idea of this new crowd is very much like the ideas of those that are now, and those more numerous ones that have been,

as well as some that are now and that won't be in the future. Their whole philosophy seems to be that because someone said (untruthfully) that the Chinese pay their doctors when they are well and require their services without pay when they are ill, the idea should be applied in America.

It probably would not be an exaggeration to state that the organizations that have attempted this and failed—at least for everyone except those who handled the money—would run into the hundreds.

The letter from this new organization which seems to have upset so many of our members shows on its face that it is prepared by people who have almost no fundamental conception of the problem they are undertaking. They fail to appreciate the difficulties that great governments have had in trying to apply this idealistic principle to everyday life. We anticipate that this latest of the many of these that are reported to us every year will not grow to sufficient magnitude to require any serious investigation and study by our departments that deal with problems of this character.

"'Modern medicine,' believes Doctor Sir David Bruce, 'must change its strategy in the battle against disease. It must begin the offensive and not await the attack.'"

Five Fundamental Standards for Ambulatory Patient Services—1. The outpatient and the bed services should be regarded as intimately associated phases of hospital work and should be unified as fully as possible as to medical staff and as to administrative organization.

2. The number of patients accepted for care should be limited and regulated according to the facilities of staff, space, and equipment.

3. Adequate records should be maintained of the medical work, the attendance, and the income and expenditure. All the medical records of a patient should be filed together.

4. Adequate laboratory service should be made available for the outpatient department.

5. Nursing service, social service and clerical service should be provided. Physicians should be able to devote their time to their patients and be freed from mechanical and clerical duties.—A. M. A. Bulletin.

Effective Sociology—"Are the passing of the old-fashioned hickory stick and the modern criminal wave related?" asks the Medical Standard, editorially. "So-called old-fashioned folks," cautions the editor, "think so, and take issue with the modern professors of psychology and sociology. Yet there is one modern professor who professes the beliefs of our fathers. To quote Dr. Rudolph M. Binder, of the sociology department of New York University, 'Spank 'em in moderation. Spanking is a nature physical cure for the tense nervous cause and reaction of misbehavior.' Which licenses dad to say, 'Accompany me to the wood-shed, Ernest, and we will review our lesson in sociology.'"

Babies Come High—"Day nurseries, convalescent homes, and fresh-air homes in New York City represent an estimated investment of over \$15,000,000," states the annual report of Association of Day Nurseries.

"The budget of the Bureau of Child Hygiene of the New York City Department of Health," continues the report, "amounts to about \$900,000 for salaries alone. A study made of the day nurseries shows that this particular type of agency is reaching not more than 9000 families in a year, and takes care of about 15,000 children as a maximum. The total cost of maintaining the day nurseries is about \$1,000,000 a year."

Making Charity a Business Trust—"And, really," says Harper's Magazine, "an overdevelopment of that great industry of raising money by drives and campaigns and organizations for purposes which the organizers and the drivers believe to be good may come—if it runs to excess—to be open to the same objection which concerns the diffusion of the funds of the taxpayers. It may take away from the givers whom it reaches the ability to give their own funds to objects they think about and care about. When these great ebullitions of money-raising go out of style, that will be one of the reasons for it. People will say: 'We would rather ourselves give to what we wish to help than give to you to give to what you wish to help.' That is where the drives are weak."

California Medical Association

EDWARD N. EWER, M. D., Oakland.....President
 W. T. McARTHUR, M. D.....President-Elect
 EMMA W. POPE, M. D., San Francisco.....
Secretary and Associate Editor for California

THE YOSEMITE SESSION

The fifty-fourth meeting of the California Medical Association held at Yosemite Valley was a success from the viewpoint of the program presented and from that of the attraction of the meeting place. The total registration was 839, almost twice that in 1922. Few hotels bring the membership closer together fraternally than does the Yosemite Lodge, where only members of the California Medical Association and their families gather during the annual meeting.

Oakland, the home of our president, Edward N. Ewer, has been chosen as the place of meeting for the 1926 session.

Data about the annual meeting in Yosemite held on May 18 to 21, inclusive, could not be published in the June issue, as CALIFORNIA AND WESTERN MEDICINE went to press on May 20, prior to the close of the annual session. In this issue, therefore, are published the speeches of the president, president-elect, a full account of the Bunnell Memorial exercises, and the transactions of the House of Delegates. Because of the volume of material submitted, it is deemed wise to hold the minutes of the Council for the August issue. Certain Council action, however, should be brought to the attention of the membership early.

Clinical Prizes—As published in the December issue of this Journal, three prizes were established by the Council in November, 1924, in the sums of \$100, \$75, and \$50. After further consideration, it was felt by the Council that the amounts were too small and, therefore, at its last meeting the Council rescinded its former action and established two prizes for \$150 each—one for a paper on original research, and one for a paper on a clinical subject, to be competed for by members of the California Medical Association only. The competition will be so arranged that announcement of the prize winners can be made at the 1926 annual session to be held in Oakland. As soon as the committee has been appointed and the rules and regulations governing the competition formulated, full publicity will be given through the columns of CALIFORNIA AND WESTERN MEDICINE.

Preservation of the History of the California Medical Association—For some time the Council has felt that it is desirable to have a permanent committee to compile and keep up to date a full history of the organization, membership, and transactions of the California Medical Association, as the files and records prior to 1907 are very incomplete. At the Yosemite session the chairman of the Council was authorized to appoint such a committee. This is a most important function of the Association and it is hoped that any members who have

information on the subject will volunteer to collaborate with this committee.

Ownership of X-ray Plates—As many inquiries are constantly being received at the state office from doctors and hospitals, the general counsel was instructed by the executive committee to submit a form that would prevent question arising in either the minds of the patient or the doctor, hospital, or laboratory as to the exact status of x-ray plates. In compliance therewith the general counsel submitted a memorandum which was adopted in principle by the Council with the recommendation that it be formulated definitely for publication to the membership.

Certification and Recognition of Delegates at Annual Sessions—Much confusion and debate has always arisen at the annual sessions of the House of Delegates owing to the lack of definite rulings and regulations regarding the certification and recognition of delegates and their alternates. After much deliberation and consideration the Council has referred the matter to the executive committee with the recommendation that the proper amendments to the Constitution and By-Laws be prepared for consideration at the 1926 annual session, and that such amendments be made in accordance with the rules and regulations of the A. M. A. This means that only those delegates and alternates who are duly elected and officially certified to by their county society at least seven days prior to an annual session will be entitled to a seat in the House of Delegates.

Because of the non-attendance of so many delegates, the Council feels that "no delegate absent without notification to his county secretary or the state office should be considered eligible for representation the following year," and will recommend that this question be considered by the House of Delegates at its 1926 session, and that action be taken by that body along the lines quoted above.

DEDICATION OF MEMORIAL PLAQUE TO LAFAYETTE HOUGHTON BUNNELL, M.D.

Exercises held by the California Medical Association near Bridal Veil Meadow, Yosemite Valley, California, Tuesday, May 19, 1925, at 10:30 a. m.

The day was perfect. A gay company had assembled and formed themselves into a semi-circle, sitting on the greensward in a charming glade on the bank of the Merced opening into Bridal Veil Meadow.

The ceremony opened with what might have been a formal military salute, so well timed were the reports of a series of blasts from the road work near by.

Emmet Rixford, M. D., of San Francisco presided.

DOCTOR RIXFORD—I wish to call your attention to the completeness of arrangements made by Mr. Lewis, Superintendent of the Park, though he seems as surprised as any of us at this opening of the exercises with a military salute, as it were. One might almost imagine an aeroplane dropping bombs in the Valley to heighten the contrast of conditions of today with the mode of operations employed against the Yosemite Indians in 1851.

We are gathered here in this spot of wondrous beauty, with El Capitan towering aloft across the Valley and Yosemite Falls visible in the distance, to dedicate a tablet to the honor and memory of Doctor Lafayette Houghton Bunnell. I will tell you more about him later.

This site was chosen after much debate and many miles of running, and I know that all present will agree that it is not only a most beautiful spot, but is also most appropriate for a monument to Dr. Bunnell. Three sites were



Bunnell Memorial Exercises, Yosemite, May 19, 1925

considered—a spot near the foot of El Capitan, whose grandeur is a major theme in Doctor Bunnell's book; a second near the Royal Arches and Indian Cave, where several of the incidents of the stay in the Valley of the Mariposa Battalion took place and which had the advan-

tage of being more accessible to the public; and third, this secluded, but lovely spot.

Bunnell was not *the* discoverer of the Valley, but merely a member of the Mariposa Battalion, a company of thirty or forty, the first white men to enter it. His real distinction

lies in the fact that he suggested the name Yosemite Valley, and this little knoll leading out to the river beside the Bridal Veil Meadow is, as nearly as can be determined, the exact site of the first camp in the Valley of the Mariposa Battalion, and it was here that the name was suggested by Doctor Bunnell and adopted.

There is much that is indefinite in Doctor Bunnell's book, but the statements are clear that the first camp of the battalion was near the foot of the trail beside a meadow where the horses were staked out to graze. The company had Indian guides familiar with the best camping places, and we know that this very spot was an old Indian camp site because of the six or seven holes in the flat rock yonder where the Indian women ground their acorns. The identification was made by Mr. Lewis after carefully studying Bunnell's description with reference to the local topography.

Now for a brief history of the plaque. A committee was appointed two years ago, on the suggestion of Doctor Howard A. Kelly of Baltimore, that the medical profession erect a suitable memorial to this pioneer physician. The design by Mr. Paul J. Fair of the National Forest Service is of a grizzly bear representing the spirit of the Valley, standing erect in surprise and perhaps mixed emotions, viewing the entrance into his domain of the Caduceus, emblematic of the medical profession. Mr. Fair modeled the plaque with suitable inscription in honor of Doctor Bunnell, and Mr. Fred Storey cast the plaque in bronze.

The design was approved by Mr. Stephen T. Mather, Director of the National Park Service, after it had been passed upon by Mr. Daniel R. Hull of Los Angeles, landscape architect, and permission was given for the California Medical Association to place such a memorial plaque on some boulder at a suitable site in the Valley.

The plaque is to be mounted in permanent fashion on the flat side of the great boulder next the river, six feet or so above the ground.

The president of the California Medical Association, Doctor Granville MacGowan of Los Angeles, will now make formal dedication of the plaque.

DR. MACGOWAN—Fellow-members of the California Medical Association: As a learned society we are gathered together here in this, one of earth's most impressive spots, which had it been within the ken of the ancient Greeks would well, instead of Olympus, have been chosen as the home of the gods. Here are, within the reach of the senses, all of the attributes of nature, which cultured man without the belief of a sole sublime ruler might well with reason worship. The echoes of the voices of the waters and winds continuously surround us; soothe the traveler and lull him into oblivion; the wondrous groves spread mystery; the towering cliffs of ice-ground granite portray the hidden powers of might and strength; the lush meadows carpeted with delicate and tender flowers springing out from the concealment of the rich growing grasses reveal the protecting and sustaining powers of our mother earth. And all this majesty which we so admire and view with reverence had been, until a little less than three-quarters of a century ago, entirely concealed from the knowledge of the men who for thousands of years alternately created and destroyed civilizations growing out of the mental needs and ambitions of the white race.

Until 1851 no pale face had set foot upon the Valley floor. It had for all this time, within the memory of aboriginal man, been the abiding place and inheritance of a tribe mean of spirit and base of blood which was the scourge of the neighboring Indians and the terror of the haciendas of the plains. They absorbed no Godlike spirit from their environment. So secure felt they in their mountain fastness that when the work of the white men seeking for gold along the Valley of the Merced, the traces of whose activities may yet be seen, approached too close to the Valley gates, their dissembling chief, old Teneiya, picketed their work like a modern walking delegate and drove off the laboring force of Mission Indians who feared the Grizzlies, raided the stock, and refused parley with the commissioners of the government of the United States and defiantly brought about a state of war. It was then that the volunteer battalion formed in and about Mariposa, commanded by Major Savage, an Indian trader and commissioned by the then Governor of Cali-

fornia—MacDougal—was authorized and instructed to pursue these Indians and bring them into camp. One of these volunteers was a young man of 29, Lafayette Houghton Bunnell, the son of a Detroit doctor, who had received a partial medical education and had served at the beginning of the Mexican War as a hospital steward and later as a doctor. Young Bunnell was in the great adventure in California to seek his fortune in the gold mines. He attached himself to the military expedition through worship of the grandeur of mountain scenery, and a laudable curiosity to become further acquainted with the immense cliff, El Capitan, that he had seen from the old Bear Valley trail on the Merced River, looming in the Sierras.

A time of storm and heavy snow was chosen by the astute commander to approach the Valley through the totally unknown byway of the Mariposa trail. The surprise to the Indians was complete, and the expedition entirely successful. That night at the campfire, Bunnell, who was a devout nature lover and believer in America and American things and of a lyric spirit, proposed to those volunteer soldiers to name the Valley and presented to them the old Indian name by which the outlaw tribe was known to their neighbors surrounding them—The Grizzlies, Yosemite, the Terrible Bandits, of whom all were in fear. He wanted a true local name for the wondrous geographical basin that they had discovered. It received its baptism by the unanimous viva voce vote of the conquerors.

Bunnell did not remain in California nor did he practice medicine here, but returned to his old home in La Crosse, Wisconsin, where he enlisted in the United States Army, and was appointed a hospital steward and served during the entire Civil War, being promoted to assistant surgeon, and when he mustered out in July, 1865, had a commission as a surgeon, having in the meantime obtained a diploma in 1864 from an ephemeral institution in his own town—the La Crosse Medical College; his matriculation and class courses in the School of Hard Knocks and Internship in Camp Necessity justified the degree.

Later in life (he died in 1903) he wrote a most interesting book upon "The Discovery of Yosemite and the Indian War of 1851," which I would recommend now for any of you who are interested in tales of Indian warfare to read, because it is wonderfully descriptive of the early days of California and portrays the character of the man.

The California Medical Association has desired to keep alive the memory of this gentle, inconspicuous but honorable brother, and for this purpose we are here in the heart of the great Sierras dedicating this plaque, commemorating Doctor Lafayette Houghton Bunnell.

As appropriate I ask you all to rise, raise your left hands, repeating after me the 11 o'clock toast of a great benevolent organization to which many of us belong and which bears the name of the noblest of the denizens of this valley at the time it was discovered, "Cervus Alsus," To our absent brother.

DOCTOR RIXFORD—Mr. W. B. Lewis, Superintendent of Yosemite National Park, has given the committee the fullest co-operation and invaluable assistance. Aside from his official position, Mr. Lewis has always taken great personal interest in Yosemite Valley, and is a friend and often a friend in need of those who would enjoy the scenery of this world's most beautiful valley. Mr. Lewis will speak as representative of the National Park Service.

MR. LEWIS—Ladies and Gentlemen: I saw my name on the program for an address. Please do not look for one; it is not my business. I would like, however, to make an observation or two, and extend to you a hearty greeting from the National Park Service and Yosemite National Park, and also to extend to the California Medical Association the appreciation of the Park Service for doing this thing.

I think it is great to perpetuate things of historical interest. The old-timers are fast passing away, and each day we lose something of the early history of the Valley. It is only now that we are picking up threads and marking old sites. I think it is a wonderful thing to mark this place as the first camp of the white race in the Valley.

In thinking of that expedition of the Mariposa Battalion into the Valley, one cannot but compare conditions with

those of the present. I was thinking yesterday, with the roads in bad condition as a result of recent storms, that many of you on your way to the Valley felt you were undergoing severe hardships and probably criticized the Government for not having spent more money on the roads and Mr. Ford for not having put in better upholstery, and couldn't but wonder what Bunnell and his party had to criticize for the conditions then found.

Out of a camp of forty or fifty men it seems only Bunnell had an appreciation of the Valley and its grandeur. The rest were more occupied with hard service and work, and the idea of pursuing and catching the Indian. Bunnell was the only one who took time to show appreciation for wonders of the Valley and to make notes, and in later years to write a very good book of the expedition.

I do not know if Dr. Bunnell was a surgeon or not, but I am inclined to believe he was. Surgeons get great enjoyment out of exploring around incisions, and Yosemite Valley might well be thought of as an incision in the body of Mother Earth, hence, it would seem that only a surgeon would get the enjoyment out of exploring its depths as did Bunnell.

As a result of his interest in and study of Yosemite Valley during the limited time he was here, the wonders of the Valley became known to the world, but it is doubtful if he even imagined that in the relatively short time that has elapsed since that time, it would come to be known as one of the major scenic attractions of the world visited annually by thousands of people from our own and every other country of the world.

The route of the Mariposa Battalion into and through the Valley can be quite clearly defined. Coming from what is now Wawona on the south fork of the Merced River, they entered the Valley by the old Indian trail leading down from Old Inspiration Point, arriving in the Valley and camping on this site on the night of March 21, 1851. The following morning they crossed the river just below here, at what is known now as Valley View, and ascended the north side of the Valley for some distance, probably as far as Indian Creek, where the party split and scouting parties were sent out, one going up as far as Mirror Lake, one to the top of Vernal Falls, and back down the south side of the Valley to the Cathedral Rocks. By prearrangement they met again near the mouth of Indian Canyon in the evening, and camped there for the night. The following day they returned to Wawona by the same route followed on their incoming march. When it is remembered that all this was done in three days in the month of March, when the entire country they covered was well blanketed with snow, we must not fail to give that group of mountaineers the credit due them. Only the hardiest of men, thoroughly inspired with a sense of duty, would undertake and complete in that limited time such a hazardous journey.

It is, therefore, right and proper that this site be of record, not only in appreciation of Bunnell, but as the most important historical spot in the Valley.

Again let me extend the greetings of the Park Service and its full appreciation of the efforts of the California Medical Association in establishing this memorial in honor of the discoverer of Yosemite Valley.

DOCTOR RIXFORD: It seemed to the committee that it would be most appropriate on this occasion to have set forth something of the history of early exploration in the Yosemite region and the origin of the name. None is so well versed in this matter as Mr. Francis P. Farquhar of San Francisco, who has gathered together a great mass of material on the history of man's coming into the Sierra. Mr. Farquhar will speak as a representative of the Sierra Club.

MR. FARQUHAR—Members of the Medical Profession and Friends of Yosemite: Doctor Rixford has asked me to give you something of the historical background in order to bring out more vividly the significance of the expedition of 1851, when Bunnell came to Yosemite Valley as a member of the first party of white men to set foot here.

It may seem strange that this remarkable spot was so long unknown, but it should be remembered that scenery was not a prime objective among the early visitors to California. Mountains were a barrier and not an attraction. The Spanish occupation was confined to the coast for many years, and, excepting for attempts to reach the

coast from the settlements in Mexico by way of the lower Colorado River, little was known of the interior of California. In 1776 Father Garces entered the San Joaquin Valley and visited many Indian rancherias along the river. He did not ascend into the mountains, however, although his visit did fix the name of Sierra Nevada upon its present location. Formerly it had been rather vaguely assigned to the mountains along the coast. Early in the nineteenth century other visits to the San Joaquin Valley were made both by soldiers and priests, but without increasing the knowledge of the Sierra.

It was not until the coming of the American and British trappers that a real interest in the interior became manifest. In the winter of 1826-27 Jedediah S. Smith, one of the greatest of American fur traders, entered California from Utah and crossed the Tehachapi into the San Joaquin Valley. In May, 1827, he crossed the Sierra Nevada and returned to Great Salt Lake. He was undoubtedly the first white man to cross the Sierra, but it is reasonably certain that he did not see Yosemite.

In 1833, Joseph Reddeford Walker left the Bonneville expedition in the Rocky Mountains and came West from Great Salt Lake to explore for new beaver streams. With a large party, he came down the Humboldt River (then known as Marys or Ogdens River), and crossed the Sierra by a route that brought him along the plateau between the Tuolumne and Merced Rivers. A young man named Zenas Leonard, who was clerk of the expedition, published his journal in 1839 in Clearfield, Pennsylvania; and in that publication occur the following words, which constitute unquestionably the first printed description of Yosemite Valley:

"We traveled a few miles every day, still on the top of the mountain, and our course continually obstructed with snow hills and rocks. Here we began to encounter in our path many small streams which would shoot out from under these high snow-banks, and after running a short distance in deep chasms, which they have through ages cut in the rocks, precipitate themselves from one lofty precipice to another, until they are exhausted in rain below. Some of these precipices appeared to us to be more than a mile high. Some of the men thought that if we could succeed in descending one of these precipices to the bottom, we might thus work our way into the valley below, but on making several attempts we found it utterly impossible for a man to descend, to say nothing of our horses. We were then obliged to keep along the top of the dividing ridge between two of these chasms which seemed to lead pretty near in the direction we were going—which was west—in passing over the mountain, supposing it to run north and south."

Following this expedition of Walker in 1833, no record appears of any white men visiting the upper Merced until the mining excitement, although many parties crossed the Sierra to the north and a few penetrated the range farther south. Even the Forty-niners found no attraction in the granite walls of the canyon, guessing correctly that no gold lay therein. Their activities were in the lower courses of the river and in the tributaries on either side. In this lower part of the Sierra, just above the foothills, they came in contact with the mountain Indians, and of the resultant raids and punitive expeditions you have already been told.

The story of the Mariposa Battalion and the expedition that led to the real discovery of Yosemite is best known through the book published many years later by Lafayette H. Bunnell. There are a few other sources of information, however, and these corroborate Bunnell in almost all essential particulars. Dr. Ralph S. Kuykendall has written a very interesting monograph on this subject, based on contemporary accounts supplemented by Bunnell and by other records. It has been reprinted by the National Park Service as a small pamphlet, and appears in substantially the same form in "The Handbook of Yosemite," edited by Ansel F. Hall.

To Bunnell belongs the honor of naming the Yosemite Valley. He wisely selected an Indian name and proposed it to his fellows of the battalion, who adopted it. A few years later James M. Hutchings questioned the spelling and endeavored to substitute "Yo Hamite." It is given in this form on the first pictorial representation of a Yosemite scene ever published, a lithograph of the falls in 1855. Hutchings maintained that his form was the true sound of the Indian name for grizzly bear. Bunnell's

form had the priority, however, and soon became indelibly written in the annals of the Valley. Later studies by Dr. C. Hart Merriam throw light upon the question, showing that the word for grizzly bear among the tribe that actually inhabited the Valley was more nearly as Hutchings gave it, being *Oo-hoo-ma-te* or *O-ham-i-te*, while the tribe next north of the Valley called it *Oo-soo-ma-te*.

For several years after the discovery of Yosemite Valley in 1851, only a few people visited it. In 1852, two mining prospectors were killed by Indians near the foot of Bridal Veil Falls. A punitive expedition of United States troops under Lieutenant Tredwell Moore entered the Valley, executed five of the Indians and pursued others across the mountains by Tenaya Lake and Bloody Canyon to Mono Lake. Gold was found on the eastern side of the range, and the news spread among the Fresno River camps. A party of miners, among whom was a man named Leroy Vining, visited the Mono region. Lee-vining Canyon was named at this time. James Caper Adams, the great grizzly bear hunter, camped just north of Yosemite in 1852 and visited the Valley in 1854.

The tourist history of Yosemite began in 1855 with the visit of James M. Hutchings and a small party. They were enthusiastic over the falls and cliffs and made these wonders widely known. In 1863 and 1864 the California State Geological Survey, under Josiah Dwight Whitney, explored Yosemite and the Tuolumne Meadows. Largely upon the recommendation of the Survey, the Valley was set aside by Congress "for public use, resort, and recreation," under the trusteeship of the state of California. The Valley remained under state administration until 1906, when it was consolidated with the Yosemite National Park, which had been constituted in 1890 from the surrounding territory, and has since then been under federal jurisdiction.

There is a great deal of interesting literature on the history of Yosemite which you can best learn about by inquiring at the Museum. The Park naturalist will be glad to show the books or give you references to them. The Government publications giving information about the Park can be had there or by writing to the National Park Service, Department of the Interior, at Washington.

DOCTOR RIXFORD—In dedicating this plaque to Doctor Lafayette Houghton Bunnell we must not forget the debt we owe to Doctor Howard A. Kelly of Baltimore, whose inspiration it was that gave birth to the idea of the medical profession commemorating in some fitting way the pioneering activities of Doctor Bunnell. Doctor Kelly learned that the grave of Doctor Bunnell in Winona, Minnesota, is unmarked, save for a G. A. R. emblem, and started a subscription list for a suitable monument for this "real medical pioneer." Moreover, Doctor Kelly contributed \$50 towards defraying the expense of placing this plaque in Yosemite Valley, in memory of Doctor Bunnell, who "alone of the little group that entered on a punitive expedition went eager and thrilled with the zest of discovery. He fully appreciated the opportunity, and was filled with mystery. His companions were impassive and unimpressed, while he was exulting in the glories that unfolded before them: he became its baptismal sponsor and gave the Valley its euphonious name and later wrote about it in a never failing spirit of enthusiasm. For these reasons we claim that Doctor Lafayette Houghton Bunnell was the true discoverer about March 21, 1851."

Doctor Kelly was not aware that the date of entry of the Mariposa Battalion has been accurately fixed as March 25, 1851, as Bunnell himself was uncertain of the date. We have no knowledge of the circumstances which led Doctor Bunnell to write his book, "Discovery of Yosemite Valley and the Indian War of 1851 Which Led to That Event," but much of the vagueness of his description is doubtless explained by the fact that the book was written some thirty years later and after the Valley had become famous through the published writings of J. M. Hutchings.

Doctor Kelly became interested in Doctor Bunnell in a roundabout way through a letter published in the Medical Record, November 23, 1915, from Doctor H. S. W. Barnes of Santa Ana, California, calling attention to the regrettable omission of the name of Doctor Bunnell from an article in the issue of October 26 by Doctor William Browning, entitled "Some of Our Medical Explorers and

Adventurers." By dint of much correspondence, Doctor Kelly finally secured and pieced together many items concerning the life of Doctor Bunnell, in addition to Bunnell's own published writings. His book on Yosemite, Doctor Barnes calls a "frontier classic," and his later volume, "Winona and Its Environs on the Mississippi in Ancient and Modern Days," is described as "a mine of Indian lore."

Doctor Kelly published the results of his search in *Annals of Medical History*, October, 1921, and this article is our principal source of information about Doctor Bunnell.

Bunnell was called *Doctor* because of his knowledge of medicine, but he had no diploma till long after his sojourn in California, when the La Crosse Medical College in 1864 gave him a diploma ("honorary"). The diploma issued by the college in the Republic of Wisconsin is preserved, and is in possession of the Minnesota Historical Society.

Born in Rochester, New York, November 2, 1824, his father a practicing physician, his mother a member of a distinguished family, Houghton by name, Bunnell spent most of his formative years in Detroit. Later, in La Crosse he attended clinics in the La Crosse Medical School, very much against his will. He was not interested in medicine. His was too much a roving disposition to settle down as a country doctor or even to make much of a success of business. But with scant systematic training his knowledge of medicine, derived largely by sheer observation and absorption from the medical atmosphere of his father's home, simply had to be drawn on for the benefit of his fellows who, as in the mining days of California, were often far out of reach of trained physicians. He was peculiarly and emphatically "médecin malgré lui."

In the second visit of the Mariposa Battalion to Yosemite, Bunnell had something of a medical equipment with him and received extra pay as surgeon to the expedition.

Bunnell served in the Mexican War in 1845 and in the Civil War as a hospital steward, and after he received his diploma was appointed first assistant surgeon, then surgeon, on his enlistment in the Thirty-sixth Wisconsin Infantry Volunteers.

Thus Bunnell was a veteran of three wars, in all of which his knowledge of medicine secured for him unusual opportunities and responsible positions.

He died July 21, 1903, at Homer, Minnesota, at the age of 79, and is buried at Woodlawn Cemetery, Winona.

Thus passed a strong man, whose life was an epitome of pioneering and adventure—the type of man who gave to California its peculiar character and romance—a type that did a great work and has passed on, and leaves one to wonder whether the inevitable huddling of humanity into great cities will, notwithstanding their vastly greater educational facilities, develop men of character which will ring as true.

MINUTES OF THE HOUSE OF DELEGATES, FIFTY-FOURTH ANNUAL SESSION OF THE CALIFORNIA MEDICAL ASSOCIATION.

FIRST SESSION

Held in the Tent, Yosemite Lodge, Yosemite National Park, California, Monday, May 18, 1925, at 8 p. m.

Call to Order—The meeting was called to order by the President, Granville MacGowan of Los Angeles.

Roll-Call—The secretary called the roll; forty-five (45) delegates were seated, and the president declared a quorum present.

Report of the President—The president, Granville MacGowan, stated that, as his report had been read in full to the association at the First General Session, he would therefore rule that no further report was necessary.

Report of the Council—James H. Parkinson of Sacramento, chairman of the Council, submitted the following report:

Doctor B. F. Keene—At the meeting of 1924, the report of the special committee on restoration of the grave of Doctor B. F. Keene, the first president of the society,

giving details as to specifications and costs of this work was received. The report was adopted and the committee continued with instructions to carry the work to completion. This has now been done and a brief sketch with an illustration appeared in the May number of CALIFORNIA AND WESTERN MEDICINE. It is impossible to read the minutes of the second annual meeting of the Medical Society of the State of California, February 11, 1857, or the obituary and resolutions appearing in the California State Medical Journal, October, 1856, and fail to realize that this, our first president, was of the highest type as man, physician and citizen. "A short biographical sketch," by Doctor Obed Harvey, then of Placerville, but later of Sacramento, whom several members of this society now living will recall, states that: "Four years he represented the County of El Dorado in the Senate of the State * * * * *, and had his life been spared one day longer he would again have been chosen." Of all that has been written, perhaps nothing better expresses the man as the true physician than this, probably from the pen of Doctor John F. Morse: "Although of a serious and grave cast of character, yet his heart seemed warmed towards his fellow-beings with a benevolence and confidence unmarred by suspicion and unaffected by the admonitions of experience." It is better that we depart hence while yet useful so that we be missed as well as regretted.

Bunnell Memorial

The special Committee on the Bunnell Memorial has, with the permission of Mr. Stephen T. Mather, placed a bronze plaque on a large boulder at the site of the first camp in the Valley of the Mariposa Battalion with the following inscription: "Commemorating Doctor Lafayette Houghton Bunnell, one of the first party of white men to enter the Yosemite Valley in March, 1851—he proposed the name Yosemite and was the first to proclaim its beauty and wonders to the world."

The plaque was designed by Mr. Paul Fair of Berkeley and fittingly depicts the grizzly (Yosemite), surprised at the entrance of the Caduceus, symbolizing the physician, into his native haunts. Doctor Bunnell, who had served in the Mexican War, was a member of the Mariposa Battalion organized January 18, 1851, as mounted infantry. This troop entered the valley by the "old Mariposa trail," and encamped near the meadow, now known as "Bridal Veil," on the south side of the Merced River and below the Bridal Veil falls. The plaque will be dedicated by the Society on Tuesday, May 19, at 10 a. m.

Meetings

The Council has held three regular meetings during the year; the daily sessions during the annual meeting not included. Two open meetings were held in connection with Industrial Medicine: one in Long Beach and one in San Francisco.

The Executive Committee has held nine meetings with an average attendance of six members out of eight.

Office of the Association

The office continues to function in a most satisfactory manner. The business of the association is conducted, apparently, with satisfaction to all who have come in contact with the staff.

It seems best to include in this report and to present each year certain tabulations which more graphically indicate conditions than is possible by any description. The following table shows the growth of the society for the ten-year period—1915 to 1924, inclusive, as of December 31.

Year.....	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
Membership.....	2557	2602	2699	2534	2496	3136	3484	3666	3809	3945

The Journal

California and Western Medicine continues to improve by the addition of special features and by a higher literary standard, which has been made possible by rigid selection from the abundance of material offered. To publish even the good papers that come to the office would make each issue an unwieldy volume. The request of the editor for an editorial reference committee was approved by the Executive Committee, and it is hoped by careful consideration to present, monthly, the

best in medicine from the Pacific States. Doctor Musgrave, who has made these improvements possible, continues to serve without remuneration.

The following is a recapitulation of Journal conditions from 1918 to 1924, inclusive:

Year.....	Yearly Pages Reading.....	Yearly Pages Advertising.....	% C. M. A. Dues.....	Miscellaneous Receipts.....	Disbursements.....	Yearly Profit.....	Yearly Loss.....
1918	540	552		\$ 9,468.76	\$10,908.57		\$1,439.81
1919	446	576		11,011.99	11,472.89		460.90
1920	430	624		14,015.41	13,561.96	453.45	
1921	492	720		15,917.82	19,614.10		3,696.28
1922	468	768		20,933.40	22,791.29		1,857.89
1923	542	816	\$7,812	23,200.37	28,997.49	2,014.88	
1924	720	816					

Medical Defense

Medical Defense by the society ceased as of June 30, 1924. In order to keep before the society the imminent peril of damage suits, a condensed recapitulation of the medical defense feature for the years 1917 to 1924, inclusive, is here given:

Year	1917	1918	1919	1920	1921	1922	1923	1924	Totals for 8 Yrs.
Claims (threatened suits disposed of out of court)	44	28	22	17	23	28	24	19	205
Cases (disposed of by court proceedings)	22	17	12	17	17	7	13	22	127

The following is a statement for the year 1925 as of May 1.

	Defense Only	I. D. Fund
Claims (threatened suits) pending and undisposed of.....	6	8
Cases pending and undisposed of.....	23	35
Claims (threatened suits) disposed of out of court, 1925.....	0	0
Cases disposed of in 1925.....	11	4

Financial Condition of the Association

The financial condition of the society is sound. Even with the substantial sum of \$7,812 credited to the Journal in accordance with the postal laws, the treasury shows a cash balance of \$19,040.11 as of December 31, 1924. The books and accounts of the society were audited by Lester Herrick & Herrick, and according to their report on file were found correct. All claims are audited by the auditing committee, the bills being approved by that member of the staff responsible for them. The voucher is then approved by the secretary, signed by the auditing committee and countersigned by the chairman of the council and the secretary.

Annual Assessment

In view of our continued responsibility in connection with medical defense as well as other contingencies, it is recommended that the annual assessment be fixed at \$10.

The following is a recapitulation in condensed form of the finances of the society from 1918 to 1924, inclusive, as of December 31 of each year.

RECEIPTS OF ASSOCIATION						
Year	Amt. Dues	No. of Members	Society Dues	Journal Earnings	Misc. C. M. A.	Total Receipts
1918	\$ 7	2534	\$18,157.00	\$ 9,468.76	\$3,019.08	\$30,644.84
1919	7	2496	17,262.00	11,011.99	681.36	28,955.35
1920	7	3136	21,782.25	14,015.41	909.29	36,706.95
1921	8	3484	24,104.50	15,917.82	1,006.57	41,028.89
1922	8	3666	29,000.50	18,202.91	795.26	47,998.67
1923	10	3809	37,594.00	20,933.40	1,421.69	59,949.09
Net 31,346.00						
Credit Journal 7,812.00						
1924	10	3945		23,200.37	875.86	63,234.73
DISBURSEMENTS						
Year	C. M. A. General Expense	Journal	Legal	Total	Cash On Hand Dec. 31	
1918	\$6,820.85	\$10,908.57	\$ 9,372.73	\$27,102.15	\$ 5,095.95	
1919	6,543.22	11,472.89	9,294.36	27,310.47	6,740.83	
1920	8,531.68	13,561.96	9,784.23	31,877.87	11,469.91	
1921	9,018.28	19,614.10	17,839.82	46,472.20	6,126.60	
1922	6,808.86	21,877.21	21,425.19	50,111.26	4,219.01	
1923	4,543.57	22,791.29	22,243.42	49,578.28	14,589.82	
1924	7,390.64	28,997.49	22,396.31	58,784.44	19,040.11	

Optional Medical Defense

Optional Medical Defense inaugurated by the Council under instructions from the House of Delegates, went into effect July 1, 1924, for 168 members; on May 1, 1925, the number of subscribing members was 464. This, while most gratifying in every way, is not sufficient as a self-sustaining organization on the present financial basis. There should be at least 1000 members to afford a reasonable margin of safety. Until quite recently, no member has been sued. Three suits, however, have been filed during the present month and it is inevitable that others will follow. The former name of the society has been secured and perpetuated in the new organization.

Financial Impositions Upon the Profession

The committee appointed by the Council last year has shown commendable activity in an effort to obtain for the profession simple justice in the matter of these impositions.

Federal Income Tax—The bill amends Section 214 of Revenue Act of 1924 relating to deductions in computing net income by adding the words "or profession, or in attending professional conventions of the profession of which the taxpayer is a member." It will be recognized that this includes all professions. The Council has instructed the secretary to communicate with other professional organizations, and with all State societies and with the A. M. A. to ensure co-operation and general support.

Harrison Narcotic Tax—"Through the initiative of the American Medical Association, a bill was introduced in the 67th Congress, providing for the abolition of the war tax under the Harrison Narcotic Act, and its re-establishment on a peace basis."

Two Dollar Annual Tax—This has been under consideration by the Council and at the 144th meeting the League was authorized to introduce a bill repealing the \$2 license tax and at the 74th meeting of the Executive Committee all action to repeal was deferred. What it actually means in real money to the members of the society is fairly well shown by the following table. It is assumed that the tax went into effect as of January, 1918. The membership of the society as of January 1, 1918, has been taken for that and succeeding years. On this basis a total of \$46,140 has been paid by our members.

Year	No. of Members	Tax	Real Money
1918	2534	\$2.00	\$ 5,068.00
1919	2496	2.00	4,992.00
1920	3136	2.00	6,272.00
1921	3484	2.00	6,968.00
1922	3666	2.00	7,332.00
1923	3809	2.00	7,618.00
1924	3945	2.00	7,890.00
Total to date.....			\$46,140.00

Proposed Amendments to Constitution and By-Laws

The attention of the Council was called to various conflicts between the constitution and by-laws and between the by-laws and council rulings. To harmonize the conflicting sections the necessary amendments have been submitted for consideration at this meeting. The principal change omits the controversial words "sciences allied to medicine" and keeps the California Medical Association limited in membership to Doctors of Medicine only. Associate members will be physicians who are engaged in research work or who hold federal positions, unlicensed to practice medicine in California, and hence ineligible to active membership. The requirements necessary for eligibility to office in the society are also more clearly defined in the proposed amendments, which are published on page 896 of this issue of CALIFORNIA AND WESTERN MEDICINE.

Medical Officers' Reserve Corps

At the request of the Surgeon General, U. S. Army, the Council has appointed a statewide committee of fifteen on this subject, with Doctor John Wilson Shiels as chairman. The purpose of this committee is to aid in building up a medical officers' reserve corps under

the general scheme of defense as devised and inaugurated by the War Department. The ultimate strength of the corps has been placed at 40,000. At this date 10,000 medical officers have enrolled. The Surgeon General will advise with the various state committees in classifying members in their respective states under the particular groups in which they are best qualified to function. In this way, it is hoped to avoid the mistakes that were inevitable, though most unfortunate for all concerned, during the World War. The committee will also serve as a point of contact between the army and medical profession, and as a means of communication between the Surgeon General and the California Medical Association. The chairman of the committee will present a report to the General Session Monday, May 18, 1925.

Industrial Medical Practice

At the 53rd Annual Session held in Los Angeles, May, 1924, the Council authorized the appointment of a statewide committee of 15 to investigate and report upon all phases of Industrial Medical Practice. This committee was organized into three regional groups, with Doctor Sol Hyman of San Francisco as general chairman of the committee. The committee held a conference with the Industrial Accident Commission on December 18, 1924, to discuss the new fee schedule contemplated by the Commission, and succeeded in deferring action in this matter. Two open meetings were held with the Council by this committee to discuss the progress made and to outline contemplated activities. On May 5, 1925, a post-card questionnaire was mailed by the committee to all members of the California Medical Association to ascertain those interested in industrial medicine. A formal report will be made by the chairman of this committee to the House of Delegates Monday, May 18, 1925.

Clinical Prizes

At the 148th meeting of the Council held in November, 1924, three clinical prizes were established to be competed for at the 1925 State Meeting as follows: First prize, \$100; second prize, \$75, and third prize, \$50. The chair was authorized to appoint a committee of three to formulate the necessary regulations governing such awards. It was evident that the time was too short for competition in 1925, so no further action was taken. At a meeting of the Council held May 17, this action was rescinded and the recommendation made that two prizes only be offered of \$150 each; one for original research and one for a clinical subject. If this be approved, the committee will be appointed.

History of the California Medical Association

At the 150th meeting of the Council held in February, 1925, the question of appointing a permanent committee on "Preservation of the History of the California Medical Association" was considered, and the chair was authorized to appoint such committee of from three to five members to include himself. This committee has not yet been appointed. The Council will endeavor to find men with the necessary knowledge.

Medical Radio Broadcasting

The possibilities of abuse in Medical Radio Broadcasting are so great and the need of some general rules for the guidance of our membership seemed so imperative that the Council appointed a committee to consider the question and to report. This committee, consisting of George H. Kress, chairman; Walter B. Coffey, Edward N. Ewer, Morton R. Gibbons and Granville MacGowan, submitted in February last a general report on the subject with the following specific recommendation:

"Your State Society Committee, therefore, recommends that each county unit be requested to provide for the appointment of a sub-committee on Medical Radio Broadcasting, this committee to consist of three to five members, according to the wishes of the county members; and the principles laid down in this report be carried out as fully as can be done according to the local environment."

The report was approved by the Council at its 150th

meeting, and has been transmitted to the component societies.

Prenatal Care

At the 53rd Annual Session held in May, 1924, the Council considered a series of letters then being sent out by the State Board of Health under the Shepard-Towner Act. After a conference with Doctor George E. Ebricht, president, and Doctor Ellen S. Stadtmuller, director of Child Hygiene of the State Board of Health, a committee was appointed with Doctor Reginald Knight Smith of San Francisco as chairman, to formulate a pamphlet comprising the changes desired by the Council and the membership. The personnel of Doctor Smith's committee was selected from among the obstetricians and pediatricians of the State. The first draft of the proposed pamphlet was submitted to the Council at its February, 1925, meeting, and was deemed of such importance that it was mimeographed and mailed to each member of the Council for more careful consideration and recommendations. Copies were also mailed to obstetricians and pediatricians throughout the State for comment. The returned comments have been forwarded to the committee and a final report will be made at the General Session, Monday, May 18, 1925.

National Board of Medical Examiners

The recognition of the National Board of Medical Examiners by the California State Board of Medical Examiners is under consideration and is favored by the State Board. The matter is being taken up with the Attorney General.

Income Tax Deductions

Having heard the report of the President and of the General Counsel as to action taken with regard to the proposed amendment to the present Income Tax Act, the Council commends the action of the committee in the course adopted.

Permanent Convention Headquarters

The Council having heard the report of Doctor Harlan Shoemaker, chairman of the committee on Permanent Convention Headquarters, recommends that the thanks of the society be extended to the committee for the very large amount of work it has done, and that the committee be continued.

Appointment of Reference Committee—The president appointed as members of the Reference Committee Harlan Shoemaker of Los Angeles, chairman; O. D. Hamlin of Oakland and Fred R. Fairchild of Woodland.

Report of Auditing Committee—Morton R. Gibbons of San Francisco, acting chairman of the Auditing Committee, stated that the books of the association had been audited by Lester Herrick & Herrick of San Francisco, certified public accountants, who certified that all accounts for the year 1924 were correct. He then read the items of total receipts and disbursements for the year, and stated that the reports of the auditors were on hand and could be examined by anyone who desired to do so.

Report of Committee on Scientific Program—Emma W. Pope of San Francisco, as chairman, submitted the following report of the Committee on Scientific Program:

The program of the 1925 meeting reflects the careful work of section officers in the selection of diversified topics and of able speakers. It is a pleasure to acknowledge the exceptional co-operation of section officers for 1925.

There are certain facts that should be regularly emphasized in the report of the chairman of the committee on Scientific Program; the most important being that each annual program closes on February 15, goes to press March 20, and is printed annually in the April copy of California and Western Medicine. Long after the April journal, with its completed program has been published, applications for space come straggling into the office.

Every member who desires to speak at an annual session should apply to his proper section secretary before the first of any given year. The section chairman and secretary, acting in conjunction with the Program Committee, control the program of their section. In every issue of California and Western Medicine,

the names of the section officers are listed, under the Directory of Medical Organizations.

All general meetings and many section meetings have as speakers invited guests. The names of Mr. W. B. Lewis, superintendent of the Yosemite National Park, and of Mr. Francis P. Farquhar of the Sierra Club on the Bunnell Memorial Program; of Doctor David Starr Jordan, president emeritus of Stanford University, on the League Program; of Doctor John Phillips from the Western Reserve University and Cleveland Clinic, on the program of the Fourth General Session; of the Honorable George F. McNoble, president of the California Bar Association, on the Optional Medical Defense Program; of Doctor Verne C. Hunt of the Mayo Clinic, on the General Surgery, Urology and Western Branch of the American Urological Association Sections; of Doctor Karl Meyer from the Hooper Foundation, on the General Surgery Program, are all names of men eminent in their various specialties. It is fitting that we make special acknowledgment to them for their interest and their part in making this the 54th Annual Session a success.

Report of Secretary—The secretary, Emma W. Pope of San Francisco, presented the following report:

The history of every individual, organization or nation is always a history of high-lights—of the times of great change, or stress, or conflict, or happiness. The quiet periods of even development go unnoted. In the history of the California Medical Association, 1924, is such an unemphasized period—a year of steady growth in membership, in accumulated working possessions, in society activities and in reserve funds.

The total increase in membership during 1924 was 173, which, depleted by 37 transferred and 35 deceased members, left a net total of 101. An increase of 361 members since the last apportionment of the A. M. A. made in 1922, entitled the California Medical Association to one extra representative in the body of 175 State delegates to our national organization.

During the year five 600-watt Bausch & Lomb lanterns and silesia screens were purchased for society use. These lanterns will eliminate much confusion at our annual meetings and will meet an urgent county society need in the extension service work. At this time, it is not inappropriate to state that no invitation is extended individually to members to join the Extension Service—all members are eligible. Notices have at times appeared in California and Western Medicine asking that those who desire to talk before county societies furnish this office the titles of those papers they are prepared to present, and whenever it seems warranted, new extension lists, including these names, will be printed and furnished to county secretaries.

The publication of a directory of the California Medical Association has met with hearty approval. The next issue, to be published in January of 1926, will list the home address and office and home telephone numbers. Needless to say, this will involve much additional labor, and complete and accurate information will be possible only through the individual co-operation of our members.

The restoration of the neglected grave of our first president, Doctor B. F. Keene, at the pretty little hillside cemetery of historical Placerville, and the placing in Yosemite Valley of a memorial plaque in honor of Doctor Lafayette Houghton Bunnell, were worthy society activities.

The report of the work of the Placement Bureau is never quite accurate, due to the fact that very often physicians whom we have placed, or doctors for whom we have secured assistants, fail to report to this office the final outcome of the Placement Bureau work. By accident only, do we at times learn that the physician has secured the position to which the Placement Bureau has sent him. We have, however, an accurate record from thirty-five physicians, ten nurses and two technicians. The value of this service to young graduates cannot be over-estimated. It is often the connecting link to the worthwhile licentiate between his college work and his established office. The attention of the membership is called to the large number of office assistants and laboratory technicians on file with the hope

that more members in need of nurses and technicians will avail themselves of the Society's Placement Bureau.

Optional Medical Defense has now at the close of its first year, one-third the membership that the Indemnity Defense Fund had at the termination of its seven years of existence. It is an interesting commentary that those members who are most keenly alive to the need for this service, as is evidenced by their membership in it, are also most keenly alive to the necessity of lessening the number of alleged malpractice suits, and plan an educational campaign among the members for the avoidance, whenever humanly possible, of the causes that lead to these alleged malpractice suits.

There has been added \$4500 to the \$14,500 on hand January 1, 1924, making a total reserve of approximately \$19,000. The general society expense was increased by \$2800, of which about \$2000 was expended in the purchase of lanterns and in the publication of our directory—the remaining \$800 being due to an increase in salaries and office supplies. Legal expense did not decrease as was hoped, but remained almost the same as that of 1923, though, through the expenditure of this amount, twenty-two court cases were disposed of in 1924 as against thirteen in 1923. Journal expenses were greatly increased due to the expansion of the Journal before the present raise in advertising rates had become effective. Because of the present postal ruling that one-half of the subscription price of a fraternal journal must be credited that journal, \$2 per member, or \$7800, was so credited and thereby shows a \$2000 Journal gain for 1924. The new Journal advertising rates became effective January 1, 1925, and to May 1 had absorbed all Journal expenses but \$261. It is, therefore, highly probable that the Journal, if not further enlarged, will report for the coming year a much greater Journal gain.

Of the 3945 members at the end of 1924, 3566 are reported in good standing as of May 1. These statistics are rather indicative of the fact that those opposed to the amount of dues must come from a very small minority of the California Medical Association. It is interesting to learn authoritatively of what other states are doing. The annual dues of Washington, D. C., and of Oregon lead at \$20, Texas comes next with \$15, Michigan, Kentucky, New York, Wyoming and California \$10, Wisconsin \$9. Dues in other states range from \$3 to \$10. "Ohio," and this I quote from Doctor Olin West, "with a very splendid organization and a good journal, maintains its annual dues at \$5. It is to be remembered, however, that Ohio has a membership of more than 5000. The state associations that maintain their dues at the lowest figures—\$3 or \$4—are, as a general thing, not nearly so active as those with higher dues."

When a man erects a building he guards by insurance against the loss of his invested capital. Medical dues are just such insurance and protect the capital of the years and the money invested in your profession. Were there no medical associations to uphold the ethics and educational standards of the medical profession and to educate the public in scientific medical truth, the dark ages of medical empiricism and quackery would be upon us.

The officers of your association, at their own expense, attend all Executive Committee meetings and all Council meetings held throughout the year. They, who thus incur many times the financial indebtedness of the regular membership, patiently debate the question of the reduction of dues. Does it not seem fitting that the membership, who seldom question the cost of a good dinner, or the loss of a misshot golf ball, or the price of an adventurous jaunt into the wilderness, by approving once for all the policy of levying a yearly assessment a little in excess of actual needs sanction through this regular yearly reserve, the undertaking of such society activities as seem desirable and worthy in the eyes of your appointed representatives.

In conclusion, let me again emphasize that the State office is information desk, complaint department, placement bureau, membership, bookkeeping and advertising department and general utility office. In doubt or debate on any subject, write or visit your office. Explanation clarifies hazy understanding; sane discussion modifies antagonistic beliefs; and whether the belief of the member or of the office be changed, the resultant effect is

beneficial and advantageous to the harmonious unity of the association.

Report of Editor—The president announced that, as the following report of the editor had been presented before the First General Session, it would not be read at this session.

The financial condition of CALIFORNIA AND WESTERN MEDICINE is shown in the annual statement of the California Medical Association. It is an encouraging one, and it ought to be still better from year to year in spite of the increasing cost of paper and printing and the very sharp increase in postal rates that recently became effective.

Growth of the magazine has been equally satisfactory in all other respects, as is indicated by the following figures:

Number of pages published in 1924 (Vol. XXII, 12 issues), 1536, 654 pages solid reading matter, sixty-six pages reading matter in advertising pages, 816 pages advertising, including directories of medical organizations, front cover, index pages, etc.

Average number of words to page, 1200, making a total of 864,000 words of reading matter, exclusive of advertising.

Circulation over 5000, and more widely distributed than ever before.

Number of contributors' articles published in 1924, 117.

Number of manuscripts on hand, accepted but unpublished, 105.

Number of manuscripts declined in 1924, nineteen. Many others have been returned to the authors with suggestions for more or less extensive revision and not all of these will come back to us.

In a word, CALIFORNIA AND WESTERN MEDICINE is now a metropolitan medical magazine widely read and widely quoted in other medical and even non-medical literature. This desirable situation has been brought about by the wise and liberal policy of the Council, Executive Committee, officers and employees of the California Medical Association, representing you, the owners of the magazine. *Your policies are fruitful chiefly because of a successful co-ordination of editorial, advertising and publishing forces.*

I want to invite your attention to these three fundamentals of successful publication because you as the owners of the magazine need to consider the problem with particular reference to its future.

My own work, although delightfully interesting and even entertaining, must eventually be passed on to someone else. It will require all of the time of an editor to do as they should be done the things that only the editor, who is unavoidably responsible for his publication, can do. I ask you to consider this matter carefully and make preparations to meet eventualities.

More than to any other factor the quality and continued growth of CALIFORNIA AND WESTERN MEDICINE is due to the unusual ability, hard work and loyalty of my assistant, Miss Sue Van Wagenen. Miss Van Wagenen handles entirely upon her responsibility all the routine pertaining to advertising; collecting; securing discussion, assembling and arranging for the publishers all contributors' essays; in co-operation with the publishers she solves that most difficult of problems, the *mechanics* of the Journal, and she discharges many, many other important functions which usually have the personal attention of an editor. She is overworked and inadequately remunerated. Both of these situations should be corrected, even when considered solely in the interest of CALIFORNIA AND WESTERN MEDICINE.

From a financial standpoint, advertising and service to advertisers is the most important function of any publication. Ours is most ably handled by Mr. L. J. Flynn in the western field and by the Co-operative Medical Advertising Bureau in the national field. Mr. Flynn devotes practically his entire time to CALIFORNIA AND WESTERN MEDICINE and Better Health Magazine. He has developed and is still developing profitable and highly desirable lines of advertising among western clients. Flynn not only sells advertising but service to

advertisers as well. In this he has the support of the editor and your executive committee. It is the eternal attention to advertising *service* by a competent representative that enables California and Western Medicine to carry the largest amount of ethical, carefully edited and censored advertising of any medical magazine published.

From an esthetic and general appeal standpoint, the most important problem of any magazine is one for the publishers. This problem is being, and has been, handled for over twenty years in a highly commendable manner by the James H. Barry Company, under the immediate supervision of Mr. William H. Barry, who serves us wisely and well without additional compensation as Superintendent of Publications.

However, beautiful settings, silver and service do not make a meal. Nor do comparable qualities make a magazine. The meal depends for satisfaction upon the food, and the magazine is dependent upon the quality and method of presentation of the matter supplied by its contributors. Thus the development of California and Western Medicine—or any other magazine—is primarily dependent upon the contributors. In this instance, upon you. The measure of the scientific value of the magazine and of success in general in the end, also must be measured by you, our readers, and I leave the matter there.

Problems—I could interest you and probably entertain you with some of the manifold problems of the editor, but this would be at the expense of brevity and therefore of the value of this report.

There is one problem of major importance—and it is your problem—about which I need your instructions. It is, what shall we do about the large number of contributions now on hand and the others that are arriving almost daily? As shown above we now have on hand accepted material enough—much of it already in type—to supply our publication in its present size for a year. In addition to this and aside from the scores of essays accumulated at medical meetings, the routine mail brings us ten or more papers a month, or about enough to keep us supplied. How shall we solve this problem? Shall we still further increase the size and consequently the cost of the magazine; shall we issue it more frequently, or shall we become much more discriminating in the material accepted for publication? This is your problem and your instructions as to policy are invited.

In my opinion—and it is only an opinion—the time is not ripe for a weekly or semi-monthly magazine; the size of each issue should be left entirely to the judgment of the editor and the executive committee; and the editor, with the advice of his Editorial Councilors, should be formally instructed to select and accept for publication only what can be used of the best and most appropriate from what is offered. This under such policies as the Council and Executive Committee may from time to time prescribe.

Assuming intelligent judgment and not over a reasonable amount of fallibility on the part of the editor and his advisors, this policy should lead to the production of a medical magazine of increasing usefulness and attractiveness. It does manifestly increase the problems and responsibilities of the editor. But that is what editors are for. The wise action of the Council in providing the editor with a confidential council of such fellows as he may elect helps, but does not eliminate, the grief inherent in accepting one author's work and declining that of another. The names of the editor's some fifty councilors are kept confidential between him and each advisor, for obvious reasons.

Report of Committee on Industrial Medical Practice—Sol Hyman of San Francisco, as chairman of the Committee on Industrial Medical Practice, presented the following report:

In speaking to you upon the work of the committee on Industrial Medical Practice, we shall at first endeavor to give you a brief review of the situation in this field as it exists in California at the present time.

Review of the Situation

From many interviews with men in and out of the

industrial field your committee has found that the evils connected with this work, so far as the medical profession is concerned, fall into two main groups:

1. So-called unethical practices such as advertising, soliciting, establishment of dressing stations, use of unapproved cards, etc.

2. Fee cutting both by physicians and insurance carriers. In this group might also be placed overcharging.

The committee on Industrial Medical Practice, feeling that group two, fee cutting in all of its phases, is by far the more important issue, has directed its work along these lines.

The fee cutting evil presents itself in a variety of forms, the principal of which are:

1. Apparently charging according to the fee-schedule, but not entering all of the items, such as omitting a certain percentage of the visits made.

2. Taking cases upon a flat rate basis for certain groups of cases, the flat rate being based upon what the claims adjustors deem to be the average rates the carriers can pay.

3. An agreement to work for a given percentage rate of the fee-schedule.

4. Contracting to work for a certain percentage of the premiums.

5. Not charging in full for what is done, i. e., charging office rates for hospital visits, giving hospital attention at cost, omitting charges for repeated radiograms, dressings, etc.

6. Taking of employment by lay organizations.

7. Accepting salaries for responsible positions.

It is clear that all of these practices have but one end in view: To make such a showing with the insurance carrier so that, in so far as can be gotten by with it, the work will go to the physician or organization which is able to save the most money for the carrier.

It is also clear that the progressive application of the above lack of co-operation on the part of the members of the profession must inevitably, and has already done so, lead to the concentration of this work in the hands of a few organizations which, because of large volume and reduced overhead, can and do serve the insurance carriers in a manner to their financial liking. Let it not be understood that your committee is criticizing adversely the existence of either small or large organizations devoting themselves to industrial medicine. It is discussing such organizations which underbid the fee-schedule in order to obtain the work.

As a corollary of the practice on the part of members in our association of underbidding and competition there has naturally developed the employment of solicitors, the attempt by correspondence and otherwise to take the work away from those who have it and the numerous other practices which can be classified under the general group, unethical.

The state of affairs has been well expressed by one industrial surgeon, who said that the whole practice of industrial medicine is degrading, and that all that he can hope to do is to keep himself at the upper limits of degradation.

Insurance Carriers—The insurance carriers are now in an apparently controlling position strategically and come fairly close to being able to dictate the rates at which industrial medical practice shall be compensated. Where necessary or expedient full schedule rates are paid, and where not necessary or expedient they demand and receive medical attention to the injured workman upon a basis of flat rates, premium percentages, fee-schedule reduction and salaries. They are able to, and do, transfer the work from one man to another over night if the desired reductions are not made. They are unwilling to acknowledge the rising cost of the medical services in line with the rising cost of all other commodities. They are unwilling to recognize that they have become educated to the value of better and more extended medical services in order to lower their compensation payments, and that consequently more must be paid for such services. They are unable to reduce their overhead in the matter of rents, advertising, brokerage, office supplies and clerical help, but see a fertile field for reduction in medical fees and

cultivate it. Some of the companies recognize the value of high grade service, adequately compensated, and maintain medical organizations of the highest rank, while others are unable to see further than the ledger.

The State Compensation Insurance Fund, the company doing the largest business in the State, about 40 per cent of the whole, and which returns dividends to its policy holders, is making a definite campaign for more business based upon the premise that it furnishes medical services at a low cost and thus is able to return larger dividends to the advantage of the policy holders. The fund has in process of development a central hospital in Redding to serve nine northern counties, to which are to be sent all of the hospital cases in these counties—a not inconsiderable industrial area. This will not alone cause a great disturbance and loss to the medical community, in that many of the practitioners in this district have made large investments in hospitals and apparatus for the care of these cases, but there will result a definite dislocation in the social aspect of these communities. Well equipped young men cannot be expected to look to these fields in which to settle and become factors. Doubtless should this scheme eventuate successfully it will be inaugurated more or less throughout the State. It will probably reduce, in a measure, the cost of compensation insurance; but is it, after all, the most economical procedure all round for the people of these communities? Will those away from the location of the central hospital be as well cared for as heretofore? Is this difference in care worth the few dollars saved in compensation insurance?

From our numerous interviews we gather the impression that the State Compensation Insurance Fund arbitrarily cuts the fees more than does any other company. We cannot state this positively to be the fact, but we can state that the committee has received many, many more complaints concerning this company than that of any other. Much of the work previously in the hands of the Medical Director is now in the hands of a layman. We note particularly that attitude of this carrier because it is a public organization, whose existence is the result of a popular vote, and whose purpose in being brought into being was that of an upholder of standards.

The Industrial Accident Commission—The Commission was written into the Workmen's Compensation Act as an impartial body to represent the State, that is all of the interests involved in the application of the Act, and as the trustees of the State Compensation Insurance Fund. In the ordinary routine work, that of adjudication of claims, etc., the committee has not come in contact with the Commission.

Last December the Commission proposed a new and comprehensive fee-schedule based upon flat rates and weekly rates of compensation for medical and surgical services. At the request of this committee the point of view of the profession in opposition to this type of schedule was presented to the Commission. The hearing was attended by the representatives of organized labor who also voiced their opposition to flat fees and weekly compensation. The chairman of the Commission then assured us that no fee-schedule would be adopted without notification of and consultation with this committee, which in turn assured the chairman of its readiness to co-operate with the Commission at all times. To date there have been no further meetings on this subject.

The campaign of the State Compensation Insurance Fund to acquire business on a basis of a more economical administration and the establishment of central hospitals to the general dislocation of social and medical order in the communities affected, we must assume have the sanction of the Commission as the trustees of this fund.

Labor—The man most vitally affected and in whose interest the Act was designed is the working man. The officers of the State Building Trades Council and Affiliated Unions and of the other State labor organizations assure us of their definite interest and willingness to co-operate with us in any effort to improve the medical services received by injured working men under the Act. They realize, however, that many of the problems are purely or mainly professional, and express themselves very certainly that any plan must come from within the

profession and have its whole-hearted support. If the medical profession can present an undivided front then they are willing and ready, in the interest of the injured working man, to do their full share. They regard the problem as one affecting the whole State, but specifically the doctor and the injured working man.

The Plan—In attempting to pave the way for the plan submitted by your committee at previous meetings of the Council whereby it was hoped that industrial medical practice might be put on a proper ethical basis by means of co-operation among the insurance carriers, the public as represented by the Industrial Accident Commission and the medical profession as represented by this association, the committee has encountered an obstacle which it has been able but partially to surmount only in the last month. As previously reported the claims attorneys in the San Francisco (Northern California) jurisdiction have expressed themselves as in favor of the idea proposed and are ready to discuss with us the details for carrying the proposed scheme into effect; but we have up to very recently been unable to interest the claims attorneys of the Los Angeles (Southern California) jurisdiction sufficiently even to allow a representative of the association to come before them. Finally, by dint of repeated arguments, a meeting was arranged and several representatives of this committee appeared before their organization in Los Angeles and discussed with them our plans. Although the organization in San Francisco voiced its approval of the principles and objects of our scheme, the Los Angeles group expressed no opinion, but appointed a committee to deal with the matter. Here the matter stands at the present time. It is clear to the committee that whatever plan be adopted can only be effective and made to go if that portion of the medical profession interested in this type of work wants it, and wants it badly enough to sacrifice something for it. It is also clear to the committee that if the profession is able to present an undivided front, each man having the sincere and real backing of his entire group, that all rebating, fee cutting and dictation by the insurance carriers can be stamped out overnight. If the interested membership of this organization wants this, its committees can accomplish something. If it does not want it, its committees are useless and helpless.

The Ballot—In order to form some sort of an estimate of the tenor of feeling within the association a ballot was taken. Sixteen hundred and thirty-four ballots were returned, representing about 40 per cent of the membership of the association. Three hundred and ninety-eight declared themselves as not interested in industrial medicine; 1135, or about 98 per cent of those directly interested in this type of work, are willing to subject themselves to the actions and decisions of the association, while twenty-two, about 2 per cent, state that they are unwilling to have their freedom of action restricted. While this ballot is perhaps indicative, the committee is somewhat in doubt as to its true meaning because, while the vote was large, there remains always the question as to the feelings of the 60 per cent who did not return an opinion.

Possibly the percentage of those who state that they will not abide by the decisions of their group can be somewhat reduced after a better understanding of the problem, but we must be alive to the fact that very few non-conformists can wreck any plan that is based upon confidence and co-operation.

The general membership of the association had but little notion that this committee has been at work upon this problem until the ballot-cards were circulated.

Summary—The industrial medical situation is not alone critical; it is disagreeable and dirty. Within the ranks of our own profession are intrigue and connivance. There is no loyalty to group and no adherence to standards. Every man is for himself and the devil take the hindmost. The ethical standards, if such they can be called, of commerce are dominant. The end justifies the means.

The individual industrial physician says that he is driven to these extremes because the association gives him no support and does not discipline the malefactors. He cannot resist the tide single-handed. Driven by economic necessity he must fall into line. Competition

necessitates his lowering of standards, much as he deprecates it. He is of the opinion that a group of men meeting in this room have it in their power to pass some resolutions and create a millennium. He fails utterly to realize that any policy of this association can be instituted only when it is the policy of the membership.

This brings us to the crux of the situation. Can the Council or the House of Delegates, now and here, put into operation *any* formulated plan to which the members of this association will adhere? Is each and every individual member ready and willing and desirous to make the fight, for a fight it will be, for several years in order that the position of medicine in the industrial field be placed on a professional rather than a commercial basis, where it now is? The present situation is the creation, not of any California Medical Association, but of the members of that association. Its correction lies solely in the hands of these same members. Is our moral fibre such that a disagreeing minority will resign itself to the will of the majority? Are we sure enough of ourselves to know what we want and to go after it?

It would seem, from the ballot, that a large interested majority can answer these questions affirmatively. Can we be satisfied that this ballot is a true reflection of the attitude of the society? What is the attitude of the 60 per cent who did not answer?

So the situation as it stands today is thus: The principal evil in the industrial medical field is fee-cutting in one form or another. The blame lies within our own ranks. The result has been a tearing down not alone of medical, but of all standards, placing the insurance carriers in the control of the situation. The indications for the future are along the lines of intense concentration with still further reduced compensation, viz: Salaries. The remedy lies in our hands; application depends upon just one factor, the moral fibre of the membership of this association.

With all of the foregoing in mind, does the membership of this association really want the situation remedied? Can it present not alone in its statements but in its actions, an undivided front, an unbreakable phalanx? The answer to these questions your committee must have. It is time for the association to speak.

In order that those county units and sections who may wish to actively engage in attempting to remedy some of the abuses that now exist in Industrial Medical Practice, may have a general foundation of principles upon which to base their actions, the Committee of Fifteen on Industrial Medical Practice of the California State Medical Association recommend that the association take definite action, declaring the following practices as related to Industrial Medicine unethical:

1. Price cutting below the regular accepted fee-schedule either directly or indirectly.
2. Fee splitting of any kind, either directly or indirectly.
3. Rebating fees or any portion of a fee, either directly or indirectly.
4. The solicitation of business by lay or other employees.
5. The advertising by individuals or by hospitals other than that allowed by the code of ethics of the American Medical Association.
6. To be employed in any capacity either on salary, fee or retainer, or as consultant by any institution or corporation or group doing industrial medicine that is owned or controlled by laymen and operated for profit.

Should further questions arise, the committee stands ready to consider them and to present recommendations at subsequent Council meetings.

Report of Committee on Medical Officers' Reserve Corps—In the absence of the chairman, John Wilson Shiels of San Francisco, John Homer Woolsey of San Francisco, as a member of the Committee on Medical Officers' Reserve Corps, presented the following report:

San Francisco, California, May 15, 1925.

Meeting of the General Committee of the Medical

Officers' Reserve Corps, present San Francisco Surgical Section as follows:

J. Wilson Shiels, M. D., Chairman, Colonel, 291 Geary street, San Francisco; Harry G. Ford, M. D., Colonel, University Hospital, San Francisco; Clarence Quinan, M. D., Lt. Colonel, 2512 Washington street, San Francisco; Walter H. Winterburg, M. D., Lt. Colonel, 516 Sutter street, San Francisco, and John Homer Woolsey, M. D., Major, 135 Stockton street, San Francisco.

Object—The education and information of the Medical Profession of the State of California relative to the National Medical Military affairs.

Program

(1) Inclination and better acquaintance between members of the committee.

(2) That the committee shall work at all times in close co-operation with the chief medical officer of the Ninth Corps area and request that he be a member ex-officio of this committee.

(3) It is the sense of the committee that there shall be a Medico-Military meeting at least once per year in each County Medical Society of the State. This meeting to be arranged for by the local representatives and aided by the State Committee.

(4) Request for a regular definite space in the Journal—"California and Western Medicine." This space will be filled subject to the approval of the editor of the Journal by the member of the State Committee appointed as a special editor.

(5) That one person be appointed within each County Medical Society by the General Committee subject to the approval of the respective County Medical Society president.

Unfinished Business—There was no unfinished business to come before the House of Delegates.

New Business—In accordance with the rules of the association, the following resolutions were presented and referred to the Reference Committee. For text of these resolutions and final action by the House of Delegates, see minutes of the second session.

Resolution No. 1. Amendments to Principles of Medical Ethics of A. M. A.—Presented by Harlan Shoemaker of Los Angeles.

Resolution No. 2. Research in Intestinal Parasitism—Presented by Lyell C. Kinney of San Diego for the San Diego County Medical Society.

Reading and Adoption of Minutes—The minutes of this session were read and, on motion of James H. Parkinson of Sacramento seconded by Joseph Catton of San Francisco, were approved.

Adjournment—There being no further business, the House adjourned to meet at 8 p. m. on Wednesday, May 20, 1925, in the same place.

MINUTES OF THE HOUSE OF DELEGATES SECOND SESSION

Held in the Tent, Yosemite Lodge, Yosemite National Park, California, Wednesday, May 20, 1925, at 8 p. m.

Call to Order—The meeting was called to order by the president, Granville MacGowan of Los Angeles.

Roll-Call—The secretary, Emma W. Pope of San Francisco, called the roll; fifty-eight delegates were seated, and the president declared a quorum present.

Place of Meeting for 1926—The chairman of the Council, James H. Parkinson of Sacramento, announced that by unanimous action of the Council, the invitation of the Alameda County Medical Society to hold the 1926 meeting in Oakland had been accepted.

Report of Committee on Arrangements—The chairman of the Committee on Arrangements, James H. Parkinson of Sacramento, announced that the number of members registered at 5 p. m. today was 387, and the number of persons in attendance at the convention 824; and that the number present at the 1922 meeting in the Valley was only 400. Doctor Parkinson read a letter from the Yosemite National Park Company expressing their appre-



WILLIAM TAYLOR MCARTHUR
President-Elect 1925-1926

ciation at having the 1925 convention of the California Medical Association in Yosemite. He then requested the privilege of the floor for Doctor George Franklin Shiels of San Francisco, who was present at the personal request of Colonel Edward L. Munson of the Ninth Corps Area.

Medical Officers' Reserve Corps—George Franklin Shiels, as the personal representative of Colonel Munson, then addressed the House of Delegates briefly on the purpose and aims of the Medical Officers' Reserve Corps.

Election of Officers

President-Elect—William T. McArthur of Los Angeles was nominated for president-elect by William Duffield, Los Angeles. The nomination was seconded by Joseph Catton, San Francisco, who then moved that the nominations be closed; such motion being seconded by James H. Parkinson, Sacramento; and the secretary instructed to cast the ballot. The secretary cast the ballot, and the president declared William T. McArthur elected president-elect for the year 1925-1926.

Vice-President—Thomas F. Madden of Fresno was nominated for vice-president by Fred R. De Lappe, Modesto, such nomination being seconded by Lyell C. Kinney, San Diego.

Joseph Catton of San Francisco was nominated by Fred Rodenbaugh, San Francisco; such nomination being seconded by C. H. Church, Yosemite.

There being no further nominations, the president announced that the House would proceed to ballot, and appointed William Bowman, Los Angeles, and Charles L. Curtiss, Redlands, as tellers. Fifty-eight ballots were cast as follows: Joseph Catton, San Francisco, 32; Thomas F. Madden, Fresno, 26. The president then declared Joseph Catton elected vice-president for the ensuing year.

Councilors

Second District—William H. Kiger of Los Angeles was nominated by Harlan Shoemaker, Los Angeles, to succeed himself as councilor for the Second District. The nomination was seconded by Dudley Smith, Oakland. On motion of William Duffield, Los Angeles, seconded by H. A. L. Ryfkogel, San Francisco, the nominations were closed, and the secretary instructed to cast the ballot. The secretary cast the ballot, and the president declared William H. Kiger elected councilor for the Second District for the ensuing three years.

Fourth District—Fred R. De Lappe of Modesto was nominated by Church, Yosemite, to succeed himself as councilor for the Fourth District. The nomination was seconded by Harry E. Alderson, San Francisco. On motion of Morton Gibbons, San Francisco, seconded by Alderson, San Francisco, the nominations were closed, and the secretary instructed to cast the ballot. The secretary cast the ballot, and the president declared Fred R. De Lappe elected councilor for the Fourth District for the ensuing three years.

Eighth District—James H. Parkinson of Sacramento was nominated by C. B. Jones, Sacramento, to succeed himself as councilor for the Eighth District. The nomination was seconded by Fred R. Fairchild, Woodland. On motion of T. C. Edwards, Salinas, seconded by R. A. Terry, Los Angeles, the nominations were closed, and the secretary instructed to cast the ballot. The secretary cast the ballot, and the president declared James H. Parkinson elected councilor for the Eighth District for the ensuing three years.

Councilor-at-Large—O. D. Hamlin of Oakland was nominated by Dudley Smith, Oakland, for councilor-at-large to succeed himself for the ensuing three years. The nomination was seconded by R. T. Legge, Berkeley.

Robert Peers of Colfax was nominated by R. R. Newell, San Francisco, such nomination being seconded by R. T. McGurk, Stockton.

There being no further nominations, the president declared the nominations closed, and instructed the tellers, William Bowman, Los Angeles, and Charles L. Curtiss, Redlands, to collect the ballot. The secretary announced that fifty-five ballots had been cast as follows: Robert Peers, Colfax, 31; O. D. Hamlin, Oakland, 24. The president then declared Robert Peers elected councilor-at-large for the ensuing three years.

Member of Committee on Scientific Program—Roland E. Skeel of Los Angeles was nominated by Harlan Shoemaker, Los Angeles, as a member of the Committee on Scientific Program for the ensuing four years. William Duffield, Los Angeles, seconded the nomination, and then moved that the nominations be closed and that the president declare Doctor Skeel elected a member of the Committee on Scientific Program by unanimous action of the House of Delegates. The secretary cast the ballot, and the president declared Roland E. Skeel unanimously



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elected a member of the Committee on Scientific Program for the ensuing four years.

Delegates to A. M. A.—The chairman of the Council, Parkinson of Sacramento, advised the House it was impossible for the House of Delegates of the C. M. A. to elect delegates to the A. M. A. at this session and have proper representation at the National Convention and, therefore, the Council, at its 150th meeting held in San Francisco, February 14, 1925, had elected Hans Lisser of San Francisco to fill the unexpired term of T. C. Edwards, Salinas, who had resigned, and the Council had elected as delegates to the A. M. A. for the ensuing two years the following: Albert Soiland, Los Angeles; Robert V. Day, Los Angeles; Lemuel P. Adams, Oakland; and as alternates to the A. M. A. for the ensuing two years: Charles D. Lockwood, Pasadena; Robert Pollock, San Diego; O. D. Hamlin, Oakland.

Parkinson, Sacramento, then moved that the House of Delegates ratify and confirm the election by the Council of these delegates and alternates to the A. M. A. Alderson, San Francisco, seconded the motion. The motion was adopted unanimously.

Delegates to the A. M. A., with their corresponding alternates, are as follows:

Victor G. Vecki, San Francisco, 1925; alternate, C. Van Zwalenburg, Riverside, 1925.

Hans Lisser, San Francisco, 1925; alternate, William E. Stevens, San Francisco, 1925.

Albert Soiland, Los Angeles, 1925 and 1926; alternate, Charles D. Lockwood, Pasadena, 1925 and 1926.

Robert V. Day, Los Angeles, 1925 and 1926; alternate, Robert Pollock, San Diego, 1925 and 1926.

Lemuel P. Adams, Oakland, 1925 and 1926; alternate, O. D. Hamlin, Oakland, 1925 and 1926.

Report of the Reference Committee

Harlan Shoemaker of Los Angeles, chairman of the Reference Committee, presented the following report:

1. Address of the President—The address dealt, in a very timely manner, with the existing conditions of the profession and what constitutes the practice of medicine. Doctor MacGowan reviewed, in a broad way, the problem of industrial medicine and its relation to the profession. He surveyed the relation of chemistry and bacteriology to the clinical arts and gave prophetic advice regarding the Volstead Act. He paid a fine tribute to Doctor Lafayette Houghton Bunnell and Yosemite Valley. He touched on the subject of taxation upon the profession for professional expenditures, concluding a stewardship well performed.

2. Address of the President-Elect—The address is the story of the layman, cultural education and specialism. Doctor Ewer cleverly dissected the character of one of the late popular novels as an illustration of how a layman views cultural education in medicine and specialism. Quoting John J. Abel, "There should be in research work a cultural character, an artistic quality, elements that give to painting, music, and poetry their high place in the life of man," and deploring the cultivation of ultra specialism, the lack of the distribution of young doctors in rural districts, and suggesting some causes and corrections to equalize this great economic loss.

3. Report of the Editor—The committee recommends that the report be accepted and that the felicitations of the members, the House of Delegates, and the Council be extended to Doctor Musgrave for his indefatigable efforts in behalf of the California Medical Association and CALIFORNIA AND WESTERN MEDICINE, and that the problem of the Journal as to size and the frequency of the publication be referred to the Council for its recommendation.

4. Report of the Legal Department—The committee recommends that the report be accepted and the members, the House of Delegates, and the Council extend their commendation to our Honorable Counsel, and that it be the sense of this meeting that the publicity shall be combined with the active solicitation on the part of the members present to extend and fortify the Association on Optional Defense with the points, as suggested by Mr. Peart.

5. Report of the Council—The committee commends the report of the Council and recommends a topographical redistribution of the Councilor Districts that would give better contact with the Councilor and his District. The

committee commends the compliance with the second-class postal laws for the support of the Journal. The committee notes with pleasure that the society is solvent, with a comfortable balance as of December 31, 1924. The committee commends the annual assessment of \$10. The committee recommends the adoption of the amendments to the Constitution and By-Laws as read in the report of the Council.

6. Report of Committee on Scientific Program—The committee recommends that the report of the Scientific Program Committee be accepted, and urges greater cooperation of the other members of the committee with the secretary.

7. Report of the Secretary—The committee commends the report of the secretary and voices the unanimous approbation of the society.

8. Report of Committee on Industrial Medicine—The committee recommends, having in mind the factors of the foregoing report, that the acts of the committee be approved, and that the committee continue the preparation of a plan to correct the evils of industrial medicine and in addition that the rules appended to the aforesaid report be referred to the Council and the attorney for the association for codification and enforcement.

9. Medical Officers' Reserve Corps—The committee recommends that the report of Doctor John Wilson Shiels be adopted.

10. Resolutions—Resolution No. 1. **Amendments to Principles of Medical Ethics of the A. M. A.**—The text of the resolution is as follows:

WHEREAS, The Principles of Medical Ethics have antedated the histories of people among whom they were developed; and,

WHEREAS, The ethical relation of the doctor and patient cannot be prescribed by civil laws; and

WHEREAS, The conservation of the patient in life and death must always remain an ethical relation; and

WHEREAS, The public has never challenged the integrity of the medical profession in this delicate situation; therefore, be it

RESOLVED, That the Principles of Ethics of the American Medical Association, adopted by the House of Delegates at Atlantic City June 4, 1912, be extended and amended to include suitable penalties for the violation of these principles:

First—That these Rules of Ethics are hereby declared to be an integral part of the Rules and Regulations, Constitutions and By-Laws, governing each component county unit and scientific section.

Second—That the penalty prescribed for the violation of these ethics shall be censure, suspension, or expulsion, as the individual governing body shall elect.

Action by the Reference Committee—The committee recommends that the resolution regarding medical ethics be adopted, and that the notification of this act be made to the C. M. A. delegates to the A. M. A. by wire.

Resolution No. 2. Research in Intestinal Parasitism—The text of the resolution is as follows:

WHEREAS, The research in intestinal parasitism now being carried on in the Department of Zoology at the University of California is of exceptional interest to scientists engaged in the study and treatment of this disease; and

WHEREAS, Its significance in many forms of pathology render this research of rare value to human life and essential to the intelligent practice of medicine; and

WHEREAS, The members of the medical profession throughout the state are fully aware of the benefit they derive from this study of intestinal parasites, appreciating the urgency of the questions which Doctor Kofoid's work is answering; therefore, be it

RESOLVED, That the California Medical Association, in annual session assembled at Yosemite Park, hereby expresses to the Board of Regents of the University of California its sense of the value of this work, its profound appreciation of the data already promulgated by Doctor Kofoid, and its belief in the vital importance of his contributions to medical science; and be it further

RESOLVED, That this association holds, in view of the highly specialized human importance of Doctor Kofoid's work, that this research is one of the most valuable in-

vestigations in modern medicine, and that we urge upon the said regents that the university continue to extend to Doctor Kofoid every facility for the continuance and enlargement of his studies in human parasitology.

Action by the Reference Committee—The committee recommends that the resolution urging the Board of Regents of the University of California to further the work of Doctor Kofoid and the Department of Zoology, be adopted.

11. Resolution on Appreciation to Yosemite Park and Curry Company—The committee voices the sentiment of the association in a vote of thanks to the Lodge for the gavel made of native manzanita presented at this meeting. It further voices the appreciation of the members for the courteous service and the kind consideration shown to all the members and their families, during this meeting in the following resolution:

RESOLVED, That the thanks of the California Medical Association be tendered the Yosemite Park and Curry Company for the very handsome gavel presented to the association; and for its many courtesies and extraordinary efforts in making the meeting a success under most trying weather conditions; and, further, that the association particularly desires to thank Mr. R. E. McCormick for the large share his unflinching efforts contributed in making the meeting a success.

12. Resolution of Appreciation to Doctor Howard A. Kelly—The Reference Committee presented the following resolution:

RESOLVED, That the California Medical Association expresses its appreciation to Doctor Howard A. Kelly of Baltimore, Maryland, for his suggestion, interest and material help in placing in Yosemite Valley a plaque to "commemorate Doctor Lafayette Houghton Bunnell, one of the first party of white men to enter the Yosemite Valley in March, 1851. He proposed the name Yosemite and was the first to proclaim its beauty and wonders to the world."

13. Resolution of Appreciation to National Park Service—The following resolution was submitted by the Reference Committee:

RESOLVED, That the thanks of the California Medical Association be tendered Mr. Stephen T. Mather, Director of National Parks, and Mr. W. B. Lewis, Superintendent of Yosemite National Park, for their many courtesies, and especially for their most helpful assistance in connection with the dedication of the Lafayette Houghton Bunnell Memorial in Yosemite National Park.

14. Resolution of Appreciation to Francis P. Farquhar—The following resolution was submitted by the Reference Committee:

RESOLVED, That the thanks of the California Medical Association be tendered Mr. Francis P. Farquhar for his most able and interesting talk at the Lafayette Houghton Bunnell Memorial exercises, and for his beautiful and instructive exhibition of Sierra scenes.

15. Yosemite Hospital—The following resolution was submitted by the Reference Committee for R. G. Dufficy of San Rafael.

WHEREAS, The hospital in the Yosemite National Park is inadequate for the present needs of the visiting tourists and traveling public; and

WHEREAS, The aforesaid hospital buildings are antiquated, out of date, unhandy and dangerous to all inmates in case of fire; and

WHEREAS, The travel into the Park is constantly increasing and the present buildings are not fit for expansion, being neither liveable in the winter and only partly comfortable in the summer; and

WHEREAS, FURTHER, There is an increasing and greater demand for a first-class medical and surgical service on the part of the visiting public from all over the United States which cannot be given in the present buildings; therefore, be it

RESOLVED, That the California Medical Association in regular session assembled exert its efforts in every possible manner on both the United States Congressmen and United States Senators in support of measures seeking an

appropriation for the building of an adequate and well-equipped hospital in the Yosemite National Park.

On motion of Harlan Shoemaker, Los Angeles, seconded by Dudley Smith, Oakland, the report of the Reference Committee, which had been read section by section, was then unanimously adopted as a whole.

Resolution of Appreciation to the Honorable George F. McNoble—On motion of Parkinson, Sacramento, unanimously seconded by the House of Delegates, it was

RESOLVED, That the sincere thanks of the California Medical Association be tendered the Honorable George F. McNoble of Stockton, President of the California Bar Association, for the extremely interesting and very valuable address made by him on Tuesday evening on the relationship of the physician and his patient.

The president called upon Mr. McNoble, who then addressed the House of Delegates.

Expression of Appreciation by the President—President MacGowan addressed the House of Delegates, briefly expressing his appreciation for the honor conferred upon him the preceding year and the pleasure derived from his presidential duties.

Presentation of the President—The president appointed Pauline Nusbaumer, Oakland, and Robert Pollock, San Diego, to escort the incoming president, Edward N. Ewer of Oakland, to the chair. Doctor Ewer was then escorted to the chair by Doctors Nusbaumer and Pollock.

Presentation of the President-Elect—The president-elect, William T. McArthur of Los Angeles, was escorted to the platform by William Duffield, Los Angeles, and Harlan Shoemaker, Los Angeles.

Reading and Adoption of Minutes—The minutes of this session were read and, there being no objection, were unanimously approved.

Adjournment—There being no further business before the House, the meeting adjourned to meet in Oakland in 1926.

SECTION ACTIVITIES OF THE C. M. A. AT THE 1925 ANNUAL SESSION

(Abstracts from Minutes of those sections whose secretaries have sent in their reports)

General Medicine Section—This section held the usual three meetings under the chairmanship of Ernest S. du Bray of San Francisco; Roy E. Thomas, Los Angeles, secretary. The scientific program was carried out very much as published in the April issue of CALIFORNIA AND WESTERN MEDICINE. Many of the papers, carefully discussed and edited, will appear during the year in CALIFORNIA AND WESTERN MEDICINE.

The chairman's address on "Comments on Body Weights in Relation to Health and Disease" will appear elsewhere in this issue, as will all other addresses of chairmen that have been received by the editor in time for publication.

At the business meeting of the section, Roy E. Thomas, Los Angeles, was elected chairman and J. Marion Read, San Francisco, secretary for the ensuing year.

General Surgery Section—This section held three meetings under the chairmanship of Wallace I. Terry, San Francisco; C. T. Sturgeon, Los Angeles, secretary. The published program was followed very closely, and a number of the papers presented, together with carefully prepared discussion, will appear in due course of time in this Journal.

At the business session of the section, T. O. Burger, San Diego, was elected chairman; E. L. Gilcreest, San Francisco, vice-chairman; J. H. Woolsey, San Francisco, secretary, and J. H. Breyer, Pasadena, assistant secretary for the ensuing year.

The following resolution was introduced, but overwhelmingly defeated:

RESOLVED, That the Surgical Section petition the Council of the California Medical Association to consider the question of appointing a committee for standardizing the preliminary qualifications of medical men in their initial attempts to do major surgery.

Pathology and Bacteriology Section—This section held three meetings under the chairmanship of Newton

Evans, Loma Linda; Roy W. Hammack, Los Angeles, secretary. Some of the papers presented before this section, in accordance with the published program, will appear in CALIFORNIA AND WESTERN MEDICINE, and others in more special journals.

At the business meeting F. R. Nuzum, Santa Barbara, was elected chairman and Roy W. Hammack, Los Angeles, was re-elected secretary.

The section discussed the advisability of continuing a separate section on pathology and bacteriology, but no action was taken.

Industrial Medicine and Surgery Section—Two meetings were held under the chairmanship of Philip H. Stephens, Los Angeles; Packard Thurber, Los Angeles, secretary. This section followed quite closely its printed program in scientific work. A number of the papers, with adequate discussion, will appear during the year in CALIFORNIA AND WESTERN MEDICINE.

At the business meeting Fred R. Fairchild, Woodland, was elected chairman and Charles E. Von Geldern of Sacramento was elected secretary for the ensuing year.

The report of the Committee of Fifteen on Industrial Medicine Problems, under the chairmanship of Sol Hyman, was discussed. Abstracts of this report will be published when released by the Council.

Radiology Section (Including Roentgenology and Radium Therapy)—The section held three sessions under the chairmanship of Ray G. Taylor, Los Angeles; Robert Newell, San Francisco, secretary. The scientific program practically as published was carried out, and some of the papers will eventually appear in this Journal, and others, no doubt, elsewhere.

At the business meeting F. H. Rodenbaugh, San Francisco, was elected chairman for the ensuing year; R. G. Van Nuys, Berkeley, vice-chairman, and C. H. Parker, Pasadena, secretary.

The section discussed plans and policies for the ensuing year, and there was a general feeling that "more of the work of the section should be called before the general medical and surgical meetings," but no definite action was taken.

Neuropsychiatry Section—Two meetings were held by this section under the chairmanship of Glenn E. Myers, Los Angeles; Joseph Catton, San Francisco, secretary. The published program was carried out, with a few minor exceptions.

At the business meeting Joseph Catton was elected chairman and Carl W. Rand, Los Angeles, secretary for the ensuing year.

A motion was made authorizing the appointment of "a neuropsychiatric council of at least five members of the section, representative of the various portions of the state. Its duties to be to act for the section during the interval between annual meetings; to study certain problems, and suggest legislative ethical and other means of dealing with them; to devote its special attention during the coming year to the subjects of commitment of the 'insane' and expert medical testimony."

Urology Section—Three meetings were held by this section under the chairmanship of Frank S. Dillingham of Los Angeles; Miley B. Wesson, San Francisco, secretary. The scientific program was carried out largely as published.

At the business meeting Miley B. Wesson, San Francisco, was elected chairman and H. A. Rosenkranz, Los Angeles, secretary for the ensuing year.

The secretary reports prompt attendance at the meetings and strict enforcement of the length of time a speaker might occupy. Two of the essayists did not appear; neither did they send any notification either before or since, and therefore, according to Rule 9, they are automatically barred from presenting a paper before this section for two years. "We limited," says the secretary, "each paper to fifteen minutes, and notified each man at the end of his fifteen minutes that he had one minute. If the audience seemed restless, he was promptly stopped at the end of the minute, whereas if the audience was very much interested we stopped him at the end of five minutes. When a man had lantern slides or was making numerous side remarks not especially connected with his subject, he was notified at the end of eleven minutes that he had four minutes, giving him an opportunity to condense and finish

his paper. Those who discussed a paper from the floor were stopped promptly at five minutes. All members present seemed to be in accord that the section meeting was one of the most successful ever held; every member had been solicited for a paper, every paper submitted was accepted; no paper was allowed to run sufficiently long to tire the audience. Doctor Dillingham was a very considerate and politic chairman and conducted the meeting so that it ran smoothly and rapidly, giving satisfaction to all present."

Eye, Ear, Nose, and Throat Section—During the three sessions of this section, under the chairmanship of Ernest W. Fleming, Los Angeles; Percival Dolman, San Francisco, secretary, the scientific program was carried out as published with a few changes, and some of the papers read will be published in CALIFORNIA AND WESTERN MEDICINE during the coming year.

"The chairman in his annual address reviewed some of the important problems which confront the eye, ear, nose, and throat practitioner of today," says the secretary. "Each one of these problems, too small in itself for review in a separate paper, was briefly discussed in a few paragraphs. The entire grouping of subjects formed a practical guide to the specialist in solving many obscure problems of his work."

At the business session W. H. Dudley, Los Angeles, was elected chairman and Percival Dolman, San Francisco, was re-elected secretary for the ensuing year.

In the absence of Chairman George K. Kress of the Legislative Committee, Secretary Dolman made a report of the activities of the committee. This report was supplemented by Otis Allen Sharpe and Arthur Hebert, who had been active in Sacramento in legislative work.

The following resolution was unanimously adopted:

BE IT RESOLVED, That this Section expresses its grateful appreciation of the magnificent support given by the League for the Conservation of Public Health to Senate Bill No. 201.

BE IT FURTHER RESOLVED, That a copy of this resolution be forwarded to the League for the Conservation of Public Health by the Section secretary.

A resolution was adopted thanking the Legislative Committee for its excellent work during the past year.

Technical Specialties Section—Both the California Association of Medical Social Workers and the California Association of Physiotherapists, who together form the present membership of the Section on Technical Specialties of the California Medical Association, held meetings. Ray Lyman Wilbur is chairman of the section and John C. Wilson, Los Angeles, secretary.

California Association of Medical Social Workers—At the scientific meeting a splendid program of five papers was presented. Most of these papers will be published during the year.

At the business meeting Edna J. Shirsper, San Francisco, was re-elected president; the position of vice-president is to be filled at the June meeting and is to be the chairman of the Southern California section. Sophie H. Mersing, San Francisco, was re-elected secretary-treasurer. Rose Steinhart, San Francisco; Alice M. Keene, San Francisco, the secretary of the Southern California section (to be elected at the June meeting), and Helen Leonard, San Francisco, were elected directors.

First steps toward amending Article III, Section 2, of the by-laws to read: "Applicants for active membership not graduated from an accredited college or school giving training in social service work shall be eligible by furnishing an equivalent satisfactory to the Advisory Council, consisting of *two years'* successful medical social work under approved medical supervision."

California Association of Physiotherapists—In the absence of Ray Lyman Wilbur, M. D., president, and John C. Wilson, M. D., secretary of the Technical Specialties Section, C. L. Lowman, M. D., Los Angeles, opened the fifth annual meeting of the California Association of Physiotherapists, member of the Section on Technical Specialties, with an address emphasizing the importance of keeping up a high standard so that this association will always be a credit to the C. M. A. The program as published was carried out with minor changes, and at the close of the evening Robert E. Ramsay, chairman of the Pediatric Section, gave a short talk

on his growing interest in physiotherapy and how his appreciation of its value had increased.

The following officers were elected for the coming year: Beulah Rader, San Francisco, president; Florence Burrell, Oakland, vice-president; Mabel Penfield, San Francisco, secretary-treasurer. Hazel Furscott, Beret Stenwig, and Margaret Blake were elected as members of the Executive Committee.

Pacific Coast Association of Anesthetists—This association held its fourth joint meeting with the Section on Anesthesiology of the C. M. A., Caroline B. Palmer, San Francisco, president, and Eleanor Seymour, Los Angeles, secretary. After a very successful scientific meeting, a business session was held, at which R. F. Hastreiter of Los Angeles was elected president, Louise Oldenbourg, Berkeley, vice-president, and Eleanor Seymour, secretary.

The following resolutions were adopted:

1. **RESOLVED**, That an expression of sincere appreciation be sent to the California Medical Association for the many courtesies so graciously extended by its efficient officers to the Pacific Coast Association of Anesthetists.

2. **RESOLVED**, That an expression of appreciation be forwarded to the secretary of the Los Angeles County Medical Association for courtesy in publishing our announcement and program in the County Bulletin.

3. **RESOLVED**, That a return wire of acknowledgment and appreciation be sent to Dr. F. H. McMechan, including greetings to the Congress of Anesthetists in Atlantic City.

4. **RESOLVED**, That an expression of regret be sent to Dr. Mary E. Botsford for her unavoidable absence.

5. **RESOLVED**, That we commend the recent ruling made by the Council on Medical Education and Hospitals of the A. M. A., to the effect that in all teaching hospitals proper equipment and facilities be provided for the instruction of interns in anesthesiology and that such instruction be given by staff members who are graduate physicians proficient in this special field.

6. **RESOLVED**, That this Association reiterates its stand deploring the employment of nurse and lay anesthetists, and endorses the attitude of the Council on Medical Education and Hospitals of the A. M. A., favoring only physician anesthetists.

7. **RESOLVED**, That we urge that all hospitals and anesthetists keep systematic records of all anesthetics administered.

8. **RESOLVED**, That a demand be made of manufacturers and hospitals to provide pure and fresh anesthetic agents at all times.

CONSTITUTION OF THE C. M. A.

First of two required publications of proposed amendments, to be voted upon by the House of Delegates 1926 session.

Amend the Constitution, Article III, Sections 1, 2, 3, 4 and 5, to read as follows:

ARTICLE III

MEMBERS AND GUESTS

Section 1. **Members**—The members of the association are the members of the component county societies and include all the active, associate and affiliate members thereof. Every member of the California Medical Association (hereafter elected) must hold the degree of Doctor of Medicine from an institution of learning accredited at the time of conferring such degree by the American Medical Association, and must be elected to membership by the component county society of the county wherein he resides, and pay all dues to the secretary of his county society.

Section 2. **Active Members**—Active members shall be elected from those Doctors of Medicine licensed to practice medicine and surgery in the state of California, who in the judgment of the component county society of the county of residence thereof, are deemed of such ethical integrity as is required for such membership. (Except if he lives on or near a county line a member may, with the previous written consent of the county of his residence,

join the society of the county most convenient for him to attend, and such adjoining county shall be included in the term "county of residence" as herein used.)

Section 3. **Associate Members**—Associate members shall be elected from those Doctors of Medicine engaged in teaching or research work or holding position in federal service or otherwise, who are not licensed to practice medicine and surgery in the state of California and hence are ineligible to active membership. These members shall have all the rights and privileges of active members, except the right to vote or hold office. Their dues to the State Association shall be one-half the dues of active members, and their dues to their county society shall be fixed by such county society.

Section 4. **Affiliate Members**—Affiliate members shall be elected from those Doctors of Medicine eligible for active membership, but who are, for any reason satisfactory to the county society and the council of the State Association, entitled to special consideration. These members shall have all the rights and privileges of other members, except the right to vote or hold office. Their dues to the State Association shall be \$1 per year, and their dues to their county society shall be fixed by such county society.

Section 5. **Honorary Members**—Honorary members of the California Medical Association may be elected by the House of Delegates.

Amend the Constitution, Article VI, Section 4, to read as follows:

ARTICLE VI

OFFICERS

Section 4. No delegate during his term of service as delegate shall be eligible to any office named in Section 1, except that of Councilor, and no person shall be elected President, President-Elect, Vice-President and Councilor who has not been a member of the association for two years preceding his election. Every delegate and alternate to the House of Delegates of the California Medical Association must have been a member of the association for one year prior to his election.

Amend By-Laws, Chapter I, Section 1, to read as follows:

BY-LAWS

CHAPTER I

Section 1. All members of county societies—active, associate and affiliate—shall by virtue of such membership hold corresponding membership in the California Medical Association upon certification by the secretary of the county society of such membership and receipt by the secretary of this association of the assessment for the fiscal year.

Amend the By-Laws, Chapter I, by adding a new section to be numbered 5, reading as follows:

Section 5. A member who changes his residence from the county through whose society he holds membership in this association to another county in which there is a county society, is eligible to membership in the component county society of his new residence on the presentation of a transfer card, and an official statement that his dues have been paid in full in the society in which he holds membership; provided that no evidence which would otherwise disqualify him for membership arise. He shall forfeit his membership in this association one year after change of location unless he becomes a member of the society of the county to which he has moved. Any member who has heretofore changed his residence as aforesaid shall have one year after the date of the adoption hereof to comply with the provisions of this section.

Amend the By-Laws, Chapter VII, Sections 4 and 14, to read as follows:

CHAPTER VII

Section 4. Each county society shall judge the qualifications of its members. However, as such societies are integral parts of this association and all the basis of membership in the American Medical Association, it is necessary that the qualifications meet the minimum requirements of the state and national organizations. These

minimum requirements are that, to be eligible for election as an active or affiliate member, the applicant must hold the degree of Doctor of Medicine from an institution of learning accredited at the time of conferring such degree by the American Medical Association, and must be licensed to practice medicine and surgery in the state of California. Every associate member must hold the degree of Doctor of Medicine from an institution of learning accredited at the time of conferring such degree by the American Medical Association, and must not be licensed to practice medicine and surgery in California and hence be ineligible to active membership. A member must not practice or claim to practice or lend his support, co-operation or in any other way endorse any exclusive system of medicine or any person practicing the same. He shall be honorable and ethical in his conduct and shall subscribe to the principles of medical ethics of the American Medical Association, and shall recognize the council of this association as the proper authority to interpret any doubtful points in ethics. Every applicant for membership in a county society shall fill out and sign in duplicate the application blanks provided by the society which prescribe the necessary qualifications for membership. One copy of each such application shall be promptly forwarded to the office of this association.

Section 14. Any county society may, in its discretion, elect active, associate, and affiliate members under and pursuant to the provisions of Article III of this Constitution. Any county society may also elect honorary members of its own society, but such honorary members shall not thereby be honorary members of this association.

ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer, secretary)—The meeting of the association was held Monday evening, May 11, President Mehrmann in the chair.

A. A. Bird reported a case of megacolon in a boy 3 years of age, with exhibition of patient and lantern slides.

M. L. Emerson reported a case of obstruction of the bowel, with roentgenological studies.

The following program was then presented by the staff of Alameda County Hospital:

"Demonstrations of Pathological Specimens," by Gertrude Moore and N. A. Cary.

J. W. Calkins demonstrated with lantern slides and a model the operation for strabismus with modified Calkins' muscle folder. By means of this instrument, a simple method of shortening any of the external muscles of the eye is possible. The amount of shortening can be accurately graduated. The muscle is not cut, but is folded about the hairpin-shaped portion of the instrument one or more times as required to correct the deviation. The placing of the suture is simple, accurate, without danger of slipping or cutting through the sutures. Hayward G. Thomas opened the discussion of this paper.

E. W. Goodman's paper was a "Case of Spinal Cord Lesion Illustrating Advantages of Puncture of Cisterna Magna." Following a description of the technique of puncture of the cisterna magna and a resumé of the indications for this procedure, the doctor discussed the comparative values of the injection of lipiodol into the cisterna magna and of the study of different conditions of and chemistry in the fluid in the cisterna magna and the lumbar subarachnoid space. Two cases were then cited in which these maneuvers were carried out; in the first one they aided in the diagnosis of a neoplasm within the spinal canal which developed with most unusual rapidity, and in the second the level of a nervous block, due to a strong fibrous band following meningitis four years ago, was definitely shown by the obstruction to the downward passage of the lipiodol. The discussion of this paper was opened by J. E. Royer.

D. N. Richards presented a "Case of Hirschsprung's Disease Improving Under Surgical Treatment" in a boy 12 years of age. The patient was first admitted to the Alameda County Hospital March 6, 1923, complaining of abdominal distension since birth and difficulty in moving bowels. X-ray examination of colon by means of barium enemas showed an enormously dilated large intestine.

Exercise and cleansing enemas were given, and the boy was discharged. Second admission, August, 1924. Condition worse than before. Exploratory operation, August 11, 1924. Unable to outline the length of the tumor, so a simple colostomy was done. Patient sent home and readmitted October 27, 1924. Colostomy had closed. Numerous x-rays were taken to demonstrate the exact location of the dilatation, and it was found to be upper rectum and sigmoid. It had improved a great deal under this treatment. Second operation, December 6, 1924. Complete exploratory, demonstrating great hypertrophy of the intestinal wall. Loop of descending colon above dilatation was brought out and stitched to itself, according to Mikulicz's technique; colostomy established. Last x-ray picture was on April, 1925, and showed a barium fecalith in dilated portion of the intestine. Colostomy functioning well, and boy greatly improved. C. L. McVey opened the discussion.

Among other things in his paper, "Insanity as a Defense for Crime," C. W. Mack said: "It is a healthy sign that the medical profession is taking an interest in public welfare work as never before, and in doing so they cannot help but become involved in the study of individuals handicapped by mental disabilities and behavioristic problems. Psychiatry is an integral part of medicine, and its roots should be firmly grounded in orthodox practice. Psychiatry can do a great deal to help in the forward movement by contributing a study of psychopathic personalities in those afflicted with actual mental disease. A certain amount of disapprobation has been placed upon psychiatry of late because of spectacular trials that are so gruesomely represented in the newspapers—one recently in San Francisco and one in Chicago. It is not desired to take up the time of this discussion by condemning the men whose names receive so much prominence or to put forth a defense of psychiatry, as none is needed. It might be timely, however, to point out that lawyers may disagree in court without incurring any disrepute, but when doctors disagree the public naturally thinks that one side or other is falsifying for the sake of monetary profit. No psychiatrist wishes to go into court and, undoubtedly, psychiatrists as a whole have just as much honesty as any other branch of the medical profession. There is no thought in the minds of psychiatrists to secure freedom from punishment for criminals, but on the contrary they are less sentimental than the public at large. Modern psychiatry contends that there is a large element of feeble-mindedness or mental disease which accounts for a large share of the criminality. This is indicated by the fact that 60 per cent of prisoners examined show mental abnormalities which are largely responsible for the criminal tendencies. It is also worthy of note that 66 per cent of prisoners are recidivists. The present penal system is not diminishing the enormous wave of crime. The homicides in the United States in one year were 9500, whereas in Great Britain during the same period there were only sixty-three. The number of the executions out of the 9500 was only 114. In view of the fact that many criminals must be such because of their mental abnormality, they should remain in custody in a hospital throughout their entire life if necessary, or until such time as they are not a further menace to society, rather than be sentenced for a few months or years to a prison and then released. In other words, if certain types of criminals are, upon examination, found to be in such a mental condition that reformation is impossible, permanent segregation from society is what psychiatrists advocate, and they are not busying themselves in an effort to secure the acquittal of these criminals in court. The present position of doctors as experts in court is almost untenable. The new law recently adopted in Massachusetts would make it possible for physicians to be of some use to courts in handling delinquent individuals. This law makes it mandatory upon the clerk of the court where a prisoner is to be tried to notify the State Department of Mental Diseases, which department, in turn, appoints a board of examiners to determine the mental condition of the prisoner. This commission is given the larger duty also of discovering the presence or absence of any mental disease or mental defect and does not confine itself to a statement of whether or not the individual is sane or insane. This report is filed with the clerk of the court and is accessible to both the prosecution and the defense. There seems to be no

doubt but what the creation of similar legal machinery in this state would be much to our credit."

Others taking part in the discussions of these papers were Roderick O'Connor, O. D. Hamlin, R. G. Graham, and E. N. Ewer.

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CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The regular meeting of the Contra Costa County Medical Society was held Thursday evening, May 28, at the Abbott Emergency Hospital, Richmond. Burt S. Stevens of San Francisco spoke on diseases of the pelvis. This was in the nature of a talk fest, bringing out situations we have to meet every day, and the management of which demands much diversity of opinion. Stevens showed that he is in possession of a vast amount of experience in diagnosis and treatment of pelvic diseases.

The attendance was small, due to the change of date for the meeting, and, therefore, no business was discussed.

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FRESNO COUNTY

Fresno County Medical Society (reported by T. Floyd Bell, secretary)—The monthly luncheon of the Fresno County Medical Society was held at the Fresno Commercial Club May 23, with twenty-six members and two visitors present. Members—Drs. Aller, Anderson, Bell, Barr, Cross, Dahlgren, Dau, Ellsworth, James, Jorgensen, Kjaerbye, G. L. Long, Manson, Miller, Montgomery, Mitchell, Newton, Pettis, Pomeroy, Schottstaedt, Sciaroni, Sheldon, Stein, Tillman, Tupper, and J. R. Walker.

Lee S. Seward, director of the Tri-County Tuberculosis Hospital at Ahwahnee, presented an interesting and very instructive paper on "Errors in Diagnosis and Therapeutics in Tuberculosis." He said that the errors in diagnosis were largely due to careless physical examination. Many of the cases with cough were diagnosed as "heart cough" or asthma. Many of the old chronic cases of pulmonary tuberculosis take care of their infection pretty well, except for chronic cough, etc., but are a source of infection in the spread of the disease to others, especially children. The x-ray is a great help in diagnosis, but only an aid, and one cannot differentiate between an active and a quiescent lesion by the x-ray. The proper treatment for pulmonary tuberculosis is that type of treatment which promotes rest for the respiratory apparatus. The advice sometimes given to tuberculous patients to go to the mountains and "rough it" is very bad treatment. Likewise the undue forcing of foods is undesirable. Climate does not make as much difference as does the kind of treatment carried out, except that patients probably do better in that climate where they are most comfortable.

Numerous questions were asked, especially since Fresno County is contemplating additional means of taking care of its tuberculous patients. Seward gave a brief history of the Ahwahnee Hospital. He said that the cost per day per bed there was \$2.79. This was about \$1.36 more than the cost for such patients as taken care of at the various county hospitals. This additional cost was entirely for service rendered, no expense being spared to take care of cases at Ahwahnee. He said that Fresno County should have two tuberculous hospitals—one in the foothills for convalescents and a preventorium for children, and one in the valley for hopeless and advanced cases. He outlined a big program if the tuberculosis problem is to be handled properly.

Cross moved, Schottstaedt seconded, that a committee be appointed to investigate the advisability of erecting a tuberculosis sanitarium for Fresno County in the valley or foothills, and report by June 2. Carried. Ellsworth, Tupper, and Mitchell appointed.

The regular meeting of the Fresno County Medical Society was held June 2 at the nurses' home of the General Hospital. There were twenty-two members and six visitors present. Members—Aller, Anderson, Bell, Couey, Cross, Dau, Ellsworth, Ingram, Kjaerbye, Larson, Miller, Montgomery, Mitchell, Nedry, Nider, Pettis, Schottstaedt, Sheldon, Tillman, Tupper, J. R. Walker, and Wiese. Visitors—Dr. Tranter and members of resident staff of the General Hospital.

Dr. Ellsworth reported for the committee recently ap-

pointed to report on the proposed tuberculosis hospital for Fresno County. He stated that, due to lack of time, the committee wished simply to indorse the proposition of building a tuberculosis hospital, but that the matter of possible and desirable locations for the institution should be left for future consideration. He said that the committee wished to make a more detailed report later in the summer. The report was accepted.

President Anderson reported on several matters which came before the State Council recently at the Yosemite meeting.

Charles L. Tranter of San Francisco presented a paper on "Traumatic Surgery of the Nervous System," illustrated by lantern slides. Neurological surgery may be divided into two large classes: (1) Traumatic surgery, and (2) tumors of the central nervous system and neuralgias. The former are more common and are the subject of the discussion.

Tranter emphasized the cardinal and auxiliary symptoms in cases of head injury, and pointed out those cases which recovered without operation, those in which operation was imperative, and those which usually died anyway.

The methods of procedure, i. e., operations, as far as the brain is concerned, are three: (1) Repair of skull defects; (2) subtemporal decompression; and (3) removal of broken pieces of skull. He presented several cases of repair of skull defects with associated brain conditions, such patients either having epilepsy, or some other condition being present, such as aphasia. He showed slides demonstrating the use of the osteo-periosteal graft. The use of foreign substances to close defects is a thing of the past. He spoke of the importance of Cushing's method of subtemporal decompression in cases of increased intracranial pressure. He also said that most authorities now believe lumbar puncture is a harmless and valuable procedure in such cases, and should be tried before decompression is done.

Surgery of the peripheral nerves may comprise any one of five procedures: (1) Neurolysis, or the removal of scar tissue; (2) simple suture; (3) transplantation of nerve and suture; (4) resection of a partial neuroma; and (5) amputation of neuromata. Dr. Tranter discussed these different methods; also the technique of suturing, resection and stretching of nerves.

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MARIN COUNTY

Marin County Medical Society (reported by J. H. Kuser, secretary)—The May meeting was held at W. F. Jones' office. H. O. Hund, W. F. Jones, C. W. Clark, O. W. Jones, and J. H. Kuser present. The delegate to the State Association being absent, the purpose of the meeting—a report by said delegate, Dr. Rafael Dufficy—could not be carried out.

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SACRAMENTO COUNTY

The Sacramento Society for Medical Improvement (according to the report of E. S. Babcock, secretary pro tem.) met at the Sacramento Hotel, May 26; thirty members present. The minutes of the previous meeting were read and approved.

Charles E. Schoff reported a case of psoriasis in a Chinaman.

The paper of the evening on "Fractures, Their Diagnosis and Treatment" was read by Frank P. Brendel. A large number of lantern slides showing most of the common fractures and many uncommon types, with both correct and faulty reduction, and proper and improper plating, were shown to illustrate his excellent paper.

Royal de R. Baronides and J. W. Wilson were elected to membership in the society.

Considerable time was given to reports of the state convention, started by Delegate C. B. Jones. A communication from Secretary Bert Thomas, further reporting the convention, was read by P. W. Christman. Dr. Parkinson, Councilor Eighth District, gave a resumé of the following subjects: Optional medical defense; permanent location for annual meetings; conflicts in schedule of section meetings; certification of delegates and alternates; Officers Reserve Corps; on choosing the site for the Bunnell Memorial; income tax, as related to physicians.

SAN FRANCISCO COUNTY

St. Luke's Hospital Notes—The regular meeting of St. Luke's Hospital Clinical Club was held Thursday, May 14, J. Marion Read being the speaker of the day, and taking for his subject, "Prognosis and Choice of Treatment in Grave's Disease," his conclusions being based on an intensive study of one hundred cases seen by him during the past six years. Points brought out in discussion were: That diagnosis of this disease is easy, since basal metabolic determinations are obtainable almost anywhere, but since its etiology is still unknown, treatment still rests on an empiric basis; that it is about eight times more frequent in females than in males; that it has many atypical forms; that it often tends toward spontaneous recovery, which makes the valuation of therapeutic measures exceedingly difficult; that it is prone to run a cyclic course with periods of remissions and recrudescences; that its incidence is greater in goiter districts; and that there seems to be an irreducible minimum of mortality.

From a prognostic point of view, one may conclude that some patients will get well (the form of therapy employed receiving credit therefor); some will die, in spite of all therapy and some because of it; and there is a group in which therapeutic efforts may affect the ultimate outcome of the case to a slight extent. The metabolic rate is the best quantitative measure of the degree in which the condition exists. It is not possible to predict from the rate, however, the probable time limit of the disease.

This Clinical Club met again on June 11. The feature of the day's program was the practical demonstration by R. L. Dresel of an improved fracture bed. Dr. Johnson, superintendent of the hospital, in his preliminary remarks stated that for the past two years the hospital had been having a great deal of trouble with fracture beds; that for several months Dr. Dresel had been working on a standardization of fracture beds and splints, and that today he was prepared to demonstrate a bed that had been worked out under his supervision.

Dresel briefly outlined some of the difficulties encountered with the old fracture beds—they would not go into the elevators; they occasionally fell down while in use; they were expensive, from the standpoint of both equipment and labor; they had no permanent superstructure, whatever constructed when necessity arose being of a makeshift nature. He proceeded to demonstrate the strength and durability of the improved bed. He showed that it can be raised and lowered without disturbing traction; that it has a superstructure that will stay, and that it is not only a fracture bed but a foundation for many kinds of care. He went on to say that there had also been much difficulty with splints; they had been of all sizes and materials. Now they had been standardized and made to fit the bed; there were lengths to fit the children's beds, as well as the adults'. He closed his remarks with a request for criticism and for any suggestions for improvement that his audience desired to make.

St. Joseph's Hospital Notes—St. Joseph's Hospital staff, San Francisco, met June 10, A. S. Musante presiding, and heard Edmund Butler, chief emergency surgeon, speak on "Surgical First Aid," abstracted below:

"In a recent visit East the emergency service of many cities was observed, many of these being but the outpatient departments of the district hospitals, instead of independent departments. San Francisco ranks high in economy, promptness, and efficiency. We had 38,500 admissions last year, of which 29,500 were surgical.

Routine fundamentals for wounds are a careful exploration, mechanical cleansing without abuse of tissue, the removal of devitalized soft parts that are contaminated, judicious drainage, and the proper use of antiseptics, sutures and wet or dry dressings. Most are iodized and dressed with equal parts of glycerin and 95 per cent alcohol. Scalp wounds are inspected for foreign material. If the pericranium is torn, the skull is inspected for fracture, but the wound is not enlarged. In face wounds exact approximation, without wrinkling and angling, is obtained with sutures. Eyelid wounds must be handled gently and nicely approximated, to avoid bad scars. Fine round needles and horse hair and silk sutures are used and drainage with rubber tissue favored. In neck wounds, often suicidal, the mucous membrane of the pharynx is sutured with catgut, muscles with chromic and skin joined

so as not to impede drainage, which is placed in the angles and midline. Stab, gunshot and crushing wounds of the chest are generally treated expectantly. Primary shock is great, but the prognosis is good. Blood is not aspirated early, as the compressed lung reduces movement and favors clotting; if allowed to expand, secondary bleeding may occur. All openings in the pleural cavities are closed at once—at first with a sterile towel wrung out of sterile salt solution and then with figure-of-eight silk worm sutures, including muscles, fascia and skin. Abdominal stab, gunshot and contused wounds require intervention. Ruptured spleen is misleading, as primary shock and low blood pressure allow clotting to occur in the tear, but in six to ten hours the blood pressure increases, the clots are dislodged and secondary bleeding ensues, accompanied by slight abdominal pain and distention and polymorphonuclear leucocytosis. Leucocytosis occurs in all bleedings into serous cavities and soft parts, and may reach 50,000. Intraperitoneal rupture of the bladder does not cause alarming symptoms, and the pain is often ascribed to contusions of the abdominal wall, enteritis or, in females, to salpingitis. Intervention, if delayed, has a high mortality.

Injuries to limbs make up most of emergencies. Simple fractures are reduced as completely as possible without anesthetic and immobilized with cardboard. In compound fractures the skin is shaved and prepared to wound and the end of bones, if protruding, cleansed and iodized. Drains, glycerin and alcohol compresses and immobilization are utilized. In lacerated wounds, few sutures, free drainage and above compresses are used. Cut tendons are sutured at once, or if patient has a physician, latter is notified at once, the wound shaved, iodized, compressed, and splinted. Burns are treated with antipyraxol."

Dr. Alex Keenan praised the fairness of Dr. Butler's service towards doctors and the excellence and immensity of its growth.

Dr. Samuel H. Hurwitz spoke on the "Modern Treatment of Asthma," the following notes being stressed:

"There are two main causes of asthma—idiosyncrasy to certain substances (proteids) and infections. Real asthma is distinguished from the dyspnoea of cardiac, renal, and other diseases. The foreign proteid substances can be taken in by such methods as ingestion, inhalation or absorption, and produce asthma, hives, and eczema. Certain foods—even essential ones—and emanations from domestic and other animals are causes of trouble. The diagnosis can be made by rubbing into the skin or injecting (too sensitive) suspected substances or their extracts to note reaction. If a wheal, itching or redness develops, it is indicative of a positive reaction. The history may disclose hereditary manifestations in early life. The onset may be noted after certain occupations (hostlers, bakers, etc.) are entered.

The prognosis for desensitization is good if the asthma is not of too long standing. Some metabolic factor, like dysfunction of ductless glands, may need correction and diet, and other hygienic measures may be needed.

The infectious group of asthmas may be due to respiratory tract origin, especially the sinuses, gall-bladder, and occasionally the kidneys. Certain groups are often recognized, like that of children after many respiratory diseases, that after influenza and that following a long history of bronchitis. The infectious type of asthma often does well. Treatment is based on the bacteriology disclosed by a careful sputum culture. Vaccines from the organisms found are used; if several, inject each one and those producing the most reaction will generally clear up the condition. The autogenous vaccines are best. Fifty million are injected every five to seven days, and even larger doses are then used. Surgical aids in removal of pathology should be considered. Climate makes but little difference. Both desensitization and vaccine therapy are used if indicated.

In the attacks of asthma, adrenalin and morphine sulphate are best."

Drs. Philip Collischonn and F. A. Lowe presented case histories of purulent bronchitis and pre-eclamptogenic toxemia, respectively.

SANTA BARBARA COUNTY

The American Association for Medical Progress, Inc.—The Santa Barbara branch of this organization was addressed by Mr. Benjamin C. Gruenberg, managing director of the American Association for Medical Progress of New York, and Walter C. Alvarez, M. D., of San Francisco.

Many of our most prominent citizens have taken memberships in this organization of laymen, whose object is to disseminate as widely as possible authentic information regarding the fundamentals of modern medicine, including the methods of research by means of which reliable knowledge is obtained as to cause, prevention and cure of disease.

"Full use of our best scientific knowledge," says President Coleman, "is possible only with the support and co-operation of the public, but such co-operation depends upon an appreciation of what scientific medicine and research mean. Ignorance, apathy and superstition are a menace to medical progress and to the health of the people, not only in actual opposition to scientific methods, but in a failure to understand the scientific attitude. This can be remedied by continuous education, and our people may thus be guarded against quacks and charlatans."

Mr. George E. Coleman is president; Mr. F. F. Peabody, chairman Lay Advisory Board; and Miss Pauline M. Finley, secretary-treasurer of the Santa Barbara County branch.



SONOMA COUNTY

Sonoma County Medical Society (reported by G. A. Hunt, secretary)—A joint meeting of the Sonoma, Mendocino, and Lake County Medical Societies was held in the hospital of W. C. Shipley in Cloverdale, Thursday, May 14.

J. H. McLeod of Santa Rosa addressed the meeting on the "Nasal Accessory Sinuses." Many lantern slides were shown which helped to make Dr. McLeod's talk interesting and instructive to the general practitioner, as well as to the specialist. A general discussion followed.

CHANGES IN MEMBERSHIP

New Members—Alameda County—E. J. Finnerty, G. M. Kennedy, Oscar K. Mohs, Abilio Reis, Oakland; J. Elliott Royer, Berkeley.

Kern County—Kenneth M. Cook, Taft.

Marin County—Homer E. Marston, San Quentin.

Orange County—William C. Bruff, Anaheim.

San Francisco County—James F. Runner, Frederick Ebersson, George F. Oviedo, William A. Blanck, San Francisco.

Santa Clara County—Hugo Schmitt, Palo Alto.

Solano County—Durward B. Park, R. I. Longabaugh, Vallejo.

Sonoma County—James C. Johnstone.

Deaths—Bronson, Edith. Died at Yosemite National Park, May 26, 1925, age 38. Graduate of Johns Hopkins Medical School, Maryland, 1913. Licensed in California in 1913. Doctor Bronson was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Cline, John Welby. Died at El Monte, May 14, 1925, age 57. Graduate of the University of Colorado School of Medicine, Boulder, Denver, 1896. Licensed in California in 1913. Doctor Cline was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Horel, Francis R. Died at Arcata in April, 1925, age 74. Graduate of Rush Medical College, Illinois, 1885. Licensed in California in 1891. Doctor Horel was a member of the Humboldt County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Obituary

EDITH BRONSON

The recent death of Doctor Edith Bronson, Assistant Professor in the Department of Pediatrics of the University of California Medical School, takes from the medical profession of California a woman with exceptional training and brilliant attainments in the field of research. Born and educated in Vermont's schools and academy, she took her A. B. degree from Syracuse University and entered the Medical School, where although a classical student, she won her master's degree in zoology and chemistry. Her scientific interest in research determined her entrance at Johns Hopkins University, and in 1913 she won her M. D. degree there. Her first internship was in the Children's Hospital in San Francisco, 1913-1914. Her second internship was in the New York City Children's Hospital in 1914. With the war came that call to go overseas and serve with the countries already bearing the burden. Doctor Bronson went first to the Hospital for Sick Children in Edinburgh and during 1915-1916 served as a resident. While there the association with Dr. John Thomson and Dr. J. S. Fowler enriched and broadened her scientific work and earned for her the friendship and interest of these leaders in the field of modern pediatrics. 1916-1917 found Doctor Bronson a resident in the Children's Hospital at Paddington Green, London, and the following year a resident in the Children's Hospital at Pendlebury, Manchester. The war children with their bitter needs flowing from the great munition plants in the heart of industrial England drew from Doctor Bronson her finest and best. She worked with an intensity that left its mark upon her fine sensitive spirit. In 1918 and 1919 she became one of the outpatient physicians in the famous Children's Hospital in Great Ormond street, London, where again her association with such leaders as Sir James Mackenzie, Dr. Leonard Guthrie, and Dr. G. Sutherland brought fresh devotion to her work and won for her the respect and admiration of her chiefs. Late in 1919 Doctor Bronson returned to her work at the University of California Hospital and the Children's Hospital, where the brilliancy of her mind, the fineness of her spirit, the true discriminating sense of values in her work brought instant recognition. The study of heart conditions has been her major interest for a number of years and her contribution to the subject had already been noteworthy. "Nodules," "Fragilitas Ossium," "Aneurysms in Childhood," "Influenza Associated with Jaundice," "Physiotherapy in Heart Disease," are some of the published articles that firmly establish Doctor Bronson's place in research. Her death at the early age of 38 leaves the medical profession in California poorer and takes from the group of women physicians in Northern California one who brought to her work an enviable training and distinction.

Endameba Coli—Sixteen cases in which endameba coli (councilmania type) was found by J. H. Hall and A. C. Reed, San Francisco (Journal A. M. A., June 20, 1925), are here reviewed as to clinical history. The complaints and symptoms were more or less variable and indefinite, in many comprising a picture usually described as neurasthenia. The most frequent reports were of epigastric discomfort, flatulence and constipation, not accounted for by the presence of any discoverable organic lesion of the digestive tract. All patients had, as a routine, physical examination, history, blood count, Wassermann test, urinalysis, gastrointestinal roentgenograms, stool analysis and, frequently, gastric content analysis. Other group symptoms were even less definite, as general debility, fatigue, vertigo, neuralgic pains and physical discomfort. Most of these patients were middle-aged men. A routine treatment was used in this group similar to that employed against *E. histolytica*.

MURPHY MEMORIAL HOSPITAL AT WHITTIER AGAIN

The astounding developments growing out of the giving, building, and maintaining of the Murphy Memorial Hospital at Whittier, California, by Colonel Murphy have been commented upon in *CALIFORNIA AND WESTERN MEDICINE* and "Better Health," several times, and these comments have been widely reproduced in both scientific and more public literature. The outstanding facts are that Colonel Murphy had designed and built an unusually beautiful hospital at Whittier as a memorial to his father. Considerably more than a third of a million dollars was spent in construction alone. At the same time the benefactor made provision for doubling the size of the hospital later on again at his expense, and included a bequest in his will of \$200,000 as an endowment in perpetuity to take care of citizens of the community who would not be able to pay the cost of good hospital service.

Colonel Murphy then entered into negotiations with the authorities of the city of Whittier by which he donated the hospital to the municipality under certain conditions. The outstanding feature of these conditions was, that the hospital was always to be maintained as a "Class A" hospital. This document was duly and as legally executed as it is possible to do, in dealing with our small town governments. The trustees, in carrying out the requirements for a first-class hospital insisted, as is required by the American Medical Association, American College of Surgeons, and all other good medical organizations, that none but educated doctors of medicine be permitted to practice in the hospital. This procedure aroused the ire of the many classes of cultists and those who do not believe in medicine at all as well, and through the usual legal machinery they brought the question to a vote of the people of the municipality. The cultists, aided, we are sorry to say, by a few licensed physicians, succeeded in carrying the election, the result of which was to treat the benefactor, who is still living, with discourtesy, to express it mildly, and to treat the official legal paper of the municipality as a proverbial "scrap of paper." This action opened the hospital to all and sundry.

The next stage in the development of this debacle was that Colonel Murphy, through his attorneys, made preparations to enter suit to declare the original trust void because of abrogation of contract on the part of the city, and demanded the return of his property to his estate. In the meantime, Colonel Murphy's health continued to fail and the lawsuit was given up and has now been withdrawn, and with that withdrawal the benefactor has deleted the \$200,000 endowment which had been included in his will, and has otherwise amputated himself from the situation in the following letter:

"May 23, 1925.

Board of Trustees of the City of Whittier,
Whittier, California.

Gentlemen—Receipt is acknowledged of your letter of May 18. I cannot appreciate or agree with your position. I am addressing this final letter to you in order that the records of the city may clearly show that I do not concur with or acquiesce in the statements contained in your letter, or the manner in which you propose to operate the Murphy Memorial Hospital.

Your attitude absolutely ignores the condition in the original deed of gift that the hospital should be always maintained as a Class A hospital: namely, as a standardized hospital according to the high standards of the American Medical Association and the American College of Surgeons. It also ignores the absolute promise of the city (contained in the resolution of acceptance by the Board of Trustees of the city of my offer to build the new wing) that the hospital should always be maintained according to the high standards then established, which the records of the hospital show were exactly those of a Class A hospital, as above defined. I am convinced that the city is both morally and legally obligated to maintain these standards, and, had my health permitted me to continue my case against the city until it could have been tried upon its merits, I feel confident that the court would have so decided.

Common honesty and fair dealing require the city to

maintain the hospital according to these standards, even though the city were not already legally bound to do so. Such being the condition of the gift, I do not believe that there is any merit in your claim that the law of the state of California requires you to do anything other than to live up to the terms and conditions of the gift, which permit anyone to practice in the hospital who has the requisite educational and ethical qualifications to practice in a standardized medical and surgical hospital.

Unless the hospital is maintained as a standardized hospital (which it will not be if practitioners licensed to practice any method of healing, or who are unethical in their practice, are admitted to its staff), the reputation of the hospital will rapidly dwindle and the people of the city of Whittier will not receive the high type of modern hospital service which it should have and which I intended to give it.

It is because of the attitude of the present officials of your board and of the present board of hospital trustees in lowering the standards of the hospital and in ignoring the city's agreement with me that I have lost my former keen interest in the hospital. It was because of such attitude, and because of my recent poor health and an expected trip to my home in Charleston, West Virginia, that I dismissed the suit against the city, without prejudice to my rights as donor. Because of such attitude I feel that not only the money invested by me in the hospital is a loss, but that the hospital will no longer be the kind of a memorial to my beloved father and mother which I intended it to be. So I have caused their pictures to be removed from the hospital.

My views have been so clearly set forth in this and my prior communications that there ought not to be the slightest misunderstanding as to my position, and as far as I am concerned, please let this letter finally close the matter. For these reasons, and because of my health, I do not desire any further discussion of the subject either by letter or interview.

Yours respectfully,

(Signed) SIMON J. MURPHY, JR."

Doctor H. P. Wilson, the personal physician and the personal friend of Colonel Murphy, who took such an intense interest in advising Colonel Murphy constantly in the various steps by which he had hoped to create a fine hospital to serve a small community, in forwarding the above letter from Colonel Murphy, says: "There is a distinct element among the best people of this community who are chafing under this thing and who still hope that the hospital may be restored to its former dignified status."

Needless to say that this hospital, at one time so full of promise, will not succeed in obtaining accredited standing before medical bodies until some assurance of the right kind of stability has been pledged and practiced under this pledge for a sufficient length of time and with earnestness of purpose and that kind of municipal regard for obligations not heretofore manifested.

This matter is given thus fully because it is no longer a little local problem for a small community in California, but has reached around the world in the news columns and editorial comment as one of the outstanding shames in modern health betterment.

WESTERN BRANCH AMERICAN UROLOGICAL ASSOCIATION

This organization held a meeting in connection with the session of the California Medical Association in Yosemite. The members were notified of the adoption of the new constitution.

The officers elected for the ensuing year were George Hartman, chairman; Anders Peterson, secretary; Louis Clive Jacobs, vice-president; J. C. Negley, treasurer.

A resolution recommending the holding of a special scientific meeting in San Francisco, either in October or November of 1925, was adopted. The following papers were presented:

"Bladder Disturbances and Lesions of the Nervous System"—Leon Meyers.

"Surgery of Tumors of the Bladder"—Verne Hunt.

"Carcinoma of the Urachus"—Paul Ferrier.

Utah State Medical Association

SOL G. KAHN, Salt Lake City.....President
 WILLIAM L. RICH, M. D., Salt Lake.....Secretary
 J. U. GIESY, Kearns Building, Salt Lake City,
 Associate Editor for Utah

ACQUIRING MERIT

The Orientals have a saying when a man performs a kindly act or one contributing to the welfare or comfort of a fellow-being that he "acquires merit" thereby. The thought is one worth considering in its application to the association of human beings East or West, we think, and surely the officers of the State Association and the committee on education deserve great credit and have acquired much merit by the work done on the post-graduate course in connection with the annual state meeting in September, a full provisional schedule of which is printed in the body of these notes.

Times were when the standard of the county society or the state society, with rare exceptions, was that of the best informed man in the county or state. But times change. Today the possible standard is limited only by the knowledge of the profession at large. Modern means of communication and transportation have largely militated to this end. Too, there is a friendly, co-operative spirit growing up within our own ranks—a sincere desire to disseminate knowledge more than ever before.

There is, however, another way of acquiring merit. Enough that the committee has furnished the program—bigger, better, and more comprehensive than ever before in the history of the state. The duty now devolves upon every member of the profession within the commonwealth to avail himself of the rich mental banquet provided to his own betterment. This is bringing the university and college to his doors. The question is, shall he, will he partake? It is his moral duty to do so, for to him men and women and little children entrust daily their physical well-being—indeed, their lives. In the assuming of such a trust, surely no man should fail to equip himself with the best available knowledge. Does he not do so, he betrays a trust, and what true man would wish to so stultify either his profession or himself? It is to be hoped, then, that the medical men of Utah will let no avoidable consideration stand in their way in attending this course of intensive instruction—that they will hasten to arrange to be present, and that in so doing they will acquire merit for the days and months to follow. An ignorant physician is a danger to his patients—to his profession in this day and age, a disgrace. Literally, today the doctor is a soldier as much as he who wears a uniform and faces a barrage.

"If ye break faith, we shall not sleep
 Tho' poppies bloom in Flanders' fields—"

Learn, work, rest. It is the doctor's as well as the layman's life.

And surely he who seeks to learn all he may, work truly and sincerely, may best rest, when his work is

done, with a conscience clear and a knowledge that such merit as he may have acquired in the eyes of his fellows was deserved.

TROUBLESOME TENANTS

We medical men are troublesome tenants if the managements of office buildings are to be believed. We make so much elevator traffic with our patients, we make so much demand on the building service of light, heat, gas, water—in fact, everything. If we're surgeons, we have bloody dressings in containers which make the charwomen sick. If we do minor operations in our offices, we disturb the other tenants with the concomitant yells and shrieks our patients emit, or should we use an anesthetic the smell puts the stenos of the adjoining offices to sleep. Our office girls visit with other office girls (or boys) and demoralize the service in every possible way. As a matter of fact, we are a sort of gang to be tolerated and permitted to pay rent, under duress, in case the building happens to have some space it wants filled up.

Consequently, it is with a feeling of something like dazed amazement that we note two announcements affecting the medical tenant directly within the past week. First to come was the news that the C. A. Quigley building, a fourteen-story, modern office structure, to be erected in the congested district, will set aside six to eight floors for the use of "the Docs." Second is the news that, inside the year, it is proposed to erect an exclusive medical and dental building—the Medical Arts building, as now provisionally called—which will literally house nothing save the two professions. This is to be a ten-story structure, built entirely for professional needs.

"Ubinam gentium sumus!" Cicero exclaims, "Where in the world are we!" Can it be possible that we poor orphans are at last to be provided with home and shelter inside the coming few months? Yet, why not? The thing has proved successful in other cities. We feel sure that both enterprises will be appreciated and patronized by the professions in Salt Lake.

Utah Notes (reported by J. U. Giesy, associate editor)—*New Office Building*—It is announced that the C. A. Quigley building will soon be erected on Exchange Place. This will be a modern fourteen-story building in which six or eight floors are to be set aside for the needs of physicians and dentists. This is a welcome bit of news to the professions affected who for so long have felt the need of some such available space for offices designed and equipped for medical and dental needs rather than the makeshift arrangements of general office buildings for which physicians have been permitted to pay rent.

Salathiel Ewing, M. D., 1834-1925—Doctor Ewing, dean of medical men in Salt Lake, died recently of cerebral hemorrhage, at the age of 91 years. He was born in Union County, Ohio, December 24, 1834, and came to Salt Lake in 1883, where he conducted active practice until his death.

1925 Session U. M. A. Combined With Post-Graduate Week—This year the sessions of the State Medical Association will be combined with courses of graduate instruction, and the combined sessions will occupy the entire week of September 7 to 12.

Below will be found the provisional program of the post-graduate course to be held in connection with the annual meeting. We are proud to print this program. It touches the high mark of medical progress in Utah. It is

a golden opportunity knocking at the door of every sincere practitioner in the state. Read it and smile in anticipation.

"Some four years ago the Utah State Medical Association inaugurated the plan of having a week of clinics and inviting someone of eminence in the profession to conduct the same. The first two years were confined to diagnostic clinics in medicine; last year we added clinics in pediatrics and a review course in laboratory diagnosis; this year we are going further. The course will be combined with the annual meeting of the State Medical Association, and we will have an intensive week, covering the entire field. There will be papers, clinics, discussions, each day from 8 in the morning until 10 at night. Such a medical feast has never before been offered in this intermountain country. Those who will conduct this course are men of outstanding eminence in the profession. There will be work for the specialist; there will be work for the general practitioner remote from the aids of the up-to-date laboratory, x-ray, etc.; there will be work for everyone. You cannot afford to miss what will constitute practically an intensive six-day post-graduate course almost at your door.

A nominal registration fee of \$10 will be charged for the clinical course.

Date: September 7 to 12, 1925.

The following will conduct the course. A mere recital of the names is convincing proof of the excellence of the program:

Walter C. Alvarez, Professor of Research Medicine, University of California Medical School.

Joseph C. Beck, Professor of Otology, Rhinology and Laryngology, University of Illinois College of Medicine.

William F. Braasch, Professor of Urology, University of Minnesota Post-Graduate School of Medicine, Mayo Clinic.

Russell D. Carman, Professor of Roentgenology, University of Minnesota Post-Graduate School of Medicine, Mayo Clinic.

George B. Eusterman, Professor of Gastro-Enterology, University of Minnesota Post-Graduate School of Medicine, Mayo Clinic.

Alexius M. Forster, Chief of Staff, Cragmor Sanatorium for Tuberculosis.

Martin F. Engman, Professor of Dermatology, Washington University Medical School.

Carl A. Hamann, Dean and Professor of Applied Anatomy and Clinical Surgery, Western Reserve University School of Medicine.

Julius H. Hess, Professor of Pediatrics, University of Illinois College of Medicine.

Edward Jackson, Professor of Ophthalmology, University of Colorado School of Medicine.

John L. Porter, Professor of orthopedic Surgery, Northwestern University Medical School.

Ernest Sachs, Professor of Clinical Neurological Surgery, Washington University Medical School.

Final program announcing subjects will be mailed.

Your early registration is earnestly suggested.

Any further information will be cheerfully furnished."

THE ANNUAL MEETING AND POST-GRADUATE WEEK
IN OUTLINE

Monday, September 7

8 to 9
Laboratory; Blood Count; Urinalysis.

9 to 12
Papers—Dr. Eusterman, Dr. Carman, Dr. Hess.

12 to 2
Meeting—House of Delegates.

2 to 6
Papers—Dr. Hamann, Dr. Braasch, Dr. Engman.

Meeting—House of Delegates.

8 to 10
Papers—Dr. Jackson, Dr. Beck.

Tuesday, September 8

8 to 9
Laboratory; Blood Chemistry.

9 to 12
Papers—Dr. Alvarez, Dr. Calonge, Dr. Hess, Dr. Sachs.

12 to 2
Meeting—House of Delegates.

2 to 6
Papers—Dr. Porter, Dr. Forster, Dr. Sundwall, Dr. Eusterman, Dr. Carman.

8 to 10
Banquet.

Wednesday, September 9

8 to 9
Laboratory; Serology.

9 to 12
Papers—Dr. Hamann, Dr. Alvarez, Dr. Engman.

2 to 6
Papers—Dr. Jackson, Dr. Porter, Dr. Sachs, Dr. Braasch.

8 to 10
Papers—Dr. Eusterman, Dr. Carman.

Thursday, September 10

8 to 9
Laboratory; Bacteriology—Sputum Examination.

9 to 12
Clinics—Dr. Hamann, Dr. Braasch, Dr. Engman.

2 to 6
Clinics—Dr. Porter, Dr. Sachs, Dr. Beck, Dr. Hess.

8 to 10
Clinic—Dr. Alvarez.

Friday, September 11

8 to 9
Laboratory; Gastric Analysis; Feces.

9 to 12
Clinics—Dr. Hamann, Dr. Alvarez.

2 to 6
Clinics—Dr. Hess, Dr. Eusterman, Dr. Carman.

8 to 10
Clinic—Dr. Forster.

Saturday, September 12

8 to 9
Laboratory; Tissue Diagnosis.

9 to 12
Clinics—Dr. Alvarez, Dr. Hamann.

2 to 6
Clinics—Dr. Forster, Dr. Hess.

All meetings, clinics and laboratory demonstrations will be held at the University of Utah.

Luncheon will be served at the University dining-hall daily.

The papers and clinics of Drs. Jackson and Beck will be on subjects of interest to the general practitioner.

EYE, EAR, NOSE, AND THROAT SECTION

Monday, September 7

12 to 2
Luncheon.

2 to 6
Papers or Clinical Talks—Dr. Jackson, Dr. Beck.

8 to 10
Papers—Dr. Jackson, Dr. Beck.

Tuesday, September 8

9 to 12
Papers—Dr. Beck, Dr. Jackson.

12 to 2
Luncheon.

2 to 6
Papers or Clinical Talks—Dr. Jackson, Dr. Beck.

Wednesday, September 9

9 to 12
Paper—Dr. Jackson.

12 to 2
Luncheon.

2 to 6
Clinic—Dr. Jackson.

Thursday, September 10

9 to 12
Papers—Dr. Beck.

12 to 2
Luncheon.

2 to 6
Clinic—Dr. Beck.

Papers and Clinics will be at the University of Utah, unless otherwise posted.

Salt Lake County Medical Society (reported by M. M. Critchlow, secretary)—At the meeting of June 8 President Brown announced the appointment of A. A. Kerr,

chairman, and Willard Christopherson and B. E. Bonar members of the committee to investigate the Visiting Nurses' Organization. Dr. Kerr reported for the committee and recommended that the Salt Lake County Medical Society endorse the organization of the Visiting Nursing Association if it were properly managed. The report was referred to the Committee on Public Health and Legislation for their action.

T. C. Gibson reported for the Committee to Supervise Public Lectures. Fred Stauffer reported for the Building Committee. F. B. Steele reported for the Library Committee. The secretary announced that the American Medical Association auto emblems have arrived.

A special meeting was called for June 16 to hear a representative of the American Birth Control League.

A telegram from James F. Percy was read, announcing that he could address the society if they wished. An invitation was extended to Dr. Percy to talk at a special meeting.

The following men were elected delegates to the Utah State Medical Association for two years: T. A. Flood, G. F. Roberts, L. N. Ossman, John Z. Brown, J. P. Kerby, F. H. Raley, S. D. Calonge, E. D. LeCompte, and R. R. Hampton. The following were elected delegates to serve one year: S. C. Baldwin and E. L. Skidmore. The following were elected alternates: G. N. Curtis, L. A. Stevenson, and Foster J. Curtis.

Special Meeting—A special meeting of the Salt Lake County Medical Society was held at the Commercial Club Thursday, June 11, 1925. Thirty-nine members and two visitors were present.

President John Z. Brown introduced the speaker of the meeting, Dr. James F. Percy of Los Angeles, California.

Dr. Percy talked on "Heat in Cancer." He discussed the history of the cautery. He described his technic in cancer operations using his cautery. He cited many cases from his own experience, showing the advantage of cauterization over the usual method of dealing with malignancy.

His very interesting and instructive paper was discussed by Byron Reese, F. S. Bascom, A. Lipkis, A. A. Kerr, Clark Young, and A. C. Callister.

May 11—Sixty one members and fourteen visitors were present at this meeting.

The scientific program was presented by members of the County Hospital staff, F. E. Straup presiding.

Ray T. Woolsey demonstrated some x-ray films of multiple pregnancy. Edwin R. Murphy presented a case of spasmophilia with laryngospasm and discussed the differential diagnosis and treatment. B. E. Bonar discussed a fatal case of diaphragmatic hernia in the new-born and showed pictures of the pathological specimen. He also showed films of enlarged thymus glands and outlined the clinical history of such a case treated by x-ray. Ralph Tandowsky showed a case of erysipelas and read an instructive paper based on a study of one hundred cases of this disease. George F. Roberts presented a case which had recovered from epidemic spinal meningitis. He discussed the treatment used in the recent epidemic. His case was discussed by G. H. Pace, R. T. Jellison, F. E. Straup, Frank Boucher, and G. E. McBride. Newton Miller presented two cases of scalp wounds and discussed the treatment. C. W. Woodruff presented an undiagnosed case of enlarged spleen. A patient 80 years old, who had been operated on for strangulated hernia, was presented by W. E. Maddison, and the surgical treatment of this condition was outlined by J. C. Landenberger. A case of stone formation in the bladder, due to foreign body, was presented by E. S. Pomeroy, and also a case of perineal fistula cured by dilatation of the urethral stricture.

Guy Van Scoyac showed a case of miners' consumption and a case of advanced pulmonary tuberculosis which had responded to calcium treatment.

These cases were discussed by H. S. Scott, George E. Robison, John Z. Brown, J. C. Landenberger, F. E. Straup, and George W. Middleton.

Fred Stauffer reported for the building committee, and outlined a plan for financing the ten-story building.

May 25—Fifty-six members and three visitors were present at this meeting.

The secretary read communications from the American Birth Control League, Inc., and the State of Utah Mormon Battalion Monument Commission. No action was taken on either of these communications. He also read a

communication from the American Medical Association referring to the auto emblems, and one from Miss Ruth Olson with reference to a position in a doctor's office.

J. C. Landenberger presented a clinical case. The man was struck by lightning, rendering him unconscious, producing superficial burns over the front of the body. He showed the man's clothing, which was peculiarly ripped and torn by the lightning. General discussion followed.

E. L. Skidmore discussed "The Insulin Treatment of Diabetes." He outlined the management in order to determine the tolerance, the administration of insulin, instructions to patients, symptoms of overdosage, treatment of coma and complications. He presented a clinical case which had been treated with insulin for three years. Ralph Pendleton, Mazel Skolfield, and A. A. Kerr discussed Skidmore's paper.

A. J. Hosmer's paper was on "The Acute Abdomen." He sighted many cases from his own practice, discussed the differential diagnoses, time for operation, and technic. The differential diagnoses of surgical conditions was discussed in detail. This instructive paper was discussed by S. H. Allen and E. L. Skidmore.

The applications of L. C. Potter and W. N. Cain were voted upon and they were elected to membership.

President Brown announced that the Visiting Nursing Association wanted a member of the Salt Lake County Medical Society on their board.

William T. Cannon moved that a committee of three be appointed to investigate the proposition and report at the next meeting. Seconded and carried.

Nevada State Medical Association

W. M. EDWARDS, M. D., Mason.....President
CLAUDE E. PIERSALL, M. D., Reno.....
Secretary-Treasurer and Associate Editor for Nevada

THE 1925 SESSION OF THE N. M. A., ELKO, SEPTEMBER 4 AND 5

The 1925 meeting of the Nevada State Medical Association will be held at the Elko General Hospital, Friday and Saturday, September 4 and 5.

It has been announced to a number on our program that it would be September 11 and 12, but the dates are changed so that our program will not conflict with the Utah State Medical meeting and post-graduate course, which will be held September 7 to 12, inclusive.

Friday, September 4, we will have a luncheon at the General Hospital, and Friday evening at the theater, a movie on pulmonary tuberculosis. Saturday evening we will have a real banquet at La Moile, such as we had there in 1921; Saturday will be devoted not only to papers, but to clinical demonstrations. Sunday, September 6, we will have a fishing trip which the Elko County Society maintains may be the best that can be had anywhere in the United States.

The following is a quotation, in part, of Dr. W. A. Shaw's letter to the secretary, dated April 25, 1925: "We intend to have the finest meeting that has ever been put over in the state of Nevada. We put over a meeting in 1921 that we figured could be equaled, but not excelled; Reno apparently excelled our meeting at Bowers Mansion in numbers only. We, in Elko County, shall put on a meeting in September which will be written in the history of the Nevada association and which will also be remembered enthusiastically by all the medical men who attend."

Our Nevada members are urged to present clinical cases, to write to your secretary for a tentative program, then decide what subject you will present or discuss. All members and visitors who are to present a paper or clinical demonstration are urged to send to the secretary a resume of your subjects as early as possible so that those listed for discussion may be prepared for the same.

The Elko Society will provide space for exhibitors.

No member may present or discuss a paper if his dues are unpaid.

The Washoe County Medical Society (reported by

Henry Albert, secretary)—A meeting was held on June 9, with President Vinton A. Muller in the chair.

Dr. Carl H. Lehner's application for membership was referred to the Board of Censors.

A communication from W. C. Woodward of the A. M. A., relative to urging those in charge of the reduction of federal taxes to consider "The discontinuance of the war tax imposed on physicians under the Harrison Narcotic Law by the Revenue Act of 1918," and also "The right to deduct certain professional expenses in the computation of the physician's income tax, which is equivalent to imposing a tax on the activities out of which such expenses arise, namely: (a) A tax on attendance at meetings of medical societies, and (b) a tax on post-graduate study," was read.

A motion to the effect that the Washoe County Medical Society indorse the spirit of this communication and that the secretary be instructed to write to the President of the United States, the Secretary of the Treasury, and to Nevada's representatives in the United States Senate and the House of Representatives, informing them of the action taken, was passed.

Doctor Ernest H. Falconer of San Francisco addressed the society on "Some of the Causes of the Enlarged Spleen." He discussed more especially the leukemias, Hodgkin's disease, splenic anemia, pernicious anemia, hemolytic jaundice, and polycythemia. The address was illustrated with lantern slides and was discussed by Doctors S. Bath and Albert.

Members in attendance were: Albert, Bath, Brown, Caples, Fuller, Lewis, McLean, Muller, Piersall, Samuels, Servoss, Tees, West, and Doctor Lehnner was present as a guest.

CALIFORNIA BOARD OF MEDICAL EXAMINERS' NOTES

(C. B. Pinkham, M. D., Secretary)

Health Fakers as of Old—Although we fully realize the hopeless stupidity of a lot of our "health educators" and are fully cognizant of the flamboyant propaganda and unutterable rot that is ground out in an endless stream and labeled health information, we nevertheless had hoped that after a half generation of such tremendous activity some progress was being made. We had hoped that our "speedy positive health propaganda" would at least enable us to say that Barnum's well-known dictum was at last obsolete. However, there is hardly a mail delivery but what contains stories that cause us to wonder if we really are elevating mass intelligence.

Just recently, a resident of an attractive little town in California became ill and formed the idea that he had a tumor. Instead of going to one of the educated physicians of his community, or even one of the thousands in a nearby city, he went to see a woman of the neighborhood who, according to a newspaper, "combined the business of vending hot tamales with the prescribing of herbs for the illnesses of her customers." This "doctor," it is reported, "told the patient that she could cure him, that it was not a tumor from which he suffered, but that he had in his stomach an animal that lived in a round ball, that the animal had broken out of the ball and was loose in his stomach, and that for the sum of \$40 she would remove the animal and he would then get well. The patient had but \$35 and he offered the "doctor" that amount, but she refused to treat him until the \$40 was paid in advance, so the patient borrowed the other \$5 and paid the \$40. He then went to the home of the "healer" where, on account of limited room, two patients occupy the same bed, regardless of what diseases they may have. The "healer" gave the patient some liquid medicine to drink and put a mustard plaster over his abdomen. On the second day she told the patient she would remove the animal, but that in his weakened condition it would be too much of a shock to him to see what a terrible animal lived in his stomach, so he was blindfolded. A woman patient in the same room was also in too serious a condition to see the terrible animal come from the other patient so she was blindfolded. An emetic was then given the patient who became very sick and vomited into a pan. After he had recovered slightly, the blindfold was removed and he was allowed to see the

animal that had been removed from his stomach. He says he didn't feel the animal come up his throat, but he saw it in the pan, that it had four legs and was partly black in color, and that, although he doesn't know the name of the animal, he has often seen such animals on the rocks in the ocean (probably a small crab). The sick man felt better after "the animal was removed," but the next day the "healer" told him that the ball that the animal formerly lived in was still "under his liver" and that it would have to be removed before he could hope to be entirely well, that it had been necessary to remove the animal first and it would take an entirely different kind of medicine to remove the ball; this would cost \$20 more. The sick man didn't have the other \$20, so it is presumed that the remnants of the ball still remain "under the liver."

Medicine Before the Bench

Findings and Comments of the Courts on Acts and Omissions of Doctors

(EDITOR'S NOTE—*The law reports contain many interesting decisions, involving the reputations and fortunes of doctors. In this column in each issue a brief summary of one or more decisions and comments of the several courts of last resort upon the cases will appear. The matter will be selected by our general counsel, Hartley F. Peart, who, with Hubert T. Morrow, attorney for Southern California, will contribute from time to time.*)

The Legislature at its last session passed an act which becomes law under the signature of the Governor on April 24, 1925, which empowers judges of the Superior Court to call in experts of all kinds to give testimony in cases requiring expert evidence. The law has been added as Section 1871 of the Code of Civil Procedure. The new section is as follows:

Experts; Appointment of by Court or Judge; Compensation; Manner of Examination as Witnesses. Whenever it shall be made to appear to any court or judge thereof, either before or during the trial of any action or proceeding, civil or criminal, pending before such court, that expert evidence is, or will be required by the court or any party to such action or proceeding, such court or judge may, on motion of any party, or on motion of such court or judge, appoint one or more experts to investigate and testify at the trial of such action or proceeding relative to the matter or matters as to which such expert evidence is, or will be required, and such court or judge may fix the compensation of such expert or experts for such services, if any, as such expert or experts may have rendered, in addition to his or their services as a witness or witnesses, at such amount or amounts as to the court or judge may seem reasonable. In all criminal actions and proceedings such compensation so fixed shall be a charge against the county in which such action or proceeding is pending and shall be paid out of the treasury of such county on order of the court or judge. In all civil actions and proceedings such compensation shall, in the first instance, be apportioned and charged to the several parties in such proportion as the court or judge may determine and may thereafter be taxed and allowed in like manner as other costs. Nothing contained in this section shall be deemed or construed so as to prevent any party to any action or proceeding from producing other expert evidence as to such matter or matters, but where other expert witnesses are called by a party to an action or proceeding they shall be entitled to the ordinary witness fees only and such witness fees shall be taxed and allowed in like manner as other witness fees. Any expert so appointed by the court may be called and examined as a witness by any party to such action or proceeding or by the court itself; but, when called, shall be subject to examination and objection as to his competency and qualifications as an expert witness and as to his bias. Such expert though called and examined by the court, may be cross-examined by the several parties to an action or proceeding in such order as the court may direct. When such witness is

called and examined by the court, the several parties shall have the same right to object to the questions asked and the evidence adduced as though such witness were called and examined by an adverse party.

The court or judge may at any time before the trial or during the trial, limit the number of expert witnesses to be called by any party. (In effect 90 days from and after April 24, 1925.)

CORRESPONDENCE

HOW YOSEMITE VALLEY IMPRESSED ONE PHYSICIAN'S WIFE

By M. B. P., San Diego

[If all our guests enjoyed the trip to Yosemite as did the San Diego member's wife who sends us this communication signed with her initials, we might do well to make the "valley" permanent convention headquarters.—EDITOR.]

Yosemite Park is beautiful. No praise that it has had could overdo the subject. To stand on one of those neat paths and look about at the green meadow or watch the clear, flowing river, and then gaze aloft at the imposing "Dome," or see the high rampart of Sentinel Rocks, fills one with praise for the Creator. Then look down at one's comfortable surroundings, and a calm assurance steals over one that all is well in the world. Mankind may enjoy its beauties and be thankful, as much as in him lies, to know that water is abundant for our needs, beauty is here to rest the weary, surprises are ready to give thrills, trees have grown for shade or shelter, flowers are abundant to lead mankind forward with desire for color, grace and charm.

When riding on the winding drives the visitor notices how inviting they look. There are lights and shadows ahead and tall straight pines looking permanent, and small graceful trees swaying to beckon the traveler. The roads are enticing. The woods are delightful, yes, full of delight. The deep steady-flowing river adds charm to many a vista. The waterfalls which leap into Yosemite Valley are every bit as wonderful as they have been painted. The Vernal Falls seem to get the most praise. The Yosemite Falls make a roar which is louder than visitors expect. When the quantity of water increased, the roar increased, but the eye could not detect much difference. The Cascade Falls are rollicking, jolly, vociferous, and happy looking. The Bridal Veil Falls are well named, for the way the water appears at the top as if coming over a head, but at the base the spray and cascades and rapids where it dashes over rocks among trees makes the beholder think only of how wet it is and full of water because he gets the spray.

The chief benefit of a visit to this marvelous valley might well be found in the effect on a small human being when he looks up the sheer high walls of tremendous height and feels awe creep into his very soul. He must look up to his Creator, marveling in such glorious works.

When riding out of the valley to El Portal the beauty is continuous for many miles, and then following down the shore of the Merced River it is attractive with trees on the banks and many curves and numerous rapids, but finally it grows less interesting.

Perhaps it is as gentle a let-down as one could ask.

A New Idea in Pharmacy Advertising—A firm of Spokane pharmacists have secured national publicity because they have inaugurated a new line of advertising. They call themselves "professional pharmacists" and "prescription specialists," and instead of using their paid space to boost patent medicines, hair dyes, beauty promoters, and such, they employ their space to carry helpful health messages to their patrons. One of their advertisements calls attention to dangers inherent in the indiscriminate use of iodine to prevent goitre; another carries a sane message about insulin and its uses, and still another urges people to have a medical examination periodically and to have it done by their family doctor.

ANOTHER POPE TRAVELOGUE

Simson's Camp, Tanganyika,
Via Nairdi, B. E. A.,
April 30, 1925.

My dear Dr. Musgrave:

We are here in the permanent camp of Simson. It is the last untouched game field of Africa. We are located on a high plateau, five or six thousand feet elevation. The morning and evening are cool, the grass plentiful, and isolated thorn trees shade the place. A score of grass huts shelter us and our native porters. There are about twenty-five of these in camp, and no women. The nearest village is thirty-five miles distant. This is Ikoma, once a Portuguese slave market, now only a collection of huts and a few aborigines.

Since coming to camp we have hunted every day. Great migratory herds of wilderbeasts are swarming over the country, zebra bark their short pertussus cough all night around our huts, hyenas titter and wail and laugh, jackals chatter and lions rumble and grumble in the distance. And because of the great number of wilderbeast, I presume that we see ten thousand a day, the lions are plentiful. All night they make their kills and wander home gorged in the early morning hours. We have seen to date eighty-nine lions. Of this number we have killed twelve. Two of these we killed outright with our bows and arrows, and two more we gave mortal wounds to, and they were dispatched to spare them misery. Eight lions have charged us to date. Four of these we stopped at distances less than five yards. Some of these beasts charged without any more provocation than snapping a camera at them, at distances from thirty-five to sixty-five yards. Either they were fretful females, mostly those who had vicarious interests in cubs, suffered insult by proxy, the usual spinster aunt complex, or they were old lions that had recently been deposed and wounded in a family fight, therefore sour on the world at large. I presume this is a dangerous life, but it all seems rather detached, as though it were a section of a cinema film. When they come on they roar and pound the ground like a running quarter-horse. One came in so close he flung himself in a great somersault right in our midst and fell dead ten feet beyond us as we sidestepped.

Smaller game we have not paid much attention to yet. A Thompson's gazelle, three hyenas, a cheeta, a baboon, and a horny badger for the Los Angeles museum, complete our bag to date.

I've carefully studied the gall-bladder and ducts of all these animals—also Topi, Eland, Zebra and Kongoni—for the Mayo Research Department.

Thus far we are in excellent health and can recommend this sort of life for anyone seeking a complete rest with plenty of exercise.

Very cordially yours,

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Mercurochrome-220 Soluble in Genito-urinary Diseases—Of the 525 cases on which F. H. Redewill and J. E. Potter, San Francisco (Journal A. M. A., June 20, 1925), report twenty-nine patients left before treatment was completed. This leaves 496 patients, of whom only twenty-two were not improved or 4.4 per cent of the series. Of the remaining 474 patients, only twenty-four, or 5 per cent, were cured with mercurochrome alone given intravenously. This shows that only in a very few urologic cases can one depend on mercurochrome alone when given intravenously to effect a cure. Nor can one expect with such a maze of symptoms and pathologic conditions as are manifested in the practice of urology that a drug given only by way of the blood stream can be a "cure-all." In scores of these cases, however, by giving topical applications, deep instillations and irrigations of mercurochrome in conjunction with the intravenous medication, remarkable results have been obtained. In nineteen out of twenty-nine arthritis cases and in half the cases of acute gonorrheal rheumatism, marvelous results were obtained with the first few treatments of mercurochrome intravenously. The development of the diphenylcarbazid test for mercury and the mercurochrome kidney function test has materially decreased the number of cases listed as "not improved."



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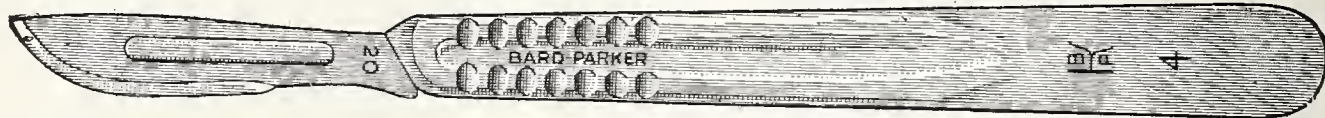
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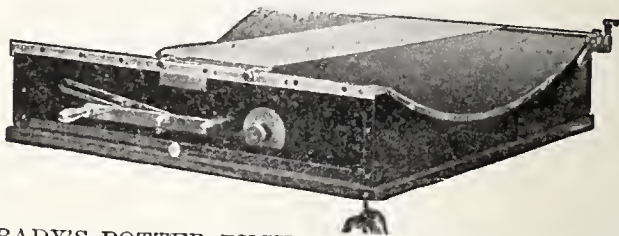
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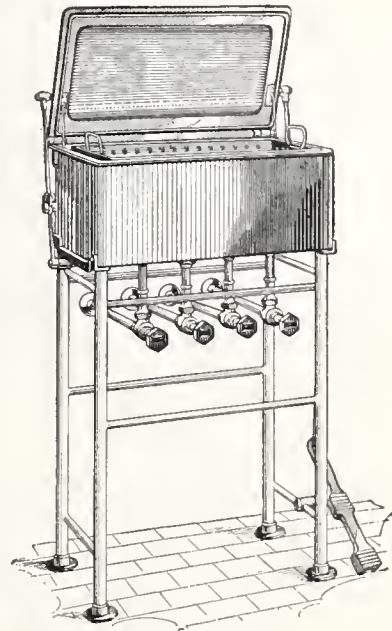
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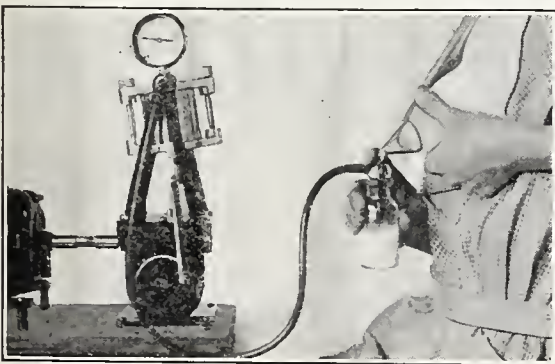
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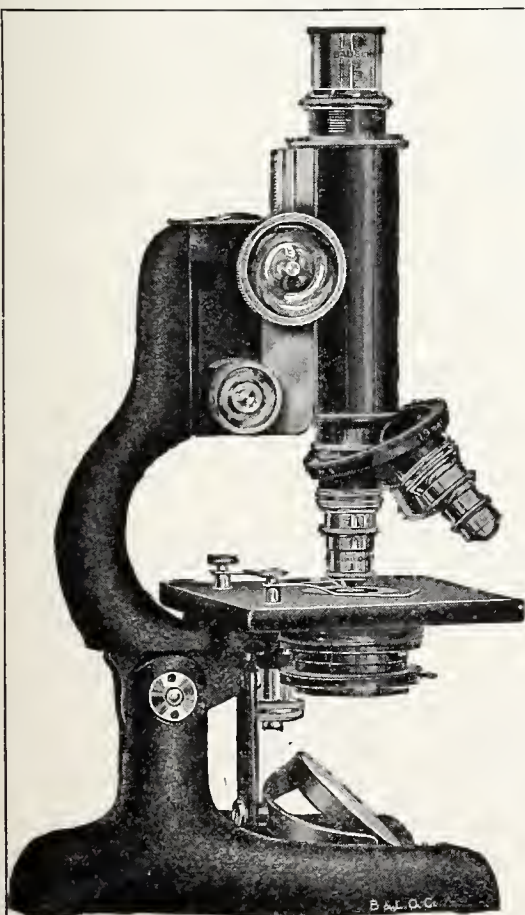
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Acute Toxic Encephalitis of Nasal Sinus Origin—One of the patients whose case is reviewed by E. T. Gatewood, Richmond, Virginia (Journal A. M. A.), was evidently suffering from a mild progressive toxic encephalitis secondary to the suppurative ethmoiditis, probably by direct continuity. The second case suggests a violent toxic absorption. Gatewood says that cases simulating this picture frequently lead to brain operations with disastrous results. Patients manifesting such symptoms should emphasize the importance of a careful rhinologic examination. As the symptoms are toxic in nature, the improvement may be sudden or gradual after the eradication of the septic focus.

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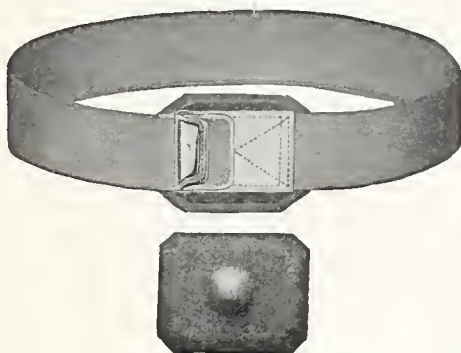
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The Romance of Medicine—William D. Haggard, Nashville, Tenn. (Journal A. M. A.), reviews the progress made in medicine in the last fifty years. He says that medicine is the only profession that is literally and altruistically devoted to professional suicide. It endeavors chiefly, not alone to cure, but to prevent disease, and thus to banish from mankind pain, suffering, and ultimate death from maladies of the flesh. But what it cannot prevent it must cure. What it cannot cure it must palliate. The discovery of the germ of tuberculosis, "the Captain of the men of Death," was the beginning of the annihilation of the Great White Plague and is a more important victory for mankind than resulted from the Fifteen Decisive Battles of the World. That the spirochete was the actual cause of syphilis, the great Black Plague, was discovered by Schaudinn in 1905. A romance in medicine to grip the admiration of the world is the subjugation of typhoid fever. Most dramatic among modern victories is the conquest of yellow fever. In the last decade, many diseases of the heart, kidneys, gall-bladder and other organs have been shown to be derived frequently from the foci of infection around the teeth, in the tonsils, in the sinuses of the nose, and in other structures. This great discovery has enabled the physician to administer in many cases the most effective of all treatments, the removal of the cause. The discovery of radium by Madam Curie close on the discovery of the roentgen ray by Roentgen in 1896 was not only a triumph in wresting another secret from the physical world, but has furnished a most necromantic weapon for the cure of certain forms of cancer and for its palliation in hopelessly neglected cases. The use of safe drugs for local injection in rendering surgical operations painless is now like a performance in a world of magic. Anti-tetanic serum to prevent lockjaw is the king of preventive serums. Physicians and the whole world are daily debtors to the innumerable instruments of precision, to the blood pressure apparatus, the basal metabolism rate machines, and the newer instruments for administering gases, that render anesthesia almost totally devoid of danger. What is more astounding than the revelation in the last few decades of the part

played in our bodies and lives by the wonder-working ductless glands? The greatest romance of the last few years in medicine was the discovery of insulin by Banting. The solution of the pellagra problem seems nearer with the increasing belief that pellagra is a deficiency disease, possibly from a shortage of vitamins, and seems to be caused by faulty protein food mixture and is generally benefited by fresh meat and milk. The most threatening cloud of chronic disease in the South, hookworm, has been dissolved by the wand of Aesculapius. The real romance of present-day medicine is to prevent or to discover early the degenerative conditions of the great organs—the heart, kidneys, liver, and brain. All the saving in life has been in the prevention of infant mortality in the control of contagious diseases. Eternal vigilance of every individual by his physician is the price of lengthened life in the middle-aged. Community health is much in advance of the prevention of illness in the individual. *Have a thorough physical examination on your birthday!* It should be a real survey of a man's physical as well as mental status. It is estimated that the number of cases of sickness in this country in a year is thirteen and a half million, costing the nation a billion dollars. It is astounding to think that there are 225,000,000 days of sickness a year in the United States. If it were possible, by nationwide effort, to reduce the amount of sickness by 25 per cent, the total economic gain yearly would be around a quarter of a billion dollars. The people should be taught that in truth there can no more be different "schools" of medicine than there can be different schools of physics, or of mathematics or astronomy. There is nothing under the sun which is of proved value that has not and will not be used by the profession in the treatment of disease. All non-medical agencies are enthusiastic endorsers of health examinations. A health week should be established nationally by all the health agencies of this country, with the co-operation of every one of the 90,000 members of the American Medical Association. The press can be counted on to do its part, which is an essential, as it is unfalteringly interested and helpful in all health movements.



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An Interesting Medico-Legal Decision—The Lord Chief Justice, summing up in a case in which a doctor was accused of negligence, pointed out that a barrister, a poet, a statesman, or a dignitary of the church, who, by negligent conduct, imperiled the fortune of a case, the taste of the public, the interests of the nation, or the future of an immortal soul was not liable for damages. What retribution eventually awaited him did not involve him in any such liability. Doctors, however, like chauffeurs, engine-drivers and solicitors, were in another group, and were bound at their peril to use reasonable care. The jury returned a verdict for the doctor. Judgment was entered accordingly.—London Times.

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Facial Palsy Following Scarlet Fever—Two cases of unilateral peripheral facial palsy are reported by P. N. Mutschmann, Calumet, Iowa (Journal A. M. A.). Both cases followed attacks of scarlet fever, with apparently only a moderate degree of glandular involvement, and both, after several months of apparently complete clinical recovery, have developed an intermittent paralysis of the seventh nerve on the right side.

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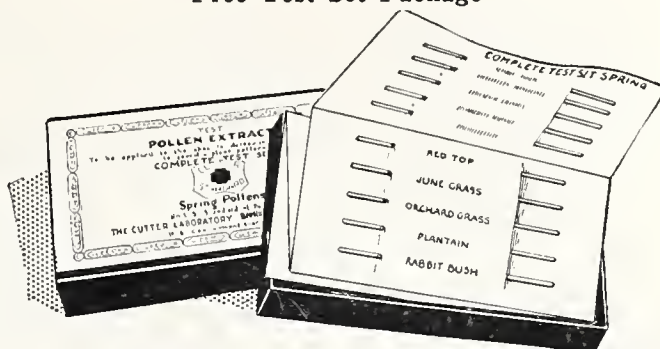
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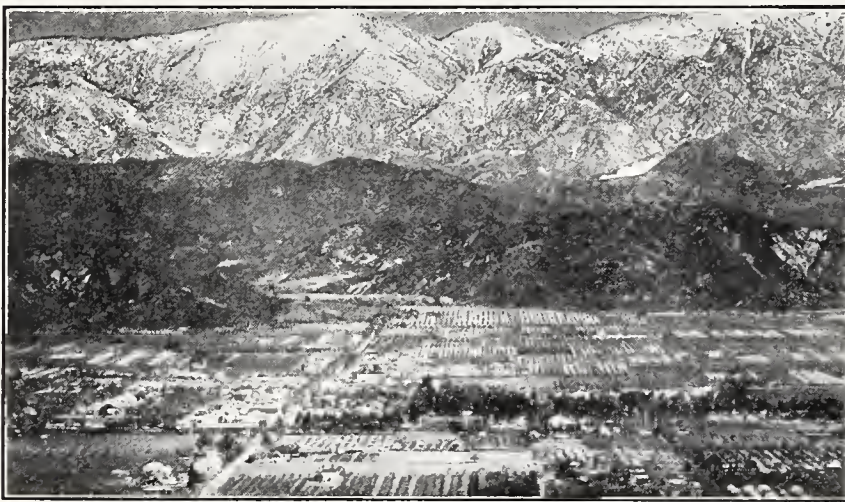
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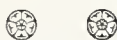
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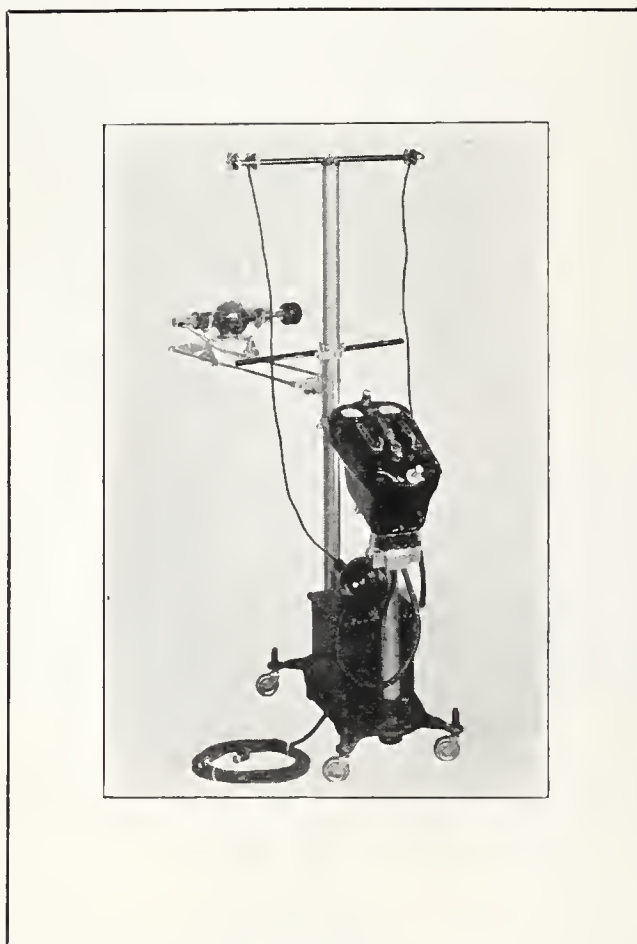
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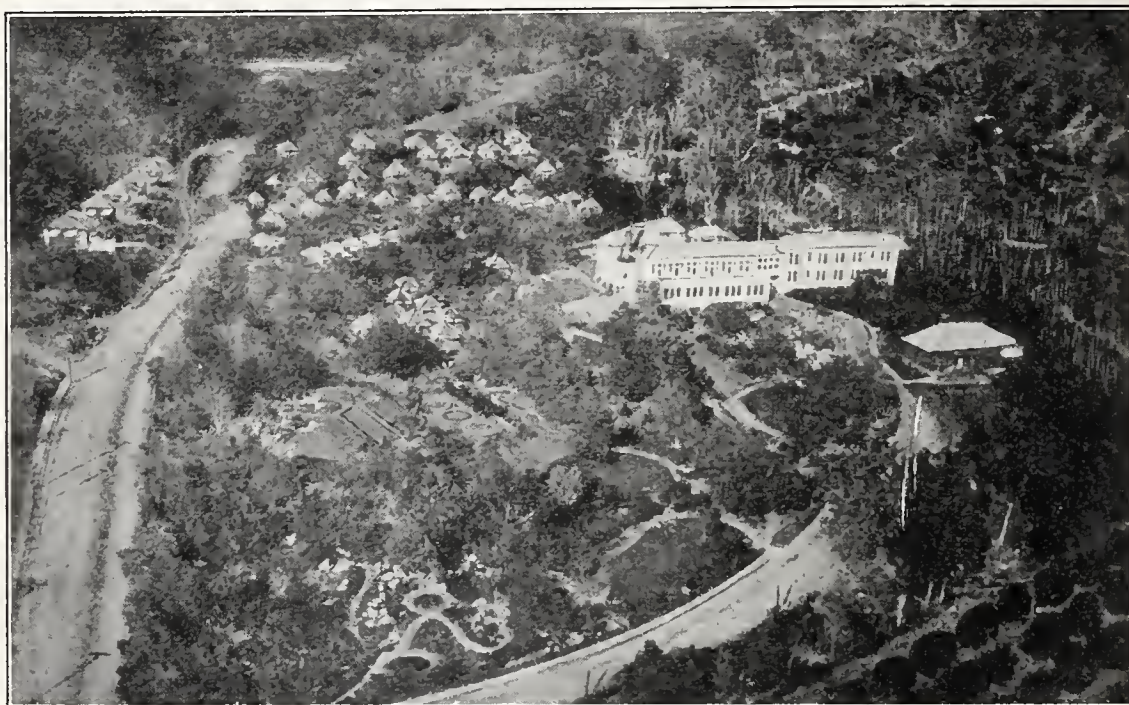
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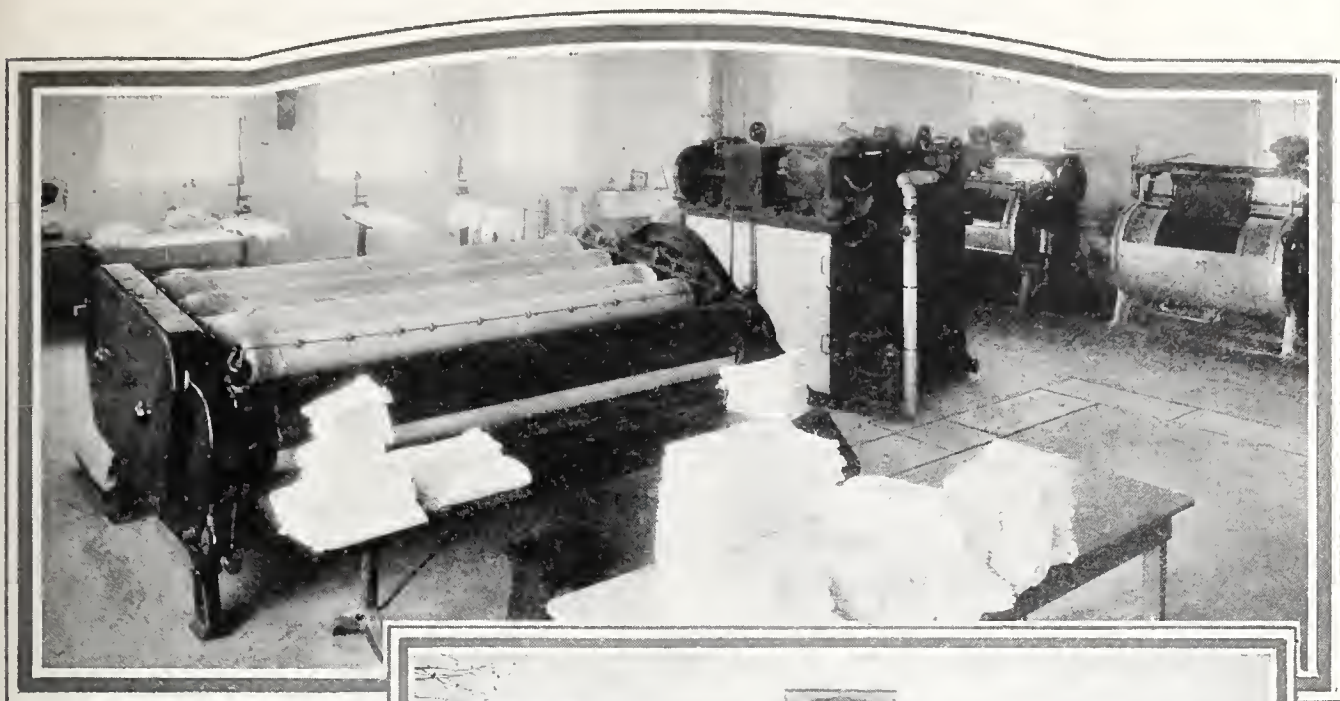
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ALEXANDER SANITARIUM Nervous and Mild Mental Diseases Belmont, Calif.	GLEN LODGE For Rest and Recuperation Foothills above Redwood City, Calif.	PARK SANITARIUM Alcoholic and Drug Addictions 1500 Page Street, San Francisco
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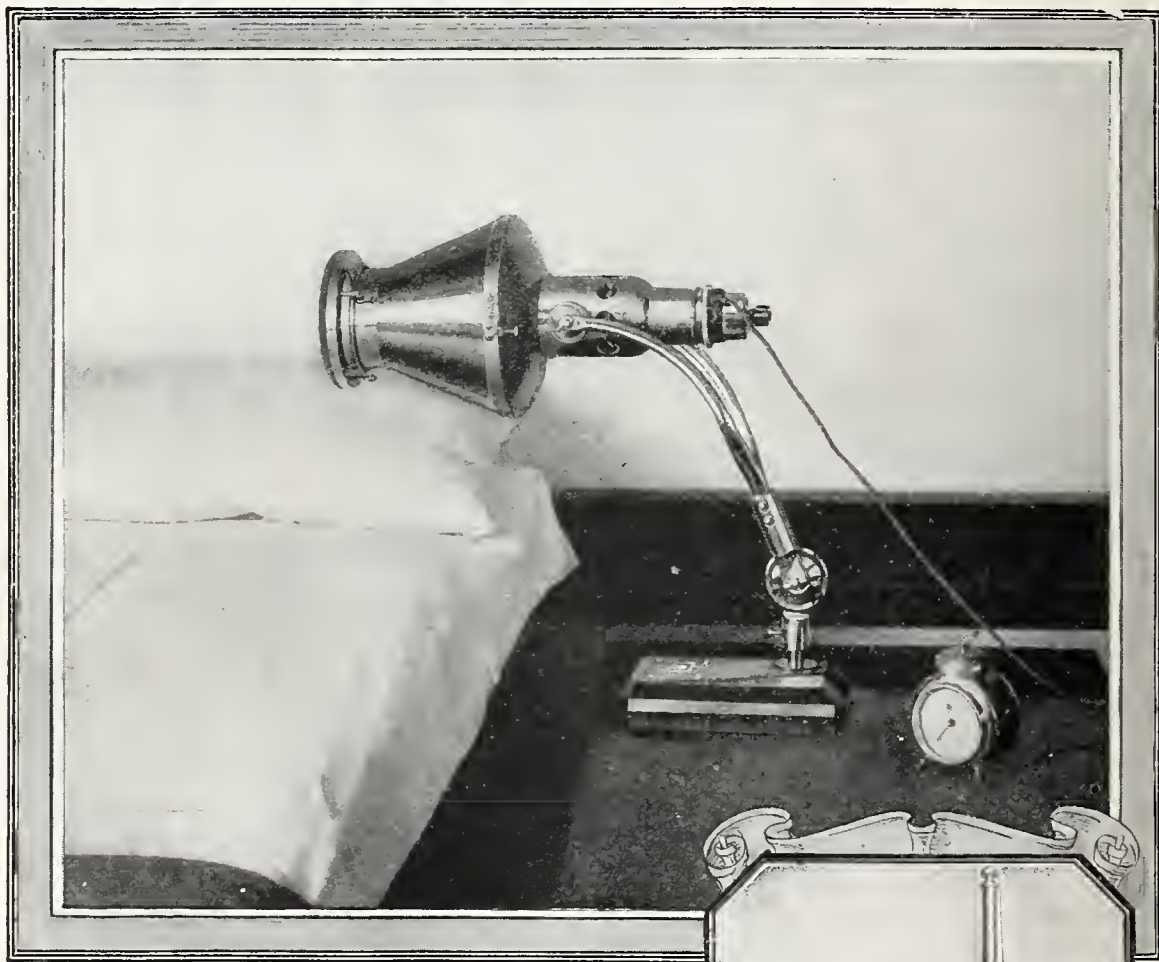
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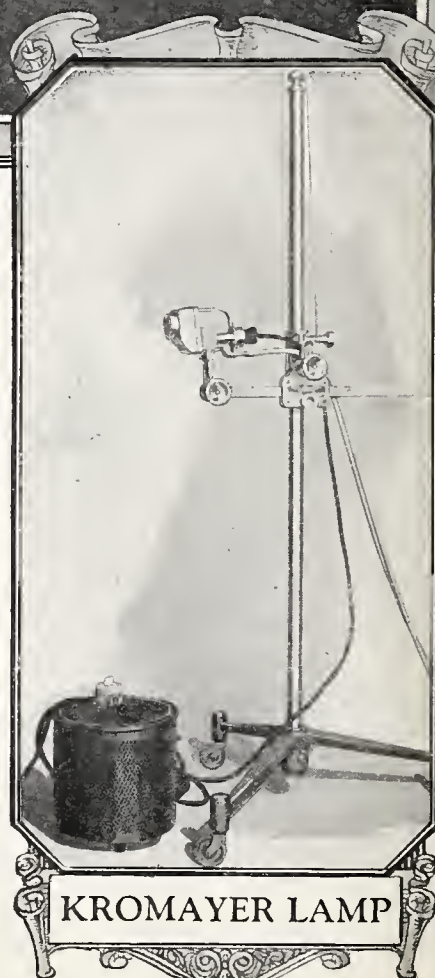
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BOOK REVIEWS

This column is conducted solely in the interests of California and Western Medicine readers. Critical comment, favorable and unfavorable, purely from the standpoint of the interests of the medical reader, will be made about books selected from the larger number acknowledged in the Books Received column. The advertising columns are open to book publishers who wish to make additional statements about their publications.

The Treatment of Common Disorders of Digestion. By John L. Kantor. 245 pages. Illustrated. St. Louis: C. V. Mosby Company. 1924. Price, \$4.75.

This little volume of 245 pages should prove of value to the general practitioner and student, as it treats in a simple, direct manner some of the common disorders of digestion, giving "principles and objectives of therapy," describing and outlining suitable diets. It is profusely illustrated.

However, it would seem that the author stopped too soon in his work and that he would have rendered a greater service if he had more thoroughly covered the field of gastro-intestinal disorders. W. W. B.

Anesthesia for Nurses. By Colonel William Webster. 153 pages. Illustrated. St. Louis: C. V. Mosby Company. 1924.

Colonel William Webster, who recently published *The Science and Art of Anesthesia*, reviewed in these columns, for the use of physicians and surgeons, presents a condensation of this work in his *Anesthesia for Nurses*.

In the preface, the purpose of the book is shown to be an aid to the nurses in the sparsely settled districts of the Western States and the Canadian West and to those working as missionaries in China and India, who are called upon to administer anesthetics because of the dearth of physicians in those places.

To any nurse ambitious to take up anesthetics as a profession, with the object of practicing in the hospitals of centers where men and women qualified in medicine are available, he recommends a medical course at some good university in order to obtain the minimum necessary knowledge required by an anesthetist, i. e.:

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tion, or to properly interpret and correlate the findings of others and direct the patient's preparation.

2. "To choose the most suitable anesthetic and produce a smooth and pleasant induction.

3. "To maintain the patient on the least amount of anesthetic consistent with the surgical procedure.

4. "To instantly recognize and be prepared to remedy with quiet confidence any untoward symptom which may arise."

The book is eminently suited to the purpose for which it is written and the chapter on pre-operative and post-operative care of the patient makes it a valuable addition to the teaching of nurses.

M. E. B.

ACKNOWLEDGMENT OF REPRINTS

Blumberg, Alfred.

See Packard, George B. Jr.

Bryan, Lloyd. Secondary Hypertrophic Osteoarthropathy Following Metastatic Sarcoma of the Lung. Report of a Case. Reprinted from *California and Western Medicine*, April, 1925.

Eberson, Frederick. Studies in Tuberculosis Immunity. I. Diagnostic and Sensitizing Properties of Some New Derivatives of Tuberculin. Reprinted from the *American Review of Tuberculosis*, Vol. X, No. 6, February, 1925.

Studies in Tuberculosis. IV. Significance of Lymphangitis Occurring with Cutaneous Tuberculin Tests in Children. Reprinted from the *American Journal of Diseases of Children*, January, 1925, Vol. XXIX, pp. 29-40.

Gilcreest, Edgar Lorrington. Fractures of the Elbow Joint and of the Lower End of the Humerus. Reprinted from *Surgery, Gynecology and Obstetrics*, October, 1923, pp. 452-460.

The Development of a Modern Medical Service for the Industrial Injured and Sick at the Hahnemann Hospital of the University of California. Reprinted from the *California State Journal of Medicine*, December, 1921.

Surgical Notes from a Year's Service in a Foreign Clinic. Reprinted from *Texas State Journal of Medicine*, February, 1915.

Gunshot Wounds of the Chest Observed in the Late Turko-Balkan War and in the Present European War. Read before Southern Medical Association, Tenth Annual Meeting, Atlanta, Ga., November 13-16, 1916.

Mills, H. W. Gas Cysts of the Intestine; With Report of

(Continued on Page 937)



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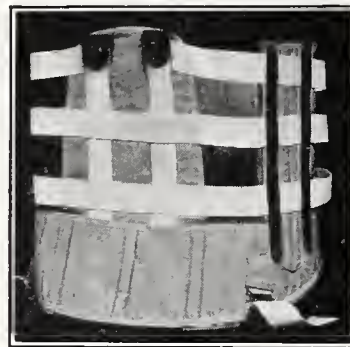
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(Continued from Page 935)

- Three Cases. Reprinted from Surgery, Gynecology and Obstetrics, March, 1925, pp. 387-400.
- Packard, George B. Jr., and Blumberg, Alfred. Sarcoma (Embryoma) of the Kidney in Infancy. Reprinted from American Journal of Surgery, December, 1924.
- Robinson, Alfred A. Familial Myopathy. Reprinted from the Medical Journal and Record, January 21, 1925.
- Ruediger, E. H. Quantitative Wassermann Test. Reprinted from the Journal of Laboratory and Clinical Medicine, St. Louis, Vol. X, No. 4, January, 1925.
- Shuman, John W. Home Care of Pulmonary Tuberculosis. Reprinted from The Medical Times, February, 1925.
- Medical Work in Syria. Reprinted from the New York Medical Journal and Record, April 1, 1925, Vol. CXXI, No. 7, p. 394.
- Voorsanger, William C. Suggestions on the Importance of the Tuberculosis Sanatorium in Treatment. Reprinted from the Transactions of the Twentieth Annual Meeting of the National Tuberculosis Association, 1924.
- Wesson, Miley B. Diseases of the Prostate and Their Treatment, Medical and Surgical. Reprinted from Northwest Medicine, February, 1925.



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Tuesday 8:00 a. m.—Weekly Staff Conference.

Tuesday 9:00 a. m.—Urologic and Cystoscopic Examinations. Louis Clive Jacobs, M. D.

Wednesday 8:30 a. m.—Operations. Charles G. Levison, M. D., and Harold Brunn, M. D.

Thursday 8:30 a. m.—Eye, Nose and Throat Operations. Aaron Green, M. D., and Herbert Cohn, M. D.

Thursday 9:00 a. m.—Medical Ward Rounds. Emilo Jellinek, M. D.

Friday 8:30 a. m.—Clinical X-Ray Conference. Lloyd Bryan, M. D.

Friday 9:00 a. m.—Pediatrics Rounds. E. Chas. Fleischner, M. D., and Ralph Kuhns, M. D.

Friday 9:30 a. m.—Prenatal Clinic. Louis I. Breitstein, M. D.

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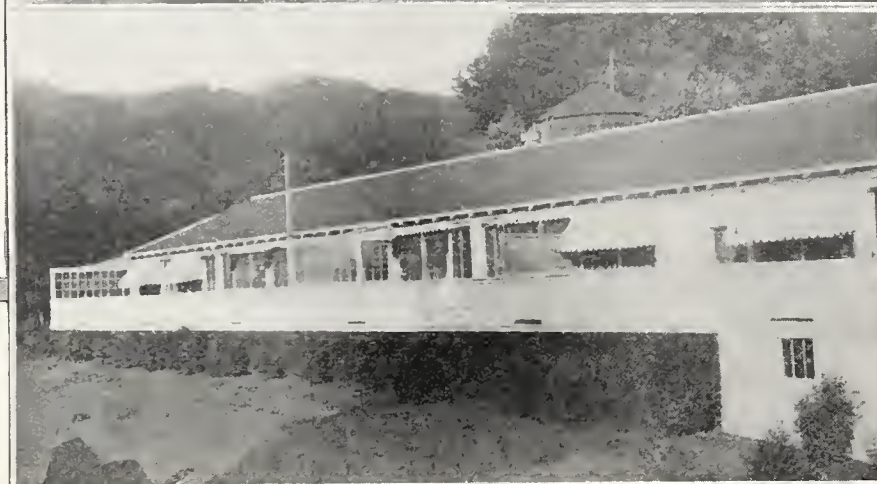
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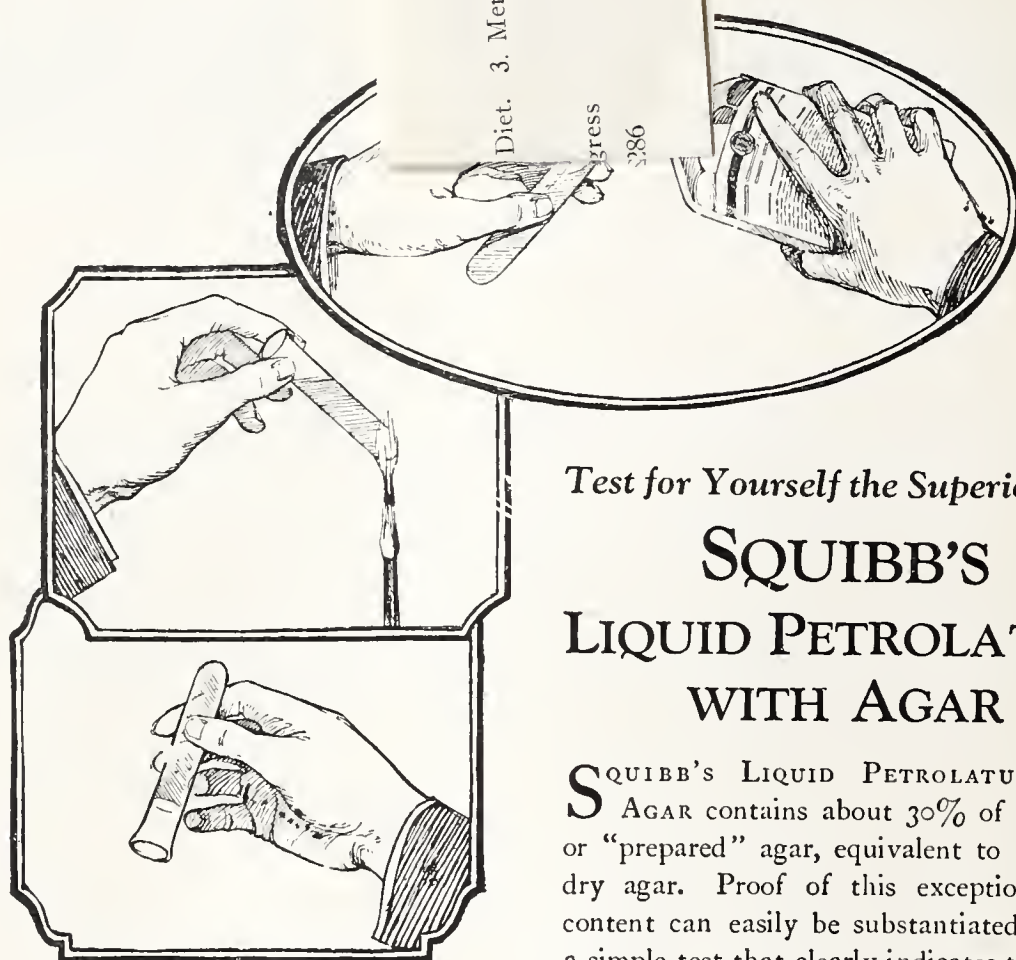
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SPECIAL ARTICLE

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Osteochondritis of the Second Metatarsophalangeal Joint

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Heart Pain

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Questionable Diagnostic Methods

The Lane Medical Lectures and Other Pertinent Editorials; The Month With the Editor;
Medical Economics and Public Health; Proceedings of the Council of the California Medical
Association; Clinical Notes and Case Reports; Utah Medical Association; Correspondence.

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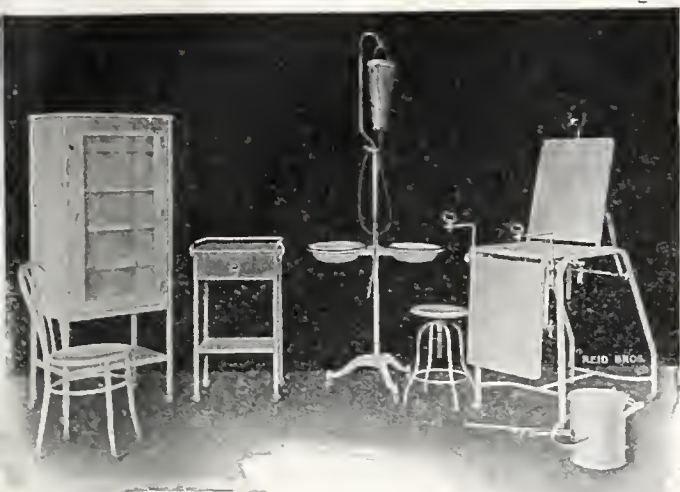


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VOLUME XXIII

AUGUST, 1945

No. 8

Subscription prices, \$5.00 (\$6.00 for foreign countries); single copies, 50 cents.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 10, 1918.

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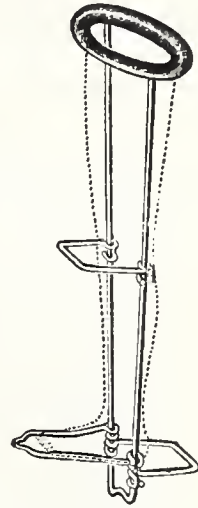
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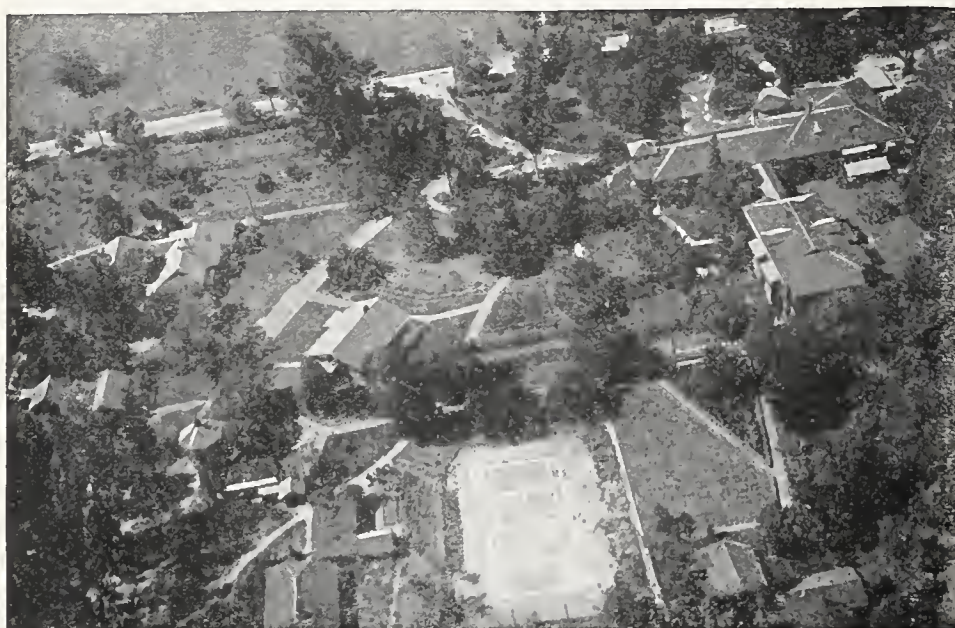
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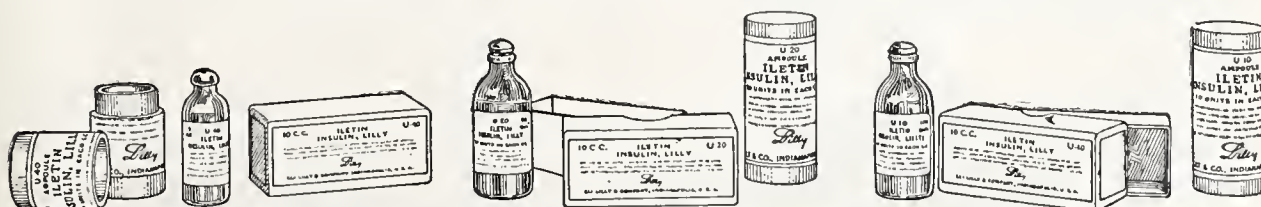
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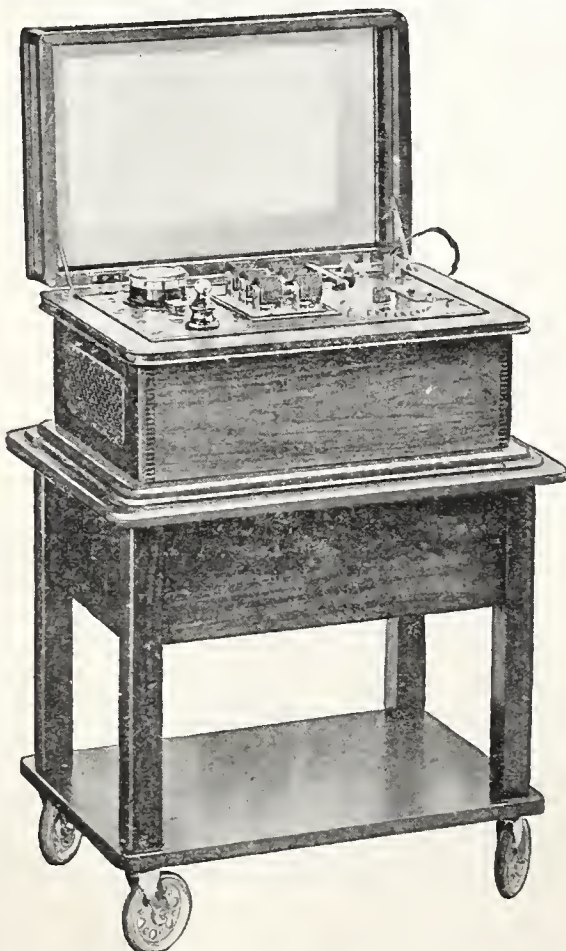
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In addition to the articles enumerated in our last report, the following have been accepted:

Parke, Davis & Co.—Tuna Fish Protein Diagnostic.—P. D. & Co.

Typhoid Vaccine—P. D. & Co., (New and Non-official Remedies, 1925, p. 363). This is also marketed in packages of thirty ampules, ten containing 500 million and twenty containing 1000 million killed typhoid bacilli each. Parke, Davis & Co., Detroit.

Typhoid Paratyphoid Vaccine—P. D. & Co. (New and Non-official Remedies, 1925, p. 363). This is also marketed in packages of thirty ampules, ten containing 500 million killed typhoid bacilli, 375 million killed paratyphoid A and 375 million killed paratyphoid B bacilli, and twenty containing 1000 million killed typhoid bacilli, 750 million killed paratyphoid A and 750 million killed paratyphoid B bacilli. Parke, Davis & Co., Detroit. (Jour. A. M. A.)

Stovarsol — Acetylaminohydroxyphenylarsonic Acid —Stovarsol contains from 27.1 to 27.4 per cent of arsenic. Stovarsol has been reported to produce favorable effects in the treatment of amebic dysentery. It is claimed to yield satisfactory results, both in the eradication of dysenteriae cysts and encysted flagellates and for general amebic dysentery. Stovarsol is not proposed for the treatment of syphilis and its use in amebic infections is still in the experimental stage. Stovarsol is supplied in tablets containing 0.25 gm. Powers-Weightman-Rosengarten Co., Philadelphia.

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QUICK temperature changes—overconfidence in the ability of the human body to adapt itself to sudden changes—that in brief is the story of the coughs and colds of late August.

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Unselfishly, in the interest of medical science to mutual advantage of physician and patient, the Grande Vista Sanatorium proposes an extensive program of reorganization and expansion, placing its directorship into the hands of a medical board who will be authorized to issue shares of stock in the institution to physicians who are in sympathy with this project, and who will lend their good-will and moral support towards its upbuilding.

All physicians of good repute are requested to join in the furtherance of this project, which will prove to their interest, as well as a blessing to their patients.

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Fungicidal Activity of Certain Volatile Oils and Stearoptens—H. B. Myers and C. H. Thienes, Portland, Ore. (Journal A. M. A., June 27, 1925), describe an occupational dermatosis which is seen developing among employes engaged in preparing the fruit for canning. The lesion has been referred to by those affected as a "fruit poisoning." It has been treated without much success by a great variety of means, chiefly by the antiseptics commonly utilized in treating bacterial infections. Scrapings from the lesion revealed budding spore forms with mycelium attached. A 10 per cent alcoholic solution of the oil of cinnamon was painted over the inflamed area. Rapid improvement in the appearance of the lesion, progressing to healing, followed the application of the cinnamon solution. The favorable action of oil of cinnamon on the original and experimental lesions led to an investigation of the comparative toxicities of several volatile oils and stearoptens on cultures of the pathogenic yeast responsible for the infections. Thymol, oil of cinnamon and oil of clove have been found particularly efficacious in destroying the pathogenic yeastlike organism responsible for this dermatitis. The drugs mentioned have been found equally valuable in causing an immediate improvement, progressing to healing of infections apparently due to fungoid organisms of several types.

Not Theory But Practice—That the American Laundry Machinery Company believes the following, which was published in their excellent house organ, The Outlook, is attested monthly in these pages:

"One step won't take you very far;
You've got to keep on walking.
One word won't tell folks who you are;
You've got to keep on talking.
One inch won't make you very tall;
You've got to keep on growing.
One little ad won't do it all;
You've got to keep them going."



It Is a Family Duty to Carry a Medical Protective Contract

The necessity is emphasized by the facts in file No. 03596. The following was received from our local attorneys, while the case was in process of litigation.

"I beg to advise that today Mrs. ———, the wife of your assured in this case, called me by phone and advised that her husband, Dr. ———, had died on March 24.

"The case is now pending on demurrer and it is not likely that much if anything will ever be done with it, although of course they can go ahead and have the administrator or executor substituted."

After a lapse of six months the widow was served with a summons and in advising us, said among other things:

"The Medical Protective Co.,
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* * *


I suppose they think that my husband, Dr. ———, left a lot of money. The whole thing does not amount to Five Thousand Dollars, and I have three small children to raise."

The Doctor dead and the defense handicapped because he is not present to prove the propriety of his treatment, the widow financially unable to pay for own defense and endure a judgment; the raising and educating of three children dependent upon the wisdom of the Doctor in carrying a Medical Protective Contract.

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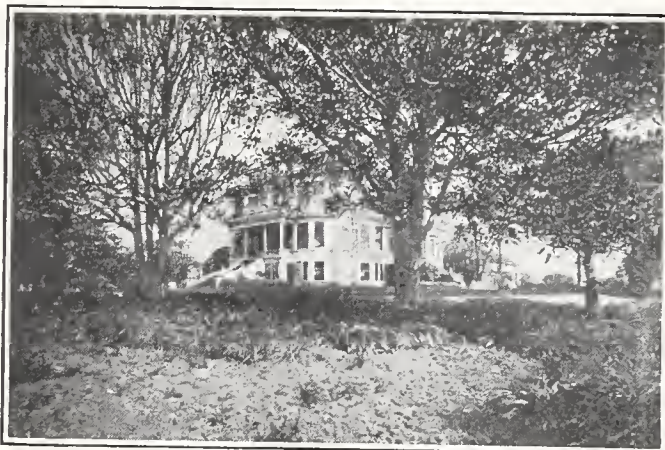
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Reduction of Increased Intracranial Pressure—Max M. Peet, Ann Arbor, Mich. (Journal A. M. A., June 27, 1925), says that the slow reduction of increased intracranial pressure in the absence of shock, hemorrhage, vomiting or dehydration is satisfactorily accomplished by the oral or rectal administration of magnesium sulphate. The rapid reduction of intracranial tension, in acute intracranial traumas unassociated with shock, is best accomplished by the intravenous administration of hypertonic Ringer's solution. Glucose may be given later to maintain the lowered intracranial pressure. Hypertonic glucose solution, administered intravenously, is indicated when acute intracranial pressure is associated with shock or hemorrhage, and in the less acute cases when complicated by dehydration, nausea and vomiting. Glucose has the following advantages over any of the salt solutions: prolonged action, no terminal rise in pressure, nontoxicity, nondehydration, increased blood volume in shock, and the control of acidosis.

Extra-Abdominal Conditions Simulating Acute Abdominal Diseases—David Riesman, Philadelphia (Journal A. M. A., June 27, 1925), discusses those extra-abdominal diseases which may simulate acute abdominal conditions, pneumonia, pleurisy, pericarditis, coronary thrombosis, rupture of a dissecting aneurysm of the aorta, true angina pectoris, tabes dorsalis, uremia, tonsillitis, lead poisoning, hysteria, diabetes, thyrotoxicosis, angiospasm of the abdominal arteries, the so-called erythema group of diseases and herpes zoster, not only for the purpose of discussing the intra-abdominal causes of acute abdominal symptoms, but to point out those extra-abdominal conditions which, in their close mimicry of truly abdominal diseases, create diagnostic difficulties and lead to errors in judgment resulting in unwise and dangerous procedures.



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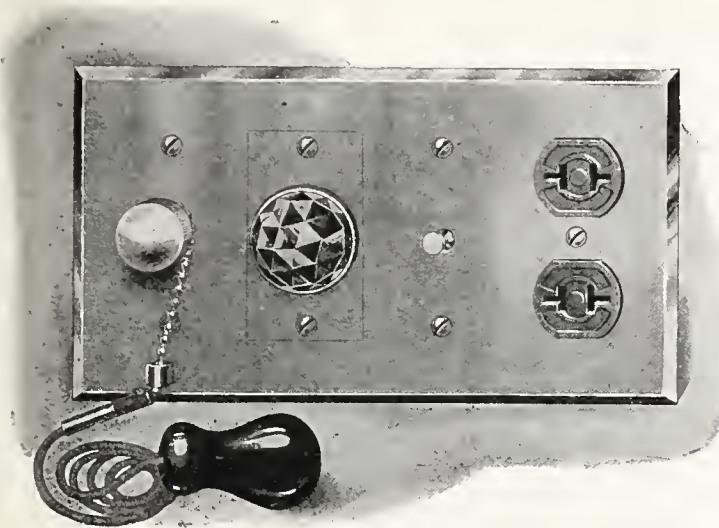
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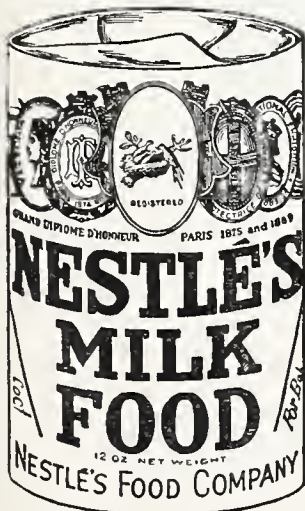
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BOOKS RECEIVED

All books received are promptly acknowledged in this column. Such acknowledgment is the only return California and Western Medicine feels obligated to render in return for the courtesy of the sender. Selected books believed to be deserving of comment will be reviewed solely in the interests of our readers. Our advertising columns are open to publishers of acceptable books for such further statements as they care to make.

Diseases of the Ear, Nose and Throat. By Harold Hays, M. D. Illustrated with 495 half-tone and line engravings in the text, and fifty-five full page plates, nearly all in colors. Philadelphia: F. A. Davis Company, Publishers, 1925.

Diabetes, Its Treatment by Insulin and Diet. A handbook for the patient. By Orlando H. Petty, M. D., and William H. Stoner, M. D. With illustrations and tables. F. A. Davis Company, Publishers, 1925.

Chirurgische Propädeutik. Eine allgemeine chirurgische Diagnostik für Studierende und Ärzte. Von Professor Dr. Erich Sonntag. Mit 135 Abbildungen im Text. Verlag von Georg Thieme, Leipzig, 1925.

Ergebnisse der Medizinischen Strahlenforschung (Roentgendiagnostik, Roentgen, Radium und Lichttherapie) Herausgegeben von H. Holfelder, Frankfurt a. M. H. Holthusen, Hamburg. O. Jungling, Tübingen. H. Martius, Bonn a. Rh. Band 1. Mit 451 Abbildungen in Text und 3 photographischen Tafeln. Leipzig, 1925. Verlag von Georg Thieme.

Conduction, Infiltration and General Anesthesia in Dentistry. By Mendel Nevin, D. D. S., and P. G. Puterbaugh, M. D. Second Edition. Illustrated with 210 engravings and large trifacial nerve chart. Dental Items of Interest Publishing Co., 1924.

Simplified Nursing. By Florence Dakin, R. N. J. B. Lippincott Co.

The Principles of Public Health Engineering. By Earle B. Phelps, B. S. The Macmillan Company, 1925.

The Newer Knowledge of Nutrition. The use of foods for the Preservation of Vitality and Health. By E. V. McCollum, Ph. D., Sc. D., and Nina Simmonds, Sc. D. Third edition entirely rewritten. The Macmillan Company, 1925.

Annual Report of the Board of Regents of the Smithsonian Institution showing the operations, expenditures and condition of the institution for the year ending June 30, 1923. Washington Government Printing Office, 1925.

Physical Diagnosis of Diseases of the Chest. By Joseph H. Pratt, M. D., and George E. Bushnell, M. D. Octavo of 522 pages with 166 illustrations. W. B. Saunders Company, 1925. Cloth, \$5 net.

The Normal Diet. A simple statement of the fundamental principles of diet for the mutual use of physicians and patients. By W. D. Sansum, M. D. Director of the Potter Metabolic Clinic, Department of Metabolism, Santa Barbara Cottage Hospital, Santa Barbara, California. The C. V. Mosby Company, 1925.

The Habit of Attending Medical Meetings— Presence at a meeting, hearing discussions and papers not only is of value to the beginner, but has been considered of importance to our masters, says Marcus Feingold, New Orleans (Journal A. M. A.). Naturally, not all that is transacted in every meeting is of the kind that signifies progress and betterment; some things presented may be of the kind that should be avoided and deprecated. But there is good also in listening to this kind because it teaches how to avoid the mistakes of others. Presence at meetings produces, in different members of the audience, various emotions. These emotions must apparently fall into one or more of the following subdivisions: admiration for the subject or the speaker; feeling of one's own inferiority in having done so little; the desire to imitate that piece of work and that method; the determination not to overlook this or that in the future, and regrets at having failed to observe this and that. Attendance at meetings has often led to ties of the most fruitful and warmest friendships among medical men the world over. History of medicine contains many records of the wonderful effects of exchange of thoughts among friendly spirits, just as these medical meetings. Attendance at meetings must not be limited to those of our immediate circles. The larger the group of individuals banded together, the greater is the probability of valuable and stimulating contributions at that meeting.

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Ivy Poisoning—The problem that has been studied by G. L. Krause and F. D. Weidman, Philadelphia (Journal A. M. A., June 27, 1925) has been that of the preventive phase of ivy poisoning and not of the cure of the already established disease. Therapeutics was the second phase of their work. The work done by the authors confirms that: The discharge from the lesion does not disseminate the disease; the virus itself must come in contact with the part. Susceptible individuals may contract ivy poisoning at any time of the year, provided the juice of the plant comes in contact with the skin. As new findings they report that: Repeated attacks tend to shorten all the stages of subsequent attacks. Local immunity is not developed by repeated attacks of ivy poisoning. There is such a thing as absolute (and probably permanent) immunity against ivy poisoning. In their series, two thirds of the men who believed themselves immune were not immune. In 45 per cent of the susceptibles it was necessary that some such defect in the epidermis, as scratches, should be present before a dermatitis would develop. It appears that all of the commoner laboratory animals are immune to this virus. Puritus ani, transient, appeared in the majority of those receiving preventive treatment; in two subjects, hemorrhoids were aggravated. The pain at the sites of intramuscular injections outweighs the danger of future attacks of ivy poisoning such as are only suppositious in the commoner walks of life. In their series of sufficiently controlled subjects, the preventive system of treatment of Strickler did not prevent; it is possible that the curative value of this system is likewise scant or nil, and that the beneficial results which have been reported are depended on and ascribable to the variable susceptibility of different individuals and the varying intensity of the irritant as applied at different times.

The death of Professor August von Wassermann on March 16, 1925, has deprived the medical world of one of its ablest investigators and the human race of a benefactor.

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ROBERT A. PEERS, M. D., *Medical Director*
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CALIFORNIA AND WESTERN MEDICINE

VOL. XXIII

AUGUST, 1925

No. 8

SPECIAL ARTICLE

FOCAL INFECTION, A MEDICO-DENTAL PROBLEM. *

By F. P. WISNER, M. D., *Research Assistant, California Stomatological Research Group*

It is not often that the results of "research" are made so promptly available to and practically applicable by physicians in the promotion of health and the limitation and treatment of disease as is the work of Doctor Wisner and his colleagues discussed in this essay.

As is the case with most worthwhile investigations, much of the research embodied in this essay has been carried on in the library and these findings have been included with those of the author with a lucidity not otherwise possible.

This study has been made possible by grants from the Carnegie Corporation of New York, the American Dental Association, and the Associated Radiograph Laboratories of San Francisco.

There are thought-provoking messages here for every physician and every dentist.—EDITOR.

ORAL focal infection is an inseparable part of general focal infection.

The commonest primary lesions are teeth, tonsils, sinuses, and prostate.

Secondary foci may exist almost anywhere throughout the body.

The primary lesions are usually symptomless and need not yield pus, rendering them difficult to locate.

The remote effects are due to bacteria or their toxic products, transported by ways of the blood or lymph stream.

Streptococci are the commonest organisms concerned in focal infections, although others may be responsible.

Among the dental pathological conditions responsible for focal infections, periapical infections and pulpless teeth are of prime importance. Pyorrhea must also be considered.

The dentist is one of a group of specialists whose services are requisite to the proper diagnosis and treatment of a case of focal infection.

Local surgical treatment often requires to be supplemented by general measures, designed to build up bodily resistance against inaccessible foci.

infection. But the condition which is commonly termed focal infection is a transported infection of organisms of the staphylo-streptopneumococcus group.†

WE ARE living in a period when the condition of focal infection is finding its proper place in the science and practice of medicine and dentistry. There are those who would give it a place with tuberculosis and syphilis, as being one of the three most important of all infections. This is somewhat surprising in view of the short time which has elapsed since the condition was first described as a clinical entity. It has been estimated that over 60 per cent of all patients admitted to all our hospitals are sent in because of some manifestation of this condition. But it is only recently that we have had a sufficiently clear insight to realize that all these cases belong in the same category. Formerly they were considered to be totally unrelated conditions. And like all advances along the lines of correct classification of diseases, we find that this new conception of focal infection serves to greatly simplify our notions of many diseases, and to group together numerous conditions which were previously considered to be totally dissimilar. Likewise, several conditions previously thought to be tuberculosis, are now recognized as being manifestations of focal infection.

WHAT THEN, IS FOCAL INFECTION?

It may be defined as the transportation of infection from one portion of the body to another, with an infection resulting in both places. Thus, a periapical abscess may give rise to an arthritis. But, according to this definition, we might place syphilis, tuberculosis, and in fact, all the infectious diseases we know, in this same category. And the truth of the matter is that, broadly speaking, all these diseases are types of focal

THERE ARE MANY TYPES OF FOCI

First of all, there is the active focus, or the one which is responsible for acting as a source of infection for the rest of the body. There is then, the inactive focus, which, although harboring infection,

* Aided by grants from Carnegie Corporation of New York, American Dental Association, and Associated Radiograph Laboratories of San Francisco.

† The great majority of the organisms isolated from infected extracted roots of teeth in our clinic, by Mrs. Pauline Scott, have been members of the strep-veridans tribe.

is not guilty of metastasizing. It is, however, a constant menace, due to the fact that it may, at any time, and without any warning, become an active focus. There is the primary focus, which is located in the mouth or in one of the body's other readily accessible cavities. This is the initial focus of the infection in the body and serves as a breeding place and center from which organisms may be discharged to all parts of the body. Then, there are secondary foci, which are located anywhere throughout the body, and become infected with organisms transported from the primary focus. The secondary foci may, in turn, become primary foci; that is, they may themselves become sources of infection for other parts of the body.

With respect to the speed with which secondary foci are established, we may distinguish between acute and chronic focal infections. In the acute focal infections, the secondary foci appear very soon after the establishment of a primary focus. Usually the time interval is so short that they appear to exist coincidentally. Examples of acute focal infection are the development of an acute osteomyelitis or perinephritic abscess following a boil on the skin, the incidence of an acutely suppurating joint following an acute tonsillar or periapical infection, and so on. Due to the acuteness of both primary and secondary foci, it is evident that these cases are much more readily diagnosed than the chronic cases. In cases of chronic focal infection, the primary focus precedes the secondary focus by months or perhaps years. The primary focus gives few if any clinical evidences of infection, while the secondary focus is not nearly as acutely involved as in the cases of acute focal infection. There is, thus, little in the secondary focus and possibly nothing whatsoever in the primary focus to call our attention to the infectious nature of the process. The difficulties of diagnosis in these chronic cases is thus readily apparent and will be emphasized later. It is with the chronic cases that we will concern ourselves in this discussion, since the acute cases are readily diagnosed, and their treatment apparent.

The common primary foci in the body are: 1, Periapical abscesses; 2, Pulpless teeth; 3, Paranasal sinuses; 4, Tonsils and adenoids; 5, Prostate and seminal vesicles; 6, Skin. It will be noted that all of these foci are located in cavities situated close to the surface of the body.

The common secondary foci are: 1, Regional lymph nodes; 2, Joints; 3, Tendons, ligaments and fascia; 4, Nerves and brain; 5, Appendix and gall bladder; 6, Kidney; 7, Heart muscle; 8, Eye and ear; 9, Stomach and intestine; 10, Lungs. It is readily apparent from this, that there are few spots within the human body which are immune to the inroads of focal infection.

The methods by which the distant effects of focal infection are produced vary considerably. The commonest method is by the lymphatic transportation of the bacteria. This is often the cause of swollen and infected glands of the neck, resulting from infection in either the teeth or tonsils. Another common method by which the bacteria may be transported is through the blood vessels. Certain conditions, as neuritis, are thought to be due to the dissemination of toxic products of bacterial

activity, rather than to the transportation of the bacteria themselves. This toxic absorption takes place, of course, either through the venous or lymphatic channels. A means of transporting infection, which has as yet not received very serious consideration, is the swallowing of bacteria and their toxic products, from foci existing in the mouth or pharynx. This lack of consideration is due to the assumption that bacteria and their products would be neutralized and destroyed by the action of the gastric juice. Thus, we see, that the first three named methods of spread are by far the most important, namely: 1, Lymphatic spread of bacteria; 2, Blood-borne bacteria; 3, Toxins borne by blood (or lymph).

In considering the factors which predispose toward the localization of an infection, we are striking at the heart of the whole question of infection and immunity. As was already indicated, the primary foci are located either on the body surface, or else in one of the readily accessible cavities adjoining the body surface. Factors favoring the establishment of an infected primary focus, are the same identical factors which predispose to infection anywhere, namely: 1, Weakness resulting from previous infection (ex. prostate); 2, Mechanical defects (ex. nasal septum); 3, Trauma (ex. prize-fighter's wrists); 4, Exposure to cold; 5, Poisons of all sorts; 6, Deficient blood supply (ex. joints); 7, Senility, fatigue, starvation, etc. Here, as in all types of infection, the establishment of an infectious process depends on: 1, The dosage of organisms; 2, The virulence of the organisms; 3, The resistance of the host.

The streptococci seem to be one of the most versatile of all organisms, being able to adapt themselves to a great variety of environments. When once they have localized in a particular region, due to a combination of the above mentioned factors, they develop a tendency to become specific for that particular organ, as is shown by their behavior when injected into animals. If, for example, as Rosenow has shown, a strain of streptococci recovered from the apex of an infected tooth in a patient suffering from, let us say, gall bladder disease, are injected into a series of rabbits, the great majority of the lesions produced in the animals will be gall bladder infections. This principle of elective localization is not a new thing in our experience. We have witnessed it previously with a great variety of diseases, such as mumps, gonorrhea, whooping cough, and many others—and yet it has been difficult for many to accept this same fact when applied to the streptococcus. Another factor which seemingly influences the virulence and also the localization of the streptococci, is that of oxygen tension. They prefer a lower oxygen tension than exists on the surface of an exposed mucous membrane, and under conditions of lowered oxygen tension, tend to become increasingly virulent. Thus, the virulent streptococci are found lurking in out-of-the-way corners, as deep in the tonsillar crypts, in the periapical tissues, in the paranasal sinuses, in the prostatic ducts, etc.

A consideration of prime importance is the fact that these lesions, dental and otherwise are almost invariably painless. This fact often adds to the

difficulty in persuading an already reluctant patient to have the focus eradicated. It also doubtless often causes the operator to hesitate and speculate about the advisability of removing a silent focus. Another common misconception is that an infected focus should manifest itself by the production of pus. It is general knowledge that the streptococci are organisms which commonly do not produce pus. On the contrary, the type of exudate which they usually provoke is more serous in character. Hence the apparent folly of refusing to remove tonsils on the ground that pus cannot be expressed from them.

This brings us to a consideration of the means at our disposal of diagnosing chronic focal infection. To begin with, let us state that these are quite unsatisfactory. First of all, the patient presents himself before us with a condition commonly known to be caused by focal infection—an arthritis, neuritis, nephritis, gastric ulcer, myocarditis, iritis or possibly a severe anemia. There are very few tests of a general nature that we may apply to determine the existence of chronic focal infection, and these are by no means generally accepted as valid. The blood picture, it is claimed by some, is quite typical. This consists of a decrease in the total number of white corpuscles, of polymorphonuclears, and of red corpuscles, together with an increase of the lymphocytes. A rise in the blood's content of uric acid is also claimed to be due to focal infection, provided none of the more obvious causes of high uric acid are formed. It is also claimed that upon removal of all foci, the uric acid content of the blood returns to normal. Thus, it will be readily seen that while the diagnosis of acute focal infections is easy, due to the fact that the local and general symptoms are clear-cut; in chronic focal infections our attention is drawn mainly to the secondary focus, while the primary focus is silent, and there is little of certain value in the patient's general condition to give us a clue as to the nature of his trouble.

In searching for possible primary foci, let us begin with the mouth. As far as the teeth are concerned, there are two conditions with which we are particularly interested. First is the chronic periapical abscess, or granuloma. The method most depended upon to locate these is by means of the radiograph. It is needless to state that several pictures should often be taken from different angles in order to discover apical lesions, especially in the molar teeth, where they are apt to be obscured by bony processes. The other type of tooth in which we are especially interested is the pulpless one. It seems to be the current opinion that between 50 and 80 per cent of pulpless teeth are infected. Even if uninfected the pulpless tooth is a constant liability, since it may, at any subsequent time, become infected. The burden of proof against this statement, it would seem, rests upon the advocates of root canal therapy. Fortunately, there is a constantly decreasing number of teeth being devitalized, so that in the future, this particular phase of the problem will not loom as large as it does at present. Of practical importance is the fact that rarely are teeth suspected without being found infected upon extraction. It will be noted that there is a noticeable lack of condemnation of pyorrhetic teeth in this connection. This is

because mild degrees of pyorrhoea are considered to be lesions with good drainage, and thus with a minimum opportunity for absorption. However, we have reason to believe that a considerable number of pyorrhetic teeth develop infected pulps and periapical infections. In this event they are as dangerous from the standpoint of focal infection as a periapical infection in any other tooth. Probably more attention should be paid to pyorrhoea in examining the teeth of these cases.

There are certain writers who attribute cures to the removal of teeth which, they state, were negative radiographically. Just what we are to infer from this is a matter of conjecture. These men may be referring to non-vital teeth, calling them radiographically negative because they show no visible periapical absorption. We have already seen how non-vital teeth are to be suspected regardless of their radiographic appearance. Again, these authors may have been dealing with teeth bearing periapical abscesses which were unobserved, either because of their small size or because of their position. It is possible that these teeth may have been affected with pyorrhoea and that deep down, near the pockets, were small areas of infection that were walled off, and thus not provided with drainage. There is also the possibility that, unknown to the dentist, some other focus has been removed at about the same time as the removal of these apparently normal teeth. And lastly, there is the possibility that there is a type of infected tooth with which we are as yet unacquainted, and which our present methods of diagnosis cannot reveal.

We will not consider in detail the methods of diagnosing primary foci elsewhere in the body. Needless to state their determination requires the most careful efforts of the specialists in whose field they occur. Repeated nasal examinations are often necessary in order to determine sinusitis, and we have frequent occasion to resort to radiographs and the washing out of the sinuses for diagnostic purposes. Infected tonsils may appear entirely healthy, but upon culturing the excised organs we will find virulent bacteria. Similarly an infected prostate or seminal vesicle may feel absolutely normal to the palpating finger, but upon repeated massage, will be found to contain an infected secretion. Thus, the study of a case of focal infection, as will readily be seen, is a problem which calls for the combined efforts of the clinician, roentgenologist, dentist, rhinolaryngologist, urologist, and probably other specialists. Such co-operative efforts are best directed by the clinician, who, alone, is in a position to consider the case as a whole, and to decide upon the basis of the evidence obtained, what the proper sequence of treatment shall be. The place of the dentist in such a scheme of things is apparent. He ranks with the other specialists, being the one whose duty it is to locate and subsequently eradicate infected teeth and investing tissues.

As an aid in locating the primary foci in a given case, it has been suggested that an over-dosage of an autogenous vaccine would cause such an acute exacerbation of the infectious process that the primary focus would be temporarily changed from a chronic to an acute focus. This would serve to bring it to the direct attention of the patient and

his attending clinician. This is possibly a wise procedure in those obscure cases where we feel confident that there are primary foci which we have been unable to locate. As a routine procedure, however, we can hardly at present recommend it. In the lack of an autogenous vaccine, it is possible that a slight overdosage with parathyroid extract would produce similar results.

We are now ready for a consideration of the proper treatment of a case of focal infection. Having located as many primary and secondary foci as we are able, we proceed with their surgical removal; that is to say, the removal of all the accessible foci. Where both teeth and tonsils are involved, it is claimed that better results are obtained if all the infected teeth are removed before the tonsils are excised. For the removal of teeth with periapical infection, the consensus of opinion seems to be in favor of Shearer's method of external alveolectomy, since it facilitates the complete exposure to view of the infected area. The extraction of large numbers of infected teeth at a single sitting, in these cases, is not the wisest procedure, because of the possibility of causing a violent flare-up of all symptoms. And in that connection it should be said, that probably the cases in which a flare-up is caused, are the ones which will be most benefited by the eradication of the infection. It is often important to reassure the patient by pointing out to him this fact, lest the exacerbation should prompt him to abandon treatment. In regard to the extraction of teeth, nothing is a more reprehensible mode of procedure than for the physician to order all the patient's teeth out merely on the suspicion that some of them are infected. There are many cases when complete extractions are indicated, but it is the blind and ruthless ordering of wholesale extractions which we are condemning. After the dentist has removed the infected teeth, and reconstructed the mouth for mastication, the clinician should see to it that all other accessible foci are likewise removed, be it tonsils, sinuses, prostate, gall bladder, appendix or what not. The removal of these infections depends, of course, upon their location, and often is not nearly so practical as the removal of dental infections.

In conjunction with the removal of accessible foci, we often have occasion to resort to local treatment in the region of the secondary focus. For example, in case of a joint involvement, we supplement the removal of foci with casts applied to the joints, followed by bakes and massages. In case of an iritis, we dilate the pupil with atropin and rest the eye by bandaging it shut. Naturally, this subsidiary treatment varies with the location of the secondary foci; the general principles involved being rest from function and the stimulation of hyperemia.

There are certain conditions, let us take for example, syphilis and tuberculosis, which, although entirely separate etiologically from focal infection, nevertheless are benefited by the removal of foci. This is readily explained by assuming that the body is relieved of an added load, and that it is thus rendered better able to fight the uncomplicated syphilitic or tuberculous infection than when a focal infection coexisted. In this connection, the prophylactic

removal of foci of infection, wherever found, should be urged. The fact that the foci are inactive and that secondary foci have not yet been established, does not mean that such inactivity will continue indefinitely. The lack of secondary foci may be due to the fact that the lesion is draining freely (as in the milder degrees of pyorrhoëa), or to the fact that the body has been able to wall off the infection, or that the patient has sufficient immunity to prevent the re-establishment of secondary foci. It is evident, however, that none of these conditions are necessarily permanent; that is to say, they are not a guarantee against subsequent systemic involvement. The old adage concerning an ounce of prevention is just as apropos here as elsewhere. Prophylaxis is just as important in the field of focal infection, as in any other diseased condition.

Due to the fact that many foci are inaccessible or difficult to clear up, we have occasion to supplement our local treatment of foci with general measures, whose purpose it is to build up bodily resistance to the point where the body can overcome what infectious foci we are forced to leave within its tissues. It is in this field that the future's great promise lies, as far as the treatment of focal infection is concerned. Measures which we may employ in the hope of accomplishing the above mentioned results are: Autogenous vaccines, ultra-violet light, Roentgen rays, and parathyroid extract. The goal of our ambitions would be reached were we able to dispense with the surgical removal of foci and devote our entire attention to the administration of these resistance-building agents. However, in our present state of knowledge, we are forced to rid the body by surgical means of as much of the load of infection as lies within our power, and to supplement this local treatment with general measures directed toward the building up of resistance against the remaining inaccessible foci.

[Since above was received for publication, Doctor Wisner, still working under the original grant and association, has carried his work further, as shown in the subjoined brief article.—EDITOR.]

A COMPARATIVE STUDY OF THE GENERAL SYSTEMIC AND DENTAL CONDITIONS OF FOURTEEN DENTAL STUDENTS*

By DR. F. P. WISNER, M. D.

The etiology of periodontoclasia still lies in obscurity. There are those who urge that purely local factors are wholly responsible for the condition. On the other hand are the men who blame systemic factors. There are doubtless many who adhere to a middle course, agreeing to some extent with both extremes.

This work was undertaken in the hope that it might help to solve this problem of the etiology of periodontoclasia. A group of dental students in their junior year were selected as subjects for examination. They were chosen for a number of reasons. In

*Aided by grants from the Carnegie Corporation, the American Dental Association, and the Associated Radiograph Laboratories.

the first place, it was felt that these young men would more willingly co-operate with our efforts if the object of our study was explained to them. In the second place, it was felt desirable to pick young subjects, since in young persons we would be more apt to find pure disease entities, uncomplicated by the many factors which appear during advancing years.† In return for the privilege of studying these patients, we were able to offer them the advantages of a thorough dental and medical examination, along with any appropriate advice and treatment that was deemed merited.

The dental examinations were made by Dr. Clayton Westbay, and were aimed particularly at the detection of early stages of gingivitis.

The medical examinations were made by the writer, and were of the same character as the average patient entering the University of California Hospital receives. Any abnormalities found were then followed up in more detail, and free recourse was made to the opportunity of consulting specialists, especially in the field of rhinolaryngology. Particular attention was paid to the determination of the existence of all foci of infection, almost all the cases being submitted to nose and throat examination and prostatic massages. Blood Wassermans were run on all the subjects, and in each case the urine was submitted to routine examination. It was hoped to obtain a complete blood count on all the cases, but we were unfortunately unable to secure the technical assistance.

In the table are listed the presence and degree, or absence of both caries and periodontoclasia. Both active and healed conditions are noted. From the medical standpoint all abnormalities, however trivial, were recorded, in the hope that some correlation might be possible. Only the abnormal medical findings are indicated.

Age		Caries	Periodontia
J. E. 22		+	+
T. D. 24	Deviated nasal septum	+	+
R. G. 24	Gassed in France	+	+
E. V. 22	Slight emphysema	+	—
F. T. 26	Acne	+	+
N. C. 21	Infected tonsils, thickened nasal septum	—	—
E. H. 29	Baldness, infected tonsils, inguinal hernia	+	+
L. O. 24	Baldness, infected tonsils, deviated nasal septum	—	+
W. B. 26	Asthma, hay-fever, cholecystitis	—	—
W. B. 28	Constipation, chronic appendicitis, cervical lymphadenopathy, pulmonary tuberculosis (?)	+	+
T. D. 33	Moderate baldness, acne, arterial hypotension, herpes progenitalis, infected tonsils	+	+
D. A. 21	Amebic dysentery, cervical lymphadenopathy	+	—
M. S. 31	Moderate baldness, orthostatic albuminuria, lordosis	+	+
B. T. 20	Acne, arterial hypotension, gastric ulcer (?)	+	+

Note: — means free from caries or periodontoclasia, while + means presence of either of these diseases. The number of + signs indicates, roughly, the degree of involvement.

† As will be noted by reference to the table, the ages of the men examined ranged all the way from 20 to 33.

A study of the foregoing table reveals several interesting facts. In the first place, the patients with few medical defects may or may not have dental disease. The one patient in whom no medical defects were noted had a certain degree of both caries and periodontoclasia. Secondly, those patients who had a greater number of medical defects, showed no uniformity in the degree of dental involvement. Studied from the dental standpoint, there seems to be no correlation between caries and medical defects. In regard to periodontoclasia, the only possible significant fact that we can discover is that all but one of the cases showing a moderate or severe degree of periodontoclasia show also some type of dermatological involvement. This was acne in some cases, and partial baldness in others. One of the cases showing only a mild degree of periodontoclasia had a severe case of acne. All the other cases with mild or without periodontoclasia, showed a healthy skin in all respects.

This connection between periodontoclasia and dermatological diseases, while rather striking in this small series of cases, may be a mere coincidence. On the other hand, it may be a matter of great significance. This series of cases is too small for any lengthy deductions to be drawn. We, therefore, recommend to those who are interested in the etiology of peridental disease that they make note of any concomitant dermatological diseases, in order that a large enough series of cases may be recorded.

Pernicious Anemia, Following Ileostomy—The absorption of hemolytic, myelotoxic or neurotoxic material from the contents of the small or large intestine has been regarded as more than a plausible possibility in pernicious anemia because of the prominence of gastro-intestinal symptoms, the atrophy of the gastric and intestinal mucous membrane, and the occasional association of pernicious anemia with intestinal stricture and also parasitic disease. This belief led C. F. Dixon, J. G. Burns and H. Z. Giffin, Rochester, Minn. (Journal A. M. A.), to the decision that, under favorable circumstances, they would recommend temporary elimination of the colon by means of ileostomy in cases of pernicious anemia, with a view to the determination of the influence of colonic absorption on the course of the disease. Ileostomy may be performed with minimal risk, and, should prolonged improvement occur, ileosigmoidostomy could be performed later, not removing the colon, but excluding it as a mucous tube. Six cases are reported. The patients have all shown the temporary improvement that so frequently follows any treatment for pernicious anemia. All have maintained a good appetite, even with the recurrence of anemia. They all lost the icteroid tint, and it did not reappear even in those who later became anemic. Glossitis recurred in only one case when irrigation of the colon became difficult, and this disappeared in a few days after the colon could be flushed. Probably the most striking feature has been the disappearance of paresthesias in all but one case, in which there was very marked improvement. This patient had moderately advanced cord changes and walked with extreme difficulty; even so, the paresthesias have not been troublesome since ileostomy, and the patient is able to walk without assistance. One patient showed slight improvement objectively and on neurologic examination. Two patients of the series died from conditions unrelated to pernicious anemia. Two have done unusually well. Two have had a recurrence of the anemia. One patient, who had very marked manifestations of the disease, has been in excellent condition for eleven months. Ileostomy cannot at present be advocated as a therapeutic measure, but in small groups of cases it is justifiable until its effect is definitely known. The procedure alters certain features of pernicious anemia, and may lead to more important results.

TREATMENT OF POISON OAK DERMATITIS*

By HARRY E. ALDERSON, M. D., San Francisco

INTRODUCTORY NOTE

Poison oak and similar contact skin poisons are exceedingly prevalent seasonally over wide areas of our Western country. Every physician and every citizen is anxious to see improvement in our methods of prevention and treatment.

Doctor Alderson and Doctor Donald have devoted much time to a study of the problem and presented their findings at the recent session of the C. M. A. in Yosemite National Park. Because of the wide interest in poison oak dermatitis, publication of this paper is advanced to meet the seasonal incidence of the disease.—EDITOR.

Discussed by W. G. Donald, Berkeley.

SINCE 1918 I have been using an alcoholic extract of the poison oak plant (*rhus diversiloba*), by intramuscular injection and oral administration in the treatment of active poison oak dermatitis and for immunization against the same. Extensive experience convinces me that this specific therapy is better than any other treatment so far developed.

The idea is not new. For years before the pioneer work recorded by Schamberg, Strickler and myself, our California Indians and Mexicans had been eating leaves of the plant to develop immunity. Old settlers testify that this method, crude as it was, produced good results. Severe inflammation of the upper alimentary tract sometimes occurred, however, and at times the "cure was worse than the disease," for fatalities resulted. This method is still being resorted to by natives.

Before taking up the specific poison oak extract treatment, local therapy will be discussed briefly. The poisonous element in the poison oak and poison ivy plant is toxicodendrol, a non-volatile glucoside. A very minute amount of the poison, well diluted, will produce dermatitis. Treatment of dermatitis venenata always has consisted, first, of attempts at removal, or neutralization, of this poison. This is accomplished to a certain extent by washing thoroughly and repeatedly with soap and alkaline solutions, followed by alcohol. Unless the alcohol is used very thoroughly, however, it may spread the poison. If the entire skin and hair is washed in running water, shortly after exposure, and if every article of wearing apparel worn at the time is thoroughly cleaned, the disease may be prevented or greatly ameliorated. If an aqueous solution of potassium permanganate is applied early it may oxidize the toxicodendrol, thus neutralizing its effects. This method has the objection that skin and clothing are stained. I have had patients who carried soda solution with them when working in the poison oak and who, by frequent bathing of exposed parts with this solution, warded off attacks. This procedure is very inconvenient and forgotten contaminated clothing may later produce the dermatitis.

After the inflammation has developed, alkaline lotions, containing antipruritics and a soothing powder in suspension, are useful in ameliorating the local symptoms. Ordinary calamine lotion is good, but one consisting of one per cent menthol and phenol, and 10 per cent zinc oxid in lime water, is

more generally useful. Epsom salts solutions (hot or cold), and baths, may give a great deal of relief. As dermatitis venenata lesions are often secondarily infected, naturally toxin treatment has no effect on this complication and antiseptic solutions are indicated. Bullae should be opened under aseptic conditions. It has been proved that the contents of the bullae are not irritative, so one need not fear that the serum will spread the disease.

Doctor William Donald, of the University of California infirmary, has developed an interesting method of local treatment. It consists of the local use of liquid air, which gives immediate and lasting relief from the itching, if applied sufficiently. He has also had considerable experience with the specific treatment which I have asked him to present at this meeting in opening the discussion of my paper.

In observing the progress of a case of dermatitis venenata one must bear in mind that persons vary greatly in their resistance to the poison. Tolerance for toxicodendrol varies, too, from time to time, in the individual. Furthermore, persons with seborrhea, or whose skin, for some other reason, is lacking in resistance and in ability to recover promptly from an injury, are apt to be more troublesome than the average patient. They may present an eczematous process (not true dermatitis venenata) that will persist long after the toxicodendrol has been eliminated. Seasonal recurrences of this eczema may be experienced in these areas of lessened resistance and be mistaken for dermatitis venenata.

We have all had patients presenting this eczema and believing that it is a recurrence of the old poison oak dermatitis without there having been exposure to the plant. Skins of this sort heal slowly. The process of keratinization may be unduly prolonged. Then the patient is apt to assume that it is the result of the poison oak toxin still acting, which is not the case. It is well known that the processes of repair in skin that has been severely damaged, as it is in poison oak dermatitis, may be delayed in those whose skins show an inherent tendency to develop eczema after injury. Such individuals make poor industrial risks.

The appearance of new lesions from several days to a week after the onset of the trouble was formerly attributed by some to irritating qualities of serum from the vesicles, and bullae. This has been proven to be wrong. Others thought the occurrence was due to systemic dissemination of the poison causing outbreaks in remote parts. It is now explainable on the basis of the varying penetrability of the skin. In some areas the poison may take from several days to a week to penetrate sufficiently to produce a specific dermatitis. These areas vary in individuals and in the same individual at different times. They result, probably, from lessened concentration of the deposited poison or from actual lessened vulnerability of the skin in said areas.

A great advance in dermatitis venenata therapy was made when Schamberg, in 1917, and Strickler, in 1918, presented the results of their work with the *rhus* toxin in cases of poison ivy dermatitis. In 1920 and 1922, Alderson recorded his experience with this method in the treatment of poison oak dermatitis at the Letterman General Hospital,

*Read at meeting of California State Medical Association, May 1925.

Presidio, San Francisco, at Stanford Medical School, and in private practice. This method has had such extensive use that its value is now generally recognized. Reports of physicians from all over the Pacific Slope prove its efficacy.

Doctor Carl Jones, (Grass Valley, California), writes that he has "treated about seventy-five cases of poison oak dermatitis with the poison oak extract with unusual success. The dermatitis usually cleared after two injections and he rarely had to use a third dose. Two or three treated patients developed recurrences which were promptly relieved by one injection. One instance was cited, that of a wood-chopper who was a frequent sufferer every summer, and was relieved by two treatments. Since then he has not had a single attack although he works and sleeps in the woods all the time. No untoward effects, or bad results, have been experienced at any time.

Doctor M. L. Fernandez, (Pinole, Contra Costa County), has had many cases, as the poison oak plant grows abundantly in his section. His records show that prior to 1921 when only local treatment was administered, the period of disability of employes suffering from poison oak dermatitis averaged about thirty working hours. Since 1921, when the use of poison oak extract was started by him, the period of disability has averaged about twelve working hours. Many cases now show no disability, the disease being relieved promptly by the poison oak extract. He has records of 114 cases.

Doctor U. S. Abbott, of Richmond, California, writes that he has treated at least fifty cases, the severe ones responding most satisfactorily. None had more than three injections, the majority receiving two. There were no untoward reactions and the results were always good.

At the "Round Table Discussion" of the American Dermatological Association meeting in June, 1924, the following discussion of the subject took place:

Doctor Jay F. Schamberg recounted his experiences, stating that he had treated over 100 patients with the toxin by mouth, with only favorable results. For immunizing purposes he uses the same method. When the toxin was used in advance, he failed to see any trouble during the poison ivy season. He believes that this protection does not last longer than a month. In treating a patient during an attack, he increases the dosage more rapidly than when it is used as a prophylactic.

Doctor Udo J. Wile indorsed Doctor Schamberg's statement and said that he had treated a number of patients with the rhus toxin and had never failed to give relief. He gives one dram three times daily.

Doctor Oliver Ormsby stated that he had had the same favorable experiences. He mentioned a patient, who was formerly very sensitive to poison ivy, but who later kept free from trouble by taking the immunizing treatment.

Doctor Howard Morrow reported that he had gathered a lot of poison oak and poison ivy and had used the preparation in many cases. Some of the patients had the worst attacks of dermatitis that they had ever had while taking his preparation. He stated that he was convinced that it had some

value and that he was still using it, but does not believe that it prevents attacks.

Doctor H. N. Cole reported very favorable results, citing several cases. He uses the poison ivy preparation regularly.

Doctor Fred Wise reported "uniformly good results" from the treatment.

Doctors Walter Highman and Jay F. Schamberg expressed the opinion that, possibly, in some cases, the dosage may be too large.

A review of my last hundred cases revealed some interesting facts. The histories are classified under three headings: (1) "favorable," (2) "unfavorable," and (3) "doubtful" or "incomplete." Those classed as "favorable" showed prompt, definite response and recovery following the poison oak toxin treatment. There were eighty such cases (80%).

Eight of the "unfavorable" cases presented conditions and factors which, by a liberal interpretation, might justify placing them in the "doubtful" or "incomplete" class, or in the "favorable" class. For this reason these eight records are given in detail:

No. 8553. A neurotic woman, 32 years old, had poison oak dermatitis of one week's duration. Injected 1 cc. poison oak toxin (concentrated). The patient fainted and it took some time to resuscitate her. One week later she returned, stating that the condition had not been relieved and that the areas were still intensely itchy. A soothing alkaline lotion was also given. The dilute solution was not given by mouth. We feel that another injection along with the specific therapy would have been beneficial.

No. 8693. A young woman always very susceptible to "poison oak," had an extensive acute dermatitis of several days' duration. She was given one injection of 1 cc. of the toxin, and the dilute solution to take internally. A soothing alkaline lotion was also prescribed. Three days later the patient was still in bed, showing no improvement, and we did not hear from her after that. Possibly a second injection would have given better results.

No. 8694. An adult male, always very susceptible to poison oak, had extensive acute areas of dermatitis, due to exposure two days previously. The usual 1 cc. injection of concentrated toxin was given and the dilute solution ordered by mouth and an alkaline lotion for local use. Two days later the condition was more acute and itchy. A second injection was given. The patient did not return.

No. 10481. A young woman had acute dermatitis venenata involving the neck and right forearm following exposure to poison oak one day after being in the country. She was given the dilute toxin solution only, and the usual alkaline lotion for local use. The condition improved slowly, clearing up in about two weeks. We believe that injections would have given much better results.

No. 10969. A young boy had acute dermatitis venenata on his face, arms and legs of four days' duration, appearing three days after exposure. The injection was objected to, so the dilute solution was given by mouth. Within three days improvement was observed, but it was almost a month before he had entirely recovered. Probably injections would have given a good result. He used also a soothing alkaline lotion.

No. 11172. A neurotic young woman with intestinal indigestion, presented acute dermatitis venenata on the arm of four days' standing. She was given the dilute poison oak solution in ascending doses, increasing up to one teaspoonful three times daily. A soothing alkaline lotion also was given. The trouble cleared up in a week but ten days later, following exposure, she had a slight recurrence on the wrists.

No. 11249. A middle-aged man had generalized acute dermatitis venenata of two days' duration. Exposure to poison oak had occurred the day preceding the onset of the eruption. He was given an injection of 1 cc. of the toxin and the dilute solution by mouth, and the next day showed some improvement, but new areas appeared on his arms and legs. A soothing alkaline lotion was ordered. He was given a second injection and never returned, so it is not known whether or not recovery occurred shortly afterwards. We believe that he would have returned if not very much better.

No. 11593. A young woman was exposed to poison oak and the following day presented an acute dermatitis on the arms and face. She was not given an injection, but the dilute solution was prescribed in the usual way and also a soothing alkaline lotion. The next day the dermatitis venenata increased very much in severity, but on the following day much improvement was noted. The patient did not return.

Of the doubtful, or incomplete cases, there were twelve (12%). These included only those patients who were given the toxin treatment and never returned. Certainly most of them would have reported had the condition grown any worse or had not subsided promptly.

Thus, it will be seen, that this low estimate of 80% of successes is a conservative one.

The poison oak toxin is prepared in two strengths, "concentrated" and dilute. It is now made and sold by two recognized local and one eastern pharmaceutical house. These preparations consist of alcoholic solutions of the toxicodendrol which have been tested and standardized.

The present method of specific treatment is as follows:

If the lesions have begun to subside no injection is given, but the dilute ("immunizing solution") is administered internally, starting with ten drops, giving it three times daily, increasing by one drop each dose until twenty drops are reached. Then one teaspoonful is ordered once daily and gradually the dose is increased to two teaspoonfuls daily. In every case an effort to develop immunity is made by having the toxins taken steadily for two or three weeks.

In acute cases an intragluteal injection of 1 cc. of the concentrated poison oak toxin is given at once. This is repeated in twenty-four hours if improvement is not shown. Then the dilute solution is given by mouth as already outlined. Ordinarily one injection is sufficient. Sometimes two, and occasionally, three, are needed. If injections are contraindicated for any reason, one ampoule (1 cc.) of the concentrated poison oak solution is given by mouth and repeated in twelve hours and the dilute solution then given in ascending doses.

For immunization, the dilute solution is prescribed in ascending doses, starting in with ten drops. Patients are advised to start taking the preparation several weeks before going to the country and to continue a week or so after arriving there. As the object of this treatment is to develop increasing tolerance for the poison *steady uninterrupted medication* is essential. A high degree of tolerance and almost complete immunity may be produced.

My own extensive experience with the method and numerous observations reported in letters and otherwise by others proves, in my opinion, that this treatment of poison oak dermatitis is efficacious. Even were it effective in only 50 per cent of the cases it would be worthy of our endorsement and use, but we feel safe in stating that it succeeds in over 80 per cent of our cases, while some of our confreres claim over 90 per cent of good results.

The following references will be useful to those desiring to review the subject further:

Schamberg: Journ. A. M. A. LXVIII, 87, Jan. 13, 1917—Schamberg: J. A. M. A. LXXIII, 1213, Oct. 18, 1919—Strickler: Journal of Cutaneous Diseases, June, 1918—Strickler: "The Toxin Treatment of Dermatitis Venenata," J. A. M. A. LXXVII, Sept. 17, p. 910—Alderson: Notes on Skin Diseases at the Letterman General Hospital, Calif. State Jour. of Med., Oct., 1920—Alderson: Calif. State Jour. of Med., May, 1921—Alderson: Calif. State Jour. of Med., May, 1922—Strickler, A.: Jour. A. M. A. 80:15, 88-90, June 2, 1923—Williams, C. M.: Med. Jour. and Record, June 4, 1924—Williams, C. M. and MacGregor, J. A.: Arch. Derm. and Syph., Vol. 10, p. 515, 517; round table discussion, American Dermatological Ass'n. Arch. Derm. and Syph., Vol. 11, p. 265, Feb., 1925.

490 Post Street.

DISCUSSION

WILLIAM GOODRICKE DONALD, M. D. (Berkeley)—It is with great pleasure that I welcome the opportunity to discuss Doctor Alderson's paper, if only to attest to the value of the use of the extract of the poison oak plant.

This has been in use at the University of California Infirmary at Berkeley since it was first put on the market and the staff are unanimous in the opinion that it has materially shortened the course of the disease.

During the last twenty-two months there have been 638 cases of poison oak dermatitis treated at the university infirmary, seventy-two of which were hospitalized for an average of three and one-half days. The average days treatment of the 638 cases was 3.1; 312 of these were treated once.

Those treated by poison oak extract were the more severe types and were treated on an average of 2.9 days. The cases considered not severe enough for expensive treatment were 151; these being treated by calamine lotion with 1% phenol as a rule. The average duration of treatment here was four days.

Poison oak extract was administered by hypodermic alone 188 times on 141 individuals. It was administered orally alone ten times on ten individuals. Seventy-five hypodermics, combined with sixty-eight oral mixtures, were administered to sixty-eight individuals, a total of 395 separate administrations on 267 individuals. Each individual on an average received 1.4 administrations of either hypodermic or oral mixture (90 c.c.) The period of treatment, I believe, is remarkably short in view of the fact that only the severe cases were given the poison oak extract.

Doctor Alderson mentions the local treatment used at the University of California Infirmary, where for the last year we have used liquid air to freeze the skin area affected by poison oak. In 1899, Doctor A. Campbell White (Medical Record) mentions the fact that liquid air, when applied to skin affected by poison ivy, was remarkable for the advance in its healing within twenty-four hours. This is the only mention I have seen of the use of liquid air for this purpose.

In October, 1923, Mr. Nelson, Mechanician of the Department of Chemistry, University of California, had severe poison oak dermatitis on his forearms. He had been making liquid air for some fifteen years and states that the obvious suggestion of getting together the hot arms

and the cold air was irresistible. He soaked some cotton waste with the liquid air and patted it on his arm. To his surprise and delight the skin where he applied the liquid air immediately ceased to itch and his arms healed rapidly. He tried this on students and others who had the dermatitis with similar results. Word leaked out around the east bay cities and people flocked to him for treatment. The newspapers took up the story and finally it came to the observation of the university infirmary.

After trying it on a number of cases we were convinced of the fact that in selected cases, if applied correctly, the itching would immediately cease and the area treated start to heal. We have used liquid air 516 times on 216 patients. We have used it in combination with poison oak extract 66 times on 48 cases. And we have used it alone 450 times on 230 patients, an average of two times a case. It is significant that the days treatment, during the year we have used it, has been 3.4 days, while during the corresponding period the proceeding year, without liquid air, these treatments were 3.7 days. But more significant is the fact that in 1924-1925, we have had to use poison oak extract on 24% of all cases, whereas in the year previous, we had to use it on 42% of all cases.

Liquid air can be had in the larger cities from any oxygen gas company at a very small cost. The objection is the length of time consumed by the application and its volatility. A liter lasts (without disturbing it) for about forty-eight hours.

We keep liquid air in a small necked open Dewar flask. We apply it usually by wrapping a few thicknesses of gauze around a 3/16 inch diameter cylindrical stick, soaking this in the liquid air and rolling it over the dry surface of the skin, with such speed as to leave about one-half inch frosted skin behind. Too prolonged application will blister badly; too short application gives only temporary relief. The optimum application causes immediate and lasting relief from the itching and healing starts immediately. Large soggy, edematous weepy areas are not so successfully treated in this way and can be better treated by applying a blast of dried air blown through the liquid air to freeze the skin.

We have evolved a routine treatment for the severe cases as follows:

- (a) Liquid air locally for the itching.
- (b) A hypodermic of poison oak extract, intragluteally, and two drams poison oak extract orally immediately and one dram t.i.d until 90 cc.s. have been used. We have very rarely found it necessary to give more than one injection.
- (c) Elixir of sodium bromide, one dram, four times a day. The value of bromide is great and personally I use it on all my cases.
- (d) Calamine lotion with 1 per cent phenol and 1 or 1½ per cent menthol and 15 per cent alcohol for the patient to take with him for local application on new spots not reached by the liquid air.
- (e) Boric ointment to be used when the skin is drying and desquamating.
- (f) Iced mg. sulph. comp. for odema.

Finally let me reiterate my firm conviction from the observation of many more than the above-quoted cases, that poison oak extract as described by Alderson is the best remedy we have at hand to halt the spread of the disease and that the local treatment of vesicles by freezing with liquid air gives immediate and lasting relief when applied correctly.

Casual Mechanism of Diabetes Mellitus—The casual mechanism of diabetes is conceived by A. E. Epstein, New York (Journal A. M. A.), to be as follows: Changes in the permeability of the capillary vessels can result in the passage of trypsin into the blood stream, and its ultimate entry into the liver via the portal circulation. The first effect of the mobilization of trypsin is a glycogenolysis with a consequent hyperglycemia and glycosuria; the second is the neutralization of insulin secreted into the blood stream, thereby causing a deficiency of active insulin. Epstein claims for his theory that it is in closer accord with experimental evidence and clinical phenomena of diabetes mellitus than any heretofore proposed.

OSTEOMYELITIS OF THE SKULL

By HOWARD FLEMING, M. D., San Francisco

A great majority of the cases reported have followed frontal sinus and mastoid infections.

Cases may be classified into two types: So-called primary, spontaneous or hematogenous osteomyelitis, and the secondary or contiguous variety.

Cases of skull involvement following osteomyelitis of the long bones are comparatively rare.

The treatment of osteomyelitis presents a serious problem.

Attempts at plastic repair of bone and scalp defects should be delayed until all evidence of infection has subsided for some time.

Recommended methods of treatment differ widely, and the surgeon cares for the isolated case with little authoritative help.

Discussion by Carl W. Rand, Los Angeles; Edward A. Franklin, Los Angeles; Howard C. Naffziger, San Francisco.

A PERSONAL interest in this subject was stimulated by the care of a patient who has resisted all forms of treatment during the last twelve months. The literature and textbooks lead one to believe that osteomyelitis of the skull is a rare occurrence. Scheinziess, out of a series of 1782 cases of osteomyelitis of the long and flat bones, reports only ten cases involving the skull. The number of cases seen recently suggests that this complication is far more common than supposed. Judging from the literature, osteomyelitis of the skull has been of most interest to the ear, nose, and throat specialist. A great majority of the cases reported have followed frontal sinus and mastoid infections. Osteomyelitis, as a complication of trauma of the skull, has received little attention, and this paper is largely devoted to a consideration of this type.

Pott first described the disease in 1778. He advanced the idea that symptoms were due to a bone contusion and extradural hemorrhage. There was an interval of just one hundred years until Van Launelongue described what we accept as the real etiology and pathology.

Cases may be classified into two types, i. e., the so-called primary, spontaneous or hematogenous osteomyelitis, and the secondary or contiguous variety. Our views regarding the etiology and pathology of infections of the skull are essentially the same as those advanced for osteomyelitis of the long bones. Trauma and local injury produce a period of lowered resistance, preparing an ideal field for bacterial invasion.

Previous infections play an important part, and the staphylococcus is the principal offender. A careful history will in a great majority of cases reveal previous infections that may be considered predisposing or exciting factors. Furunculosis, perinephritic abscess and infected wounds often leave residual foci ready to invade devitalized tissues. In a small number of cases the other cocci, as well as typhoid and influenza, have been reported as the infective organism.

Cases of skull involvement following osteomyelitis of the long bones are comparatively rare. Those cases reported in which this has occurred usually had multiple long bone infections prior to that of the skull. Metastatic infections of other bones following osteomyelitis of the skull is still less frequent.

The frontal bone is most often the seat of infection. The order of incidence of infection in the other bones is temporal, parietal and occipital. The contiguous sinuses and middle ear will explain the order of frequency. Fortunately the spread of infection is most often toward the vertex rather than the base. In children the periosteal partitions may localize the infection to one bone. These barriers are not marked in adults, and the disease may spread rapidly from one bone to another.

Those cases following sinus infection the otolaryngologists have classified as spontaneous and post-operative. In both an infected sinus is the primary cause. Osteomyelitis following operations on a sinus is said to have a mortality of 100 per cent, while that appearing without operative trauma has a mortality of only 60 per cent. No satisfactory explanation of this discrepancy is available, although most authorities are agreed as to the figures.

The pathology is essentially the same in all types. Inflammatory changes appear in the scalp. There is oedema and swelling, but frequently no redness. More often the doughy tumor mass is pale and anemic, suggesting a cold abscess. These tumor masses may be multiple and usually overlies necrotic bone. The origin of the infection is in the diploe. The diploic structures melt away and are replaced by granulation tissue. Frequently, the blood vessels are infected and thrombosed far beyond the visible extent of pathology. The inner and outer tables become anemic and lose their characteristic appearance. The normal color is replaced by a glistening pallor and the eburnated bone breaks up into large and small sequestrae. Fortunately, the pericranium is less resistant than the dura and subgaleal abscesses appear. The dura usually shows a typical pachymeningitis externa. The microscopic picture is that of a purulent rarefying osteitis.

Symptoms are usually not severe until the onset of complications. One is frequently amazed at operation to see the severity and extent of the pathology in patients with most insignificant symptoms. In a small percentage of cases the course is acute, with the characteristic picture of osteomyelitis elsewhere. More often, and especially in those cases following trauma, the symptoms are mild and the course exceedingly long. Many cases persist from one to two years, and are operated on ten to twenty times.

Osteomyelitis of the skull in babies following birth trauma, is illustrated by three cases in this small series. All were essentially the same, and a description of one will be sufficient.

The patient was the first child of young parents. The pregnancy was normal, but the labor difficult. Following delivery by forceps, large oedematous swellings were noted over both parietal regions and the left side of the neck. It was noted that the left side of the face did not move as well as the right, the eye remaining open, and the mouth drooping. The left eye slit and pupil was smaller than the right. No weakness of left hand and leg was noted. The swelling in the right parietal region did not subside, and at the age of one month became reddened and inflamed. On two occasions yellow greenish pus was evacuated.

The baby was nine weeks old at the time of the examination. The swelling had subsided somewhat. There was a left facial paralysis of the peripheral type; also a left endophthalmus and inequality of pupils, the right being larger than the left. All nerve findings were thought to be due to the peripheral seventh and sympathetic nerves. No evidence of central irritation or damage was found. X-rays revealed a decalcified area the size of a dime in the right parietal bone.

Operation uncovered a small area of osteomyelitis and pachymeningitis externa. Cultures taken of the purulent matter were reported positive for staphylococcus aureus. The wound continued to drain for some time, but eventually healed.

It is very possible that many of the so-called infected hematomas seen in new-born babies are in reality cases of low-grade osteomyelitis. Frequently, the virulence of the infecting organism is low and the resistance high, and no doubt spontaneous healing occasionally takes place.

The second case is characteristic of a series of three. A man 45 years old was injured by having his head crushed in a cement block press. The vault was so badly dislocated from the base that the emergency surgeon did nothing more than reshape the head and put the skull cap in place. The patient bled profusely from the nose and both ears for sixteen hours. To everyone's surprise he made an uneventful recovery. Six months after the accident the following findings were noted. Marked asymmetry of the vault; anosmia; right-sided primary optic atrophy, and hypesthesia of the left side of the face. During his convalescence the patient had erysipelas and acute suppurative arthritis of the ankle, which necessitated drainage. Two months after this complication an abscess and sinus appeared over the skull fracture line, which had been well fibrosed. Operation revealed an osteomyelitis and pachymeningitis. The fistula was permanently closed in about six weeks.

This case offers many points of interest. The question arises whether a latent infection in the skull injury was responsible for the arthritis, or the arthritis of the ankle was the etiological factor causing the osteomyelitis of the skull. It is also possible that there was no relation between the two or that both were due in turn to some third focus of infection. The facts would rather suggest that the skull injury produced an area of lowered resistance susceptible to the invading organism present during the acute suppurative arthritis.

The third case is the one that prompted a review of the literature and report of these cases. Injured over one year ago, the patient is still unhealed. A man of 43 was struck in the right parieto-frontal region by the handle of a derrick wheel. He suffered a long scalp wound and a comminuted fracture of the skull. The wound was sutured to control bleeding. About ten days after injury the wound began to discharge pus. At the time of our first examination he had a widely separated scalp wound. The bone fragments appeared pale and glistening. Synchronous with each pulsation a yellow purulent material exuded from the fissures.

X-rays revealed marked fragmentation of right parietal region and fracture lines extending to the base.

At operation the fragments of bone were found to be large sequestra of the outer table only. These were floating in pus. All loose fragments were removed and the margins of the periphery rongeured away. All diseased-appearing bone was removed and healthy dura exposed on all sides. The wound was sutured in part, leaving ample drainage.

Since the original operation, seven attempts have been made, either to remove the infected bone or close the defect in the scalp. Nearly all the measures recommended as effective in the treatment of osteomyelitis have been tried, without permanent success. So much skull and scalp have been removed and lost by repeated operations that the defect is alarming. Bone has been removed from the midline on the vertex to the zygomatic arch, and the longitudinal dimension of the defect is larger. Recent x-rays suggest an extension of the osteomyelitis to the left side.

The last two operations were attempted with the conviction that only the most radical measures would effect a cure. All suspicious-appearing bone was rongeured away and the rough edges smoothed down with a chisel. The use of the chisel was the result of a suggestion by Doctor Edward Bull. It was thought that devitalized bone on the margin of the defect was produced by the crushing effect of the rongeurs, and increased the danger of spreading the infection. With a sharp gouge or chisel, the rough edges may be eliminated without traumatizing the residual bone. In dissecting the galea every precaution was taken to avoid injury to the pericranium. However, in spite of these precautions, signs of further infection appeared, necessitating opening the wound widely.

Prior to the injury and bone infection, the patient states he was singularly free from all skin infections. During the last year he has had numerous boils and furuncles. It would seem that the patient had lost all resistance to the staphylococcus organism.

The last case is one of osteomyelitis following operation on the frontal sinuses. A middle-aged man had radical external operations on both frontal sinuses. Progressive symptoms suggested intracranial complications. The frontal bone was found to be involved in an infectious process extending from the sinuses. A large cerebral abscess was evacuated from the frontal lobe. The fatal outcome adds another case to substantiate the 100 per cent mortality figures for such cases.

The diagnosis and treatment of bone injury and infection is of primary interest only to the surgeon. The complications of osteomyelitis of the skull often present interesting and difficult neurological problems. These complications, in the order of frequency, are extradural abscess, pachymeningitis, leptomeningitis, cerebral abscess—subdural abscess and sinus thrombosis. The infection travels by direct extension through contiguous surfaces or along the route of the cranial nerve sheaths. In some cases the large sinuses are infected by way of diploic and emissary veins.

If the cerebral pathology occurs in the so-called silent areas, repeated neurological examinations may fail to localize the site. Often an abscess may obtain considerable size and produce signs of marked intracranial pressure without producing signs of localizing value. In cases where cerebral abscess occurs as a late complication of osteomyelitis, the abscess is usually in the immediate vicinity or underlying the diseased bone. In the more virulent cases the abscess may be found at some distance. No doubt those cases are due to metastatic or embolic causes rather than direct extension.

The treatment of osteomyelitis presents a serious problem. The proper care of head injuries, especially compound fractures, will prevent a large number of cases. Every case should be considered potentially if not actually infected. Cases seen in the first twenty-four hours may be debrided and closed. Those seen at a later time should be left wide open.

Any scalp wound that fails to heal promptly should lead one to suspect an underlying osteomyelitis. Frequently, x-rays do not reveal evidence of osteomyelitis until the process is well advanced.

Local anesthesia is well adapted for use in these cases if the infiltration can be made at some distance from the infected area. The bleeding is minimized, making exposure and inspection easy. Wound edges and sinuses should be excised. All loose fragments should be removed and, in addition, a margin of what appears to be healthy bone. The appearance of the dura is often the best indication of the extent of the pathology. Care must be taken to avoid trauma to the dura. In those cases where intradural complications are suspected, a careful inspection and palpation of the dura will often reveal evidence of a stalk or sinus leading to the underlying pathology. In such cases the abscess cavity may be drained without gross infection of the surrounding tissues.

Frequently, the surgeon is loathe to excise as much bone as experience with such conditions would dictate. Unless one makes it the rule to remove a wide margin of supposedly healthy bone, repeated operations and poor results will occur. Care must be taken not to disturb the pericranium beyond the line of excision. The rough margins following the use of rongeurs can be smoothed off with a chisel with slight trauma.

Attempts at plastic repair of bone and scalp defects should be delayed until all evidence of infection has subsided for some time. Frequently, infection remains dormant when the tissues are fully exposed, only to flare up when closure is attempted. Too hasty or ill-advised attempts at closure sacrifice covering tissues, and adhesions between galea and pericranium interfere with later efforts.

Several other methods of therapy may be used as adjuncts to surgery. Local disinfectants, such as mercurochrome, gentian violet, alcohol, and iodine have proved useful. Autogenous vaccines and intravenous dye therapy have given good results as accessory agents. German authorities highly recommend the use of various artificial lights.

In conclusion, let me urge that more cases of osteomyelitis of the skull be reported. It would ap-

pear that the prevalence and seriousness of this complication has not been properly emphasized. Recommended methods of treatment differ widely, and the surgeon cares for the isolated case with little authoritative help.

380 Post Street.

DISCUSSION

DR. CARL W. RAND (Pacific Mutual Building, Los Angeles)—I did not know that osteomyelitis of the skull was so rare. The few cases which I have seen have been secondary to frontal sinusitis or mastoiditis, or resulting from compound, comminuted skull fracture. One instance was that of a new-born child with infection following instrumental delivery which spread under the pericranium. This yielded to sunlight treatment. When he was seen five years later, a definite thickening of the skull in this region was felt. I would emphasize greater care in the early treatment of cases of compound skull fracture. If the tissues are very carefully handled and thoroughly cleansed, not infrequently the loose fragments of bone can be saved without resulting osteomyelitis. Once this pathology exists, however, general upbuilding of the patient is an important adjunct to surgical interference.

EDWARD A. FRANKLIN, M.D. (Bank of Italy Building, Los Angeles)—Closer co-operation between internist and surgeon is clearly indicated in osteomyelitis. One of Doctor Fleming's cases in which healing has resisted frequent and extensive surgical procedures owing to lowered resistance of infection, emphasizes this fact.

Haemic and metabolic studies are of prime importance in discovering associated complications engendered by enforced and unhealthful change of patient's environment during prolonged hospitalization. Special hygienic and dietetic measures suited to the individual are of prime importance as an adjuvant to surgical treatment.

HOWARD C. NAFFZIGER, M.D. (380 Post Street, San Francisco)—In the treatment of osteomyelitis of the skull one is often impressed by the tendency of the infection to spread for long distances along the diploic channels. These must be followed to their terminations. With soft dural granulations and purulent collections between dura and bone, extensive removal of the full thickness of bone seems imperative. When, however, there is only bare, porous appearing outer table, with perhaps some diploic infection, free removal of the outer table or multiple perforations of the outer table alone as suggested some years ago by Dr. Charles Mayo serves to permit vascularization of the area and permit rapid granulations with separation of the outer table. Such a plan leaves a bony covering over the dura and epithelization is rapid. In such cases large bone defects can be avoided.

In one instance I have seen a subgaleal abscess occur in the course of a septicaemia. When this patient was first examined he presented also a hemiplegia of the opposite side of the body and his optic discs were choked. Incision of the scalp abscess revealed denuded, porous-appearing bone. An opening through this bone revealed no pus in the diploe, but the dura was soft, thickened and blotter-like. Puncture of this revealed a huge intra-cerebral abscess. In a second patient a scalp abscess was similarly associated with an intra-cerebral abscess with but little gross change in the intervening bone. Scalp abscesses associated with signs of intra-cranial involvement should cause us to keep such collar-button collections in mind.

Another experience with a staphylococcus infection complicating a luetic osteomyelitis makes me feel that this combination likewise should not be forgotten. In these, sufficient perforations in the bone to give adequate drainage for the acute infection should be followed by intensive anti-syphilitic treatment before any more radical operative treatment is instituted.

DOCTOR FLEMING (closing)—I heartily agree with Doctor Rand and Doctor Franklin that all medical measures that will be helpful and increase the patient's general resistance must be used in conjunction with surgery. However, osteomyelitis of the skull requires the same surgical drainage and prompt measures given bone infections elsewhere.

It may be of interest to note that the third case reported in the paper is now entirely healed. A plastic operation done a short time after the writing of the paper covered the defect with scalp and galea except for a small area. Scar tissue eventually covered the exposed dura. There is no sign of inflammation and we are hopeful that the lesion is permanently healed. The patient is back at work, but occasionally has attacks of weakness in the left arm and hand. At some future date another attempt to cover the dura entirely with normal scalp will be made.

THE ARTIFICIAL FEEDING OF NEWLY BORN INFANTS

By WILLIAM M. HAPP, M.D., Los Angeles

The birth-weight loss can be prevented by the supplementary feeding of a sufficiently concentrated food.

The procedure is not indicated in full-term babies of seven pounds or those nursing normal mothers.

The indications in which the prevention of the birth-weight loss is desirable are chiefly prematurity, small infants, post-partum illness of the mother, and twins. In these instances serious subsequent consequences in the infant may be avoided.

The digestive tract of the newly born infant can tolerate a fairly concentrated food, the advantages of which are outlined.

DISCUSSION by Harold K. Faber, San Francisco; Herbert M. Coulter, Pasadena; J. C. Cummings, Carpinteria; Victor E. Stork, Los Angeles.

NEWLY born infants, as is well known, lose weight after birth, and recover the loss after eight to ten days, sometimes longer. This phenomenon has been called the "physiological loss of weight in the newly born,"—physiological because it occurs in normal infants, nursing normal mothers. Physicians have attempted to explain the loss as a natural process, and have assumed that nature did not intend that the infant take food just after its birth and so supplied it for several days with colostrum, a fluid of relatively low nutritive value. Breast milk, in most cases, becomes ample only after the first week. Recently, the physiological nature of this initial loss has been questioned, and many workers now regard the loss as due to a state of semi-starvation, which is not only unnecessary, but in certain instances becomes of serious moment, especially in weak infants or in those prematurely born.

Figures from various sources show that the loss in weight during the first few days of life in normal breast-fed babies amounts to 8 to 10 per cent of the body weight. This loss is greater in first-born than in subsequent babies. (See Chart I.)

Coincident with the loss in weight there is an elevation in temperature, usually called dehydration or inanition fever, which is present in proportion to the loss in body weight. Practically all normal babies losing as much as 10 per cent of their body weight have elevations in temperature, if no means be taken for its prevention. (Chart I.)

CHART I

(From Von Reuss)

The upper figures give the average birth weight loss for various weights. The lower figures show the increasing loss in weight.

AVERAGE BIRTH WEIGHT LOSS PER CENT			
Weight		(Hery and Pies)	
Gms.	Lbs.	Primiparae Per cent	Multiparae Per cent
2000-2500	4.4- 5.5	9.3-11.2	7.6-8.2
2510-3000	5.5- 8.6	7.1- 8.3	6.3-6.2
3010-3500	6.6- 7.7	7.4- 9.0	5.6-8.1
3510-4000	7.7- 8.8	6.0- 9.7	6.1-8.7
4010-4500	8.8-10.0	6.6- 8.4	5.9-8.3
Average		9.3	8.0

AVERAGE FOR INANITION FEVER	
Birth weight Loss—Gms.	Fever Per cent
200	0
200-300	5.4
300-500	26.3
500-720	55.5

Let us consider briefly the factors behind these two phenomena. There is a theoretical loss in the first twenty-four hours after birth, due to the loss from the body of the following: meconium; vernix, caseosa; urine, drying. This amounts, in the average seven and one-half pound baby, to about 5 ounces. This loss only can be interpreted as physiological. Further loss represents the negative difference between the actual minimum requirement of the baby and the amount of the food ingested.

According to the studies of Heubner, Benedict and Talbot, and others, the basal requirement during the first ten days of life is 40 calories per kilogram, the maintenance 65, and the optimum about 100 calories per kilogram.

In addition to meeting its basal metabolism, which is 45 to 55 calories per kilogram, the newly born infant must receive, to remain in equilibrium and to gain in weight, additional food to account for growth, 10 to 20 calories per kilogram, digestion 4 to 6, muscular activity 20 to 30, and waste 8 to 12, making a total of 87 to 123 calories per kilogram required (Faber). (See Chart II.)

Taking the figures of von Reuss for the actual intake of breast-fed babies, determined by weighing before and after nursing, we find that the infant receives during the first twenty-four hours practically no food, during the second, about 30 calories per kilogram, etc. Not until the fourth day does he receive his maintenance requirement of 65, and at no time during the first ten days does he receive his optimum.

The result is that, during the first four days, there is a loss in weight beyond the purely physiological. The curves given by Faber (dotted line, Chart II) show even lower intake than those of von Reuss, and in his studies the basal requirement is not reached until the sixth day, and at no time during the first ten days was the maintenance requirement met.

In addition to deficient food, the baby receives during the first few days deficient fluid, i. e., water. It has been shown recently by Schick, Bakwin, Bachmann, and others that the giving of fluid supplementary

to the breast will reduce but not prevent the birth weight loss, but that it will prevent the initial fever. The fever is, therefore, interpreted as a dehydration fever, preventable both by giving of additional food and additional fluid.

Fishberg cites interesting incidents to show that, for a long time, it has been the practice among the laity to prevent this initial loss by giving of supplementary food.

He states that Soranus, a Roman physician of the second century, cited the giving of honey to newly born infants, and, according to Turner, the natives of the Fiji Islands gave chewed-up cocoanut or sugar-cane mixture, and in ancient India infants after birth received honey, butter, and various plants containing sugar. The practice of giving sugar solutions was common in Europe. Nicholas Culpepper, in his Directory for Midwives, 1693, advises the giving of honey to the newly born.

Studies have shown, furthermore, that not only can the digestive tract of the newly born tolerate food immediately after birth, but that a variety of foods, such as sugar solutions, half-milk plus sugar, whole milk plus sugar, human milk alone or with sugar, given to newly born infants supplementary to the breast, prevent the initial loss of weight and the fever, and cause no digestive disturbances in the babies (Schick).

Animals nurse immediately after birth from fairly full udders, and the initial weight loss is insignificant as compared with human beings (Kehrer, quoted by Backman). The modern human mother fails to supply her infant with food, but this is not due to the failure of the infant to digest it. The digestive tract seems to be mature at birth.

On the obstetrical service at the Los Angeles General Hospital, I attempted to prevent the birth weight loss in a series of infants. These were taken at random by the nurse, and were per routine put to breast eight hours after delivery and nursed every four hours, following which they were given a bottle containing: Skim milk, 20 ounces; dextri maltose No. 1, 2 ounces. In other words, 10 per cent carbohydrate added to skim milk.

The caloric value of this mixture is approximately 24 calories per ounce, with the following percentages: Fat, 0.5; protein, 3.5; carbohydrate, 14.5; salts, 0.75.

The infants were offered 2 ounces, and the amount taken recorded. The mixture was chosen as one containing a high caloric value per unit of volume, the calories being made up chiefly by carbohydrate, as it is well known that infants tolerate relatively high percentage of carbohydrate, provided the fat be kept low. Taking the figures of von Reuss for the average breast intake, I computed, from the series of fifty infants who received supplementary feeding, the caloric equivalent. The results are shown in Chart III.

The average amounts taken are charted in calories. The upper weight curve is the average weight curve of the fifty infants. It shows that the average birth weight was seven and one-half pounds, the

* In this paper the term "supplementary" is used as synonymous with "complementary"; that is, a feeding given after the breast-feeding.

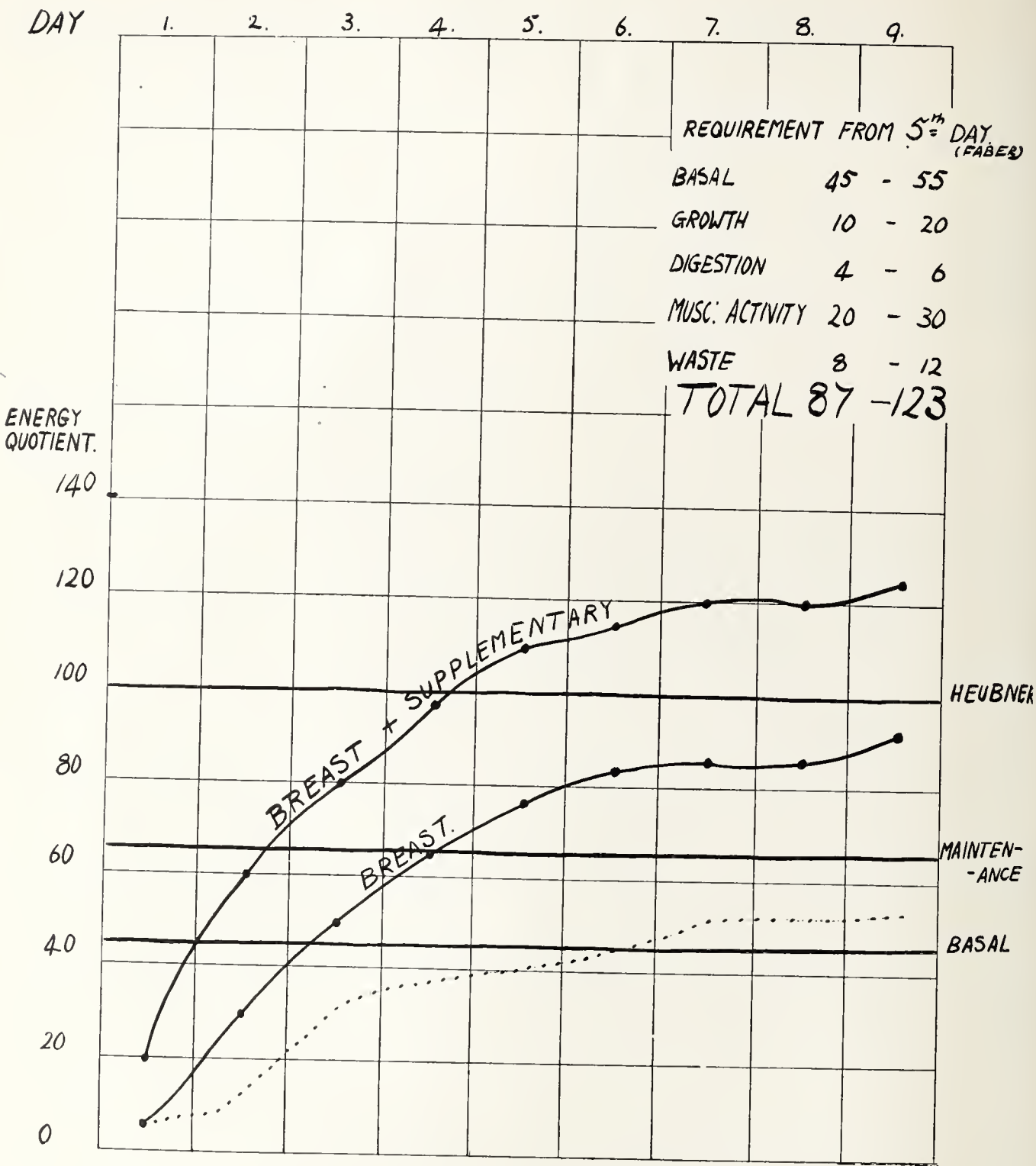


CHART II
Shows the requirement for minimum maintenance and optimum in the newly born. The upper curve shows the daily energy quotient for the babies on supplementary feeding in our series. The middle represents the E. Q. for breast-fed babies from von Reuss' figures. The lower dotted curve shows the E. Q. for breast-fed babies in Faber's series.

average loss in the first twenty-four hours 5 ounces, and following this no further loss, but a steady gain, reaching the birth weight on the fifth day, and at discharge at the tenth day averaging one-half pound over birth weight.

The explanation of this is found in Chart II. The basal requirement is met at the end of twenty-four hours, the maintenance on the second day, and the optimum on the fourth day. From the fourth day these babies received their requirement as calculated by Faber (87 to 123 calories per kilogram).

In none of these fifty babies was there any eleva-

tion of temperature, although elevations were common in the control babies.

This series and those of the above-mentioned authors shows conclusively that the birth weight loss can be prevented without harm to the baby.

I wish to emphasize that I do not recommend this procedure as a routine. In normal babies, with birth weights over seven pounds nursing healthy mothers, it is unnecessary. In the following instances, however, the indications for supplementing the feeding of the newly born baby are fairly definite.

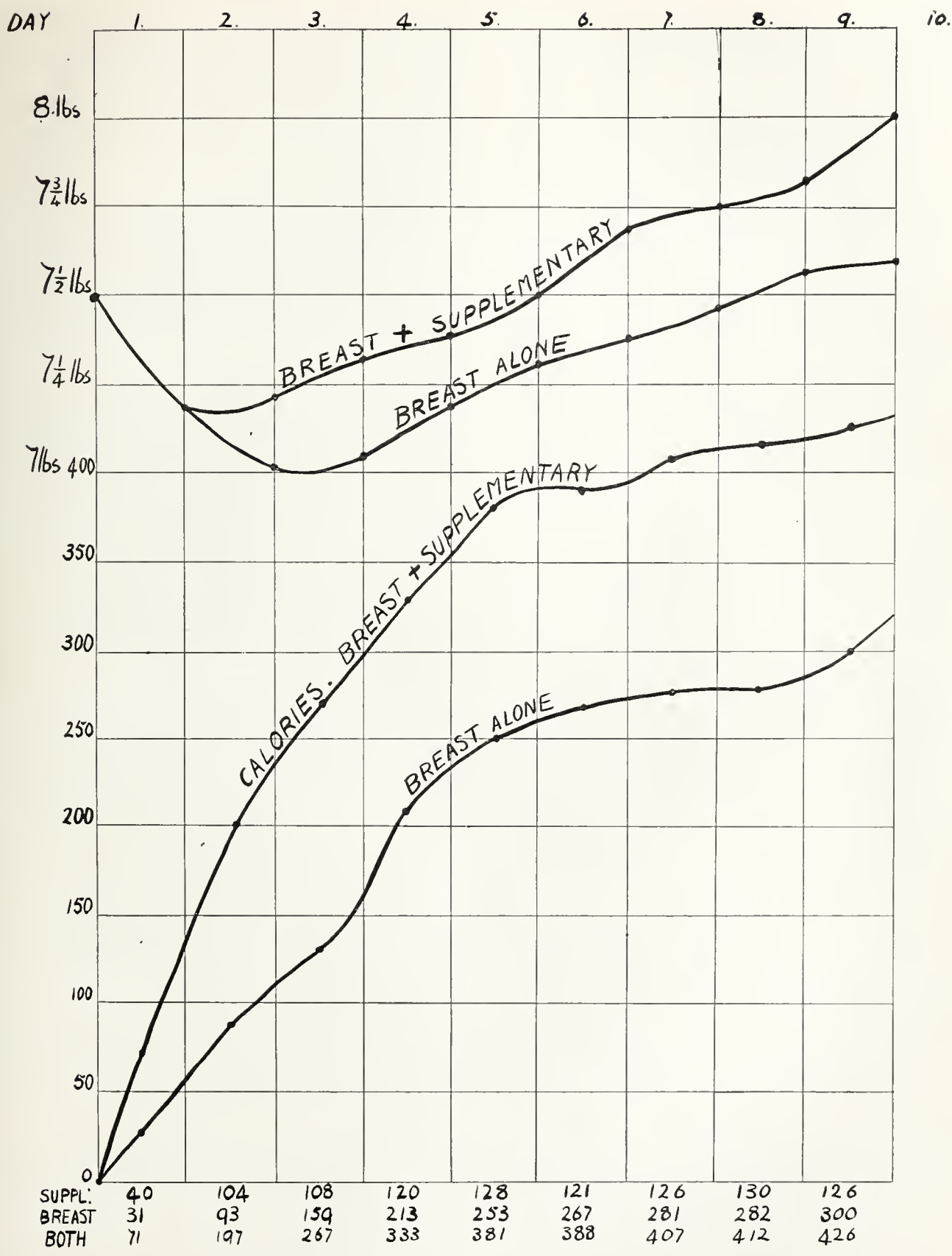


CHART III

The upper curves represent the daily weight curves in the babies of our series, receiving supplementary feeding, and of von Reuss' average for breast-fed babies and the figures for total caloric intake below. The total caloric intake is recorded in the lower curves.

1. All babies with birth weight under six pounds.

2. All premature infants.

3. Babies whose mothers are ill, as after prolonged, exhaustive labor, operative delivery, Cesarean section, puerperal infection, eclampsia and nephritis, post-partum operation.

4. Twins.
- It must be remembered that, granting the indica-

tions for supplementing the breast-feeding, it is highly advisable to supplement with a food sufficiently concentrated to give an adequate number of calories in the smallest bulk. Babies will take, during the first twenty-four hours, only one-half to 1 ounce supplementary, and from the second to fourth day 1 to 2 ounces.

The older methods of feeding very weak mixtures,

such as half or one-third milk diluted with water, fails to give an adequate caloric intake, even though 2 ounces be taken. There is no harm in giving whole milk with some or all of the fat removed and with the addition of 5 to 10 per cent carbohydrate. Lactic acid may be added to the formula, although this was not done in the above series. There is good reason for believing that whole milk undiluted will be better tolerated if lactic acid be added.

Breast milk can be used as supplementary feeding, if sufficient amounts be obtainable, but it is advisable to add 5 to 10 per cent carbohydrate to further increase its caloric value.

The above principles of concentrated feeding, so popularized in recent years by Piquet and by Finklestein, are of inestimable value, not only in the feeding of the newly born supplementary to the breast, but in the artificial feeding of newly born infants whose mothers die at birth, and of premature infants. I have fed newly born babies deprived of mother's milk 2 per cent undiluted lactic acid milk plus sugar from birth, with steady gain in weight and without digestive disturbance.

It is extremely desirable to prevent the birth-weight loss in premature babies. The technical difficulties in feeding such babies are very great, and the initial loss may be sufficient to cause the death of the infant. As the caloric requirement is high (140-200 calories per kilogram) and the amount which the premature will take at a feeding is small, the indications for concentrated feedings are obvious. I have used breast milk with the addition of 5 to 10 per cent dextri maltose, and when this was not available either a two-thirds whole milk mixture or whole lactic acid milk, to which 5 to 10 per cent dextri maltose or karo syrup was added. In this way the optimum requirement can be supplied very early, and good gains in weight obtained.

CONCLUSIONS

1. The birth-weight loss can be prevented by the supplementary feeding of a sufficiently concentrated food.
2. This can be accomplished without harm to the baby.
3. The procedure is not indicated in full-term babies of seven pounds or over nursing normal mothers.
4. The indications in which the prevention of the birth-weight loss is desirable are chiefly prematurity, small infants, post-partum illness of the mother, and twins. In these instances serious subsequent consequences in the infant may be avoided.
5. The digestive tract of the newly born infant can tolerate a fairly concentrated food, the advantages of which are outlined.

523 West Sixth Street.

DISCUSSION

HAROLD K. FABER, M. D. (Stanford University Medical School, San Francisco)—It is well to point out again, as Dr. Happ has done, the fact that Nature's provision for the nutrition of the first two or three days of life of the human species is defective, and may lead—in the case particularly of premature or weakly infants—to unfavorable or even calamitous consequences if artificial assistance is not given. There has been too much superstition

of the perfection of Nature's arrangements, with a rather widespread belief in the turpitude of interference with them when other foods than breast milk are given to the new-born. The young of nearly all mammals take other food than homologous breast milk very soon after birth.

It is, of course, not necessary to give supplemental feeding to well-nourished, large infants until there is definite indication for it. Happ has wisely limited his indications to those infants whose store of body fat and water is presumptively small at birth.

Of much interest is Happ's statement that new-born infants in his service suffered no digestive disturbance from undiluted (though skimmed) cow's milk. This is certainly a sign of vigorous digestive function, since the interference with enzymatic activity caused by the buffer substances in cow's milk is considerable. The use of acid to lessen the buffer effect is now generally regarded as desirable, when undiluted milk is employed. This appears to be Happ's present practice.

HERBERT M. COULTER, M. D. (1949 Huntington Drive, Pasadena, Calif.)—It was my privilege to have been in Europe about the same time as was Dr. Happ and to have observed the work of Finklestein, Shick, and Pirquet regarding the supplementary feeding of the new-born infant. Pirquet had the same idea in mind as Happ, when he devised the *decinem siqua* as a means of determining the amount of food that an infant should have. Using the sitting height instead of the weight or age as an index, he found that it required, in terms of Nem., three-tenths of the sitting height squared for metabolism alone with an addition of from one-tenth for growth, and a further addition of from one-tenth to three-tenths for exercise. This figures out about 45 calories per kilogram for metabolism, 60 calories for metabolism plus growth, and from 75 to 105 calories for metabolism growth and exercise, varying according to the degree of exercise indulged in by the infant.

I quite agree with Happ, when he says that the new-born infant tolerates a relatively high percentage of carbohydrate when the fat content is kept low in a concentrated formula. During my service at the Los Angeles General Hospital, following the report of Meyer of Chicago, I used sweetened condensed milk, with the result that, out of a series of fifty babies fed on a formula containing about 22 calories per ounce, six of them showed no loss of birth weight and began to gain after seventy-two hours. At present, under the service of Metzner, honey is being tried out as a substitute for sugar. Shick found, in Vienna, that breast milk, augmented by the addition of cane sugar to the extent of increasing its caloric content twice or even thrice its original value, was well tolerated by the new-born and did much to diminish the length of time before the infant regained its birth weight.

There can be no doubt that breast milk is the best food for a new-born infant, and, by robbing Peter to pay Paul, and with the help of an Abt electric breast pump, we are able at the Los Angeles General Hospital to furnish enough breast milk for those groups of babies who require supplementary artificial feeding as set down by Happ.

As for a carbohydrate to further concentrate the breast milk, it would seem, from the foregoing data, that there are many, such as corn syrup, cane sugar, honey, and sweetened, condensed milk, which are cheap and may be purchased at the grocery store, in place of the drug store.

J. C. CUMMINGS, M. D. (Coast Highway, Carpinteria, Calif.)—The supplemental feeding of new-born babies is a very important factor in their welfare. Dr. Happ has weighed the problem in a most delicate form, and I wish to compliment him on the earnest, interesting, and instructive paper.

Regarding loss of weight in the new-born, I think there are several angles from which we might survey the field: First. Shock from unnecessary handling and sudden change of room temperature. Second. Dehydration. Third. Insufficient food.

During a visit to the obstetrical department of the Columbia University last year, I was interested in observing their delivery routine and follow-up treatment of the new-born. As a preventive to shock from sudden exposure to room temperature, they were using an electric-heated tent about four feet square which was arranged snugly over the mother's hips during delivery, and the

baby was washed and dressed before it was removed from the tent, which had an average temperature of 100 degrees F.

Supplemental feeding was started four hours following delivery, and all unnecessary handling of baby was eliminated, and all charts revealed an increase of weight during the first week.

During the past two years I have been feeding new-born babies 60 calories per kilogram of skimmed milk and dextro-maltose, four hours following delivery, and feel very much encouraged by this routine.

I am satisfied that the supplemental feeding that has been outlined by Happ is the proper procedure in retaining and increasing the weight curve in new-born babies.

VICTOR E. STORK, M. D. (Medical Office Building, Los Angeles)—The data, logic, and conclusions presented by Dr. Happ in this paper seemed to me perfectly sane, and in general they are in line with our present practice in infant-feeding.

One point, I believe, should have special emphasis, and at the same time slight modification. The point to be emphasized is that it is neither necessary nor desirable to prevent the initial loss in normal, full-term, well-nourished babies, by giving supplementary food. I know of no evidence to show that this type of baby suffers any ill after-effects from this initial loss in weight.

When one gives any sort of supplementary food to a new-born infant, the breast milk supply of that infant is put in jeopardy. It will be more difficult in that case to establish and maintain an adequate breast milk supply. The weaning process has been started. This is the real reason for avoiding supplementary feeding when it is possible to do so. This effect of extra food in diminishing the breast milk supply constitutes the danger which Happ has himself pointed out in another article on "The Feeding of New Born Infants," in the November number of *Better Health*.

When it is realized that the smaller, more feeble, or premature infants, constitute the very group which should, above all, receive an adequate amount of breast milk, it becomes obvious that considerable discrimination is necessary in choosing the infants who appear to need supplementary feeding.

Dr. Happ does not say whether he is usually able to discontinue the supplementary feedings after one or two weeks and establish an adequate breast milk supply. There is usually considerable difficulty in getting away from the bottle once it is started. So many small babies, twins, and even prematures, accept their initial loss in weight and do well later on exclusive breast-feeding, that I should be inclined to make the indications for giving extra food a little more limited.

When it does seem necessary, however, to prevent trouble by giving extra food, the method of doing this, outlined by Happ, seems entirely desirable.

The Effect of Ultraviolet Rays—The effect of ultraviolet rays on varying concentrations of the follicular hormone has been determined by Edgar Allen and M. M. Ellis, Columbia, Mo. (*Journal A. M. A.*). It was found that exposure to ultraviolet rays in air destroys both the ovarian hormone and the placental hormone, and further, that the action is on the hormones rather than on the oil used as a solvent. The positive test in a 1:3 dilution of the irradiated extract in the second series and the two indeterminate tests of irradiated residues in the third series indicate that the destruction of these hormones is gradual rather than sudden. This destruction of these hormones by the ultraviolet rays may possibly be associated with some oxidative change, as it is well known that ultraviolet rays promote the oxidation of some substances and also the molecular oxygen is partly transformed by ultraviolet rays into ozone.

Cholecystitis and Cholelithiasis in Young Children—Three cases of gallbladder disease in children under 10 years of age are reported by C. C. Snyder, Pasadena, Calif. (*Journal A. M. A.*). The children were aged 4, 5½ and 9½ years, respectively. The patients were operated on, and in each case drainage was followed by uneventful recovery. The preoperative diagnosis in these three cases was acute appendicitis.

THE PROSTATE AND ITS INFLUENCE ON LOW-BACK PAIN

By LIONEL P. PLAYER, M. D., *San Francisco*
(From the Department of Urology, University of California)

Until recently writers considered pain in the back due entirely to static conditions, muscle or ligament strain, and nerve involvement, excluding arthritis patients.

Eradicating the focal infection of the prostate and seminal vesicles, as well as the tonsils, teeth, adenoids, appendix, etc., will cure cases of myalgia, myositis, synovitis, and neuritis.

Orthopedic surgeons find in backache associated with prostatitis, x-ray lesions of the pelvic joints in an average of 25 per cent of patients.

One of the most important causes of backache in man is prostatitis. Routine examination of the prostate should be made in all male patients complaining of backache, and, if involved, proper treatment given.

DISCUSSION by Fraser L. Macpherson, C. P. Mathe, George J. McChesney, H. H. Markel, *San Francisco*.

IN CONSIDERING the subject of the prostate and its influence on low-back pain, one must bear in mind the intimate relationship of the prostate and seminal vesicles. I voice the opinion of other investigators when in stating that prostatitis and seminal vesiculitis almost invariably occur together, and so I will consider them as a unit.

Backache is a common complaint, and patients usually seek relief at the hands of the physician or the orthopedic surgeon. If less enlightened, but influenced by glaring advertisements, they may take treatment from an osteopath or chiropractor.

The urologist sees these patients frequently when urological symptoms are uppermost (on many occasions in the clinic particularly, back pain has erroneously been called kidney pain by the patient) and backache not so prominent, but usually in consultation with the family physician or the orthopedic surgeon who is endeavoring to discover a focus of infection which may be the etiological factor in sacro-iliac or lumbo-sacral joint inflammation. I am not assuming that prostatitis is the sole factor in backache, because such localized pain may be the result of foci elsewhere. I am positive that backache does exist, however, when inflammation of the prostate is the only discoverable site of infection.

I am purposely excluding tuberculosis of the spine or genito-urinary system, lues, malignancy, organic nervous diseases, and fractures of the spine or joints under discussion. Acute gonorrhea is also excluded, since in the acute stage this disease shows a predilection for other joints primarily.

In the past three years I have incorporated the question of backache in taking routine urological histories, and this paper is based on one hundred such histories—our findings and treatment in these chronic cases.

It may be well to mention here that female low backache may be due to pyelitis, ureteritis, cystitis, trigonitis, urethritis, urethral stricture, or polypos—exclusive of or with pelvic inflammatory conditions. Treatment directed to such conditions, exclusive of pelvic inflammatory disease, will often relieve backache if they are the only foci existing.

The question of accompanying foci in the sinuses,

teeth, tonsils, is highly important, for, in looking over a large number of histories, it was evident that, unless all possible foci were treated along with prostatitis, improvement was slow and recurrence the rule.

Some authors disregard or fail to mention focal infection as a cause of backache. Others discussed this symptom before focal infection was considered a factor. Robert W. Lovett omits purposely tuberculosis of the spine, organic nervous diseases and spinal fractures in his paper on "Backache and Prostatitis," and considers three etiological possibilities:

1. Disease or displacement of joints.
2. Traumatism to the back.
3. Arthritis of the spine.

He also adds two more classes which cover forty-one out of eighty-three of his cases:

A. Static in origin, due to overstrain of posterior musculature and pain due to irritation of muscles, ligaments, and fasciae.

B. Special strain or relaxation of sacro-iliac joints.

The static A type he says is caused by forward displacement of center of gravity with undue strain on posterior muscles, which causes pain in these muscles and fasciae. As a result of this forward displacement the author admits of strain on sacro-iliac joint, but thinks the pain is in the muscles and fasciae and not in the joint. Lovett refers to Roland O. Meisenbach's article (2), in which this investigator attempts to prove that the sacro-iliac joint is a true joint and reports eighty-four pathological conditions. This paper preceded any work on focal infection. In his cases of sacro-iliac relaxation he classifies the following types: traumatic, general debility, uterine, neurotic. He claims in pregnancy that the sacro-iliac synchondrosis yields and admits motion. He with Dr. Albee proved, by injecting methylene blue in the joints of cadavers, that it is a true joint and has all the anatomical structures, i. e., hyaline cartilage, synovial membrane, and supporting ligaments. One of the chief reasons for relaxation of this joint is that the sacrum may be so pulled out of place in its articulation with the ilium that there is a pressure on the nerves, with resulting sciatica. Also undue forward position of the body with a relaxed joint would keep it pulled out of place and produce pain in that region. If this is taken into consideration, together with focal infections in the pelvic viscera, prostate seminal vesicles, and elsewhere, one can understand why, with a synovitis developed, there would be pain in the sacro-iliac or even the lumbo-sacral joints, especially when one is familiar with the selective action of bacteria as described by Rosenow. Lovett denies that there is any evidence to prove slipping of the sacro-iliac joint or pain caused by this joint condition either with the x-ray, by palpation, or post mortem, as described by Meisenbach. He says: "In my series of eighty-three cases I have failed to find evidence of slipping, displacement, or abnormal motion." He lays stress on the static A theory with defective antero-posterior balance. Of backache of pelvic origin, he says: "In general, pelvic backache is sacral but may be dorsal,

and is generally associated with symptoms pointing to pelvic disturbance." He still adheres to his pet theory that even pelvic backache is caused by forward bent position above mentioned. He accedes to the traumatic type (2), and regarding the arthritic type (3) he considers nerve-root pressure, mentioning stiffness and lateral deviation of the spine, and x-ray evidence of the presence of osteophytes in the vertebrae, and lipping of the vertebrae edges. With such x-ray evidence today we seek a focus of infection and consider the rest of it postural.

Frank Billings, besides mentioning the mouth, faucial tonsils, and sinuses as sites of chronic focal infection, also mentions the prostate, seminal vesicles, and female genitalia. The bacteria he cultured were streptococcus viridans, and streptococcus hemolyticus pyogenes. He quotes Rosenow, who found that the principal types of infection in the joints, etc., were those that occupy a position between streptococcus viridans and streptococcus hemolyticus. They are more virulent than the former and less virulent than the latter. Injected into rabbits they produce arthritis, endocarditis, myocarditis, and pericarditis. He advises the removal of all sources of infection, and mentions especially treatment of the prostate gland and seminal vesicles. He recommends autogenous vaccine and vasotomy to drain and wash out the seminal vesicles. Hugh Young calls attention to the limited recognition of the genito-urinary tract as a focal site in many vague pains. He lays especial emphasis on the fact that chronic diseases in this tract may exist for years without symptoms, but such infections, with their toxins in the prostate and seminal vesicles, irritate the nerve terminals of these organs, sending stimuli to other viscera and superficial regions, according to the dicta laid down by Head. He says, "I have often seen cases of lumbago, sciatica, vague pains in hips, thighs, perineum, groin, and as far as the sole of the feet, due to it," and recommends in extreme cases, perineal prostatectomy as a means of relief. He also quotes Fuller's article on seminal vesiculotomy, with report of cases and 50 per cent cures in arthritis. Brandsford Lewis, in discussing Young's paper, brings out the following points: Ninety per cent acute anterior urethritis cases become posterior, and mentions Young's operation in extreme cases. Gotlieb brings out the fact that the subject of chronic backache is casually mentioned in some textbooks. He quotes Keys: "Pain in the back in these cases is usually in the upper sacral region; it is a constant aching in character, uninfluenced by urination." Pearson: "Spondylo-arthritis is not an uncommon complication of gonorrheal diseases of the joints, and the sacro-iliac joint is involved sometimes." Guiteras mentions the possibility of gonorrheal arthritis of the sacro-iliac and inter-vertebral joints. Billings, Rosenow, and Adami state that the prostate and seminal vesicles are important sites of chronic infection. Gotlieb advises the proper fitting of shoes, correction of faulty statics, and treatment of the prostate for backache. Arthur P. Luff describes a condition which he terms fibrositis of various organs of the body. He mentions tonsillitis, pharyngitis, and absorption of toxins, but does not mention the pelvic organs. A. H. Swartz made cul-

tures in twenty cases of prostatitis. In 65 per cent the streptothrix was demonstrated either in pure culture or mixed with staphylococci. He made infected vaccines which gave good results in all but three cases, which required prostatic massage along with the vaccine. L. P. Player and C. P. Mathé, in a study of tumors of the vesicle neck and prostatic urethra and their relation to prostatitis, found that backache was a symptom in fifty-two of sixty-eight cases. Moses Behrend lists every cause of backache, with the exception of focal infection, in the pelvis. J. R. Caulk and H. G. Greditzer studied 300 cases of prostatitis and seminal vesiculitis; in 203 or 67.66 per cent of these cases they found referred pains or aches in the back (lumbago), legs and hips (sciatica), suprapubic region, groin, perineum, testicles, scrotum, penis, urethra, and kidneys. Of all these, however, lumbago and sciatica were most frequently mentioned. They regret the fact that the prostate and seminal vesicles are so frequently overlooked by the general practitioner as a possible source of infection and absorption of toxins in the production of vague and referred aches and pains, and say: "It is with this class of referred pains that our best results have often been obtained." Edward C. Rosenow and Winifred Ashby took material from infected foci in the human suffering with myalgia, myositis, arthritis, and peri-arthritis in one of their experimental groups and injected sixty-one animals; 79 per cent developed myositis and arthritis, 26 per cent had turbid fluid in the joints, none developed lesions in the nerves. In another group a small percentage did develop lesions in the nerves.

In a previous paper, Player, Lee-Brown, and Mathé published a table showing the results of cultures obtained from sterile secretions obtained from the posterior urethra taken directly from the prostate and ejaculatory ducts by a special instrument. The following is the table, and bears a close relationship to the findings of Frank Billings, who collected streptococcus viridans and streptococcus hemolyticus from the prostate and seminal vesicles. Rosenow found that the principal types of infection in the joints were those that occupied a position between the streptococcus viridans and the streptococcus hemolyticus. Why, then, should not prostates and seminal vesicles play a very important part in backache?

TABLE I	
Sterile	57
B. Coll.	24
Staphylococcus albus	2
Diphtheroids	5
Extracellular diplococcus (gram positive)	2
Staphylococcus {	5
B. Coll.	2
Streptococcus hemolyticus	1
Non-hemolytic streptococcus	13
Streptococcus hemolyticus {	4
B. Coll.	1
Staphylococcus albus {	2
Non-hemolytic streptococcus {	118
B. Coll.	
B. Proteus {	
Micrococcus catarrhalis	
Total	

In a survey of 500 private and clinical urological histories, 60 per cent, or 300 cases, complained of pain in the back as an outstanding symptom. In 100 of these, taken at random, prostatitis and seminal vesiculitis were present in eighty instances. Of the eighty, sixty-one admitted gonorrheal infection, four

were or had been chronic masturbators, six had indulged in sexual excesses and were alcoholics. Three had been operated for hemorrhoids or fissures. The remaining six could attribute no cause. It is interesting to note that, in this group of cases, eight had been perfectly well until an attack of influenza; four had furunculosis; others blamed exposure to cold, overexercise, or strain. One had inserted wax tapers into the urethra and infected his bladder, urethra, and prostate. Other foci were present in fifty of this group of cases; the teeth were the disturbing element in thirty instances; infected tonsils, sinuses, and anal conditions were found in the remaining twenty. In the presence of other foci, prostatitis, and particularly seminal vesiculitis, is prone to recur, which fact emphasizes the importance of clearing up all focal infections. In the absence of foci elsewhere, the result of treatment of prostatitis and its influence on the back pain is quite gratifying, although, as a rule, patience on the part of the surgeon and the patients both is quite essential. Gradual improvement without recurrence of pain is not the rule. The secretions will show practically no pus at times and the pain be more pronounced. Conversely, the patient will be free of pain and secretions show more pus. When one remembers the histological structure of the prostate and seminal vesicles, the difficulty of emptying the numerous small abscessed acini by massage, the difficulty to effect a cure may be readily understood. The following table, No. 2, will assist in simplifying the findings in our 100 cases with backache as a pronounced symptom.

The other signs and symptoms in prostatitis and seminal vesiculitis are: shreds in the urine, moisture or watery discharge in the meatus, perineal discomfort, suprapubic pain, backache, arthritis, impotentia, sexual weakness, painful nocturnal erections, mental depression, neuroses, premature and painful ejaculation.

An analysis of the above table reveals the following data: Backache was most common in the third and fourth decades of life. Fifty-seven and three-tenths per cent of this group had only one gonorrheal infection. The onset of backache occurs most frequently between one and two years and two and four years following the last gonorrheal infection. Diagnosis in 70 per cent was prostatitis, seminal vesiculitis, and littritis. Urethral strictures, slight in extent or well developed, comprised 35 per cent. Urethral polypi or expressences occurred in 30 per cent. Urethritis and trigonitis are not constantly present, but do occur during the disease. Referred pains in joints were complained of as follows: Sacro-iliac, 30; lumbo-sacra, 20; sacro-iliac, lumbo-sacral, and hip, 41; shoulders, 4; knee, foot, wrist, elbow, ankle, 5. Wassermann test was positive in twenty-two cases. By massaging the glands of Littre on a urethral sound, gonococci were found within twenty-four hours in stained smears in seven cases. In one of these seven gonorrhea had been denied. Of the one hundred cases under consideration, seventy-five took treatment, thirteen requested diagnosis only, and twelve did not continue treatment after a few weeks. (Read off duration of treatment in Table II.)

There is one point in particular worthy of em-

TABLE II

Age	Gonococcus Number of Infections	Onset Present Illness Fol- lowing Last Neisser Infection	Diagnosis	Referred Pains	Treatment Kinds	Duration
Under 20 years 13	One attack 5	Under 1 month 0	Prostatitis, vesiculitis (seminal) 70	Sacro-iliac 30	Massage, stripping, dilatation, Vaccine, Anterior instillation 27	Three months 10
Between 20 and 30 years 18	Two attacks 15	Between 1 and 6 months 5	Prostatitis, seminal vesiculitis and littritis 30	Lumbo- sacral 20	Vas injection 5	Between 3 months and 6 months 30
Between 30 and 40 years 38	Three attacks 5	Between 6 months and 1 year 8	Strictures P. S.— V. and L. 35%	S.-I. L.-S. and hip 41	Came for diagnosis only 13	Between 6 months and 1 year 19
Between 40 and 50 years 25	Four attacks 5	Between 1 and 2 years 18	Polypi 30%	Shoulder joint 4	Treated only a few weeks 12	Between 1 and 2 years 7
Over 50 years 6	Had more than four attacks 4	Between 2 and 4 years 20	Urethritis and trigonitis occur to a greater or less extent in all cases.	Sacro-iliac knee, feet, wrist, elbow 5	Autogenous vaccines 30	Between 2 and 3 years 2
		Between 4 and 8 years 6	Epididymitis 10%	Pressure Sitting and arising 35%		Over 3 years 7
		Over 8 years 4	Arthritis in acute Neisser 4			

Results: The treatment of prostatitis alone when all other foci have been attended to is of prolonged duration, anywhere from three months to three years being the time allotted in my series of cases; the average case will clear up within a year. The influence of elimination of all foci on the backache is in proportion to the degree of infection remaining. Orthopedic care of static conditions and correction of faulty posture and shoes are essential to good results.

phasis in making routine examination of prostate and seminal vesicles as a possible focus of infection. No one can palpate a prostate per rectum and tell definitely from its size, shape, and consistency whether or not infection is present. It is often necessary to massage the prostate and strip the vesicles from one to four times on consecutive days before the secretion will show in its true light.

Early in this article I mentioned that a great many patients complaining of backache and with prostatic and seminal vesicular involvement first seek aid of the orthopedic surgeon. In order to obtain definite data on the percentage of such cases I sent questionnaires to the orthopedic surgeons of the state, containing two questions: 1. "In what percentage of patients complaining of pain in the back associated with prostatitis do you find x-ray pathology in the lumbo-sacral and sacro-iliac joints?" 2. "In what percentage of patients complaining of pain in the back do you find prostatitis?" I have received sixteen replies. I may divide these answers into two classes: First, those who have definite figures at hand and can answer the questions in terms of percentages, and second, those who, though giving an affirmative answer to both questions, are unable to investigate their case histories in order to obtain the exact data and give definite figures. In the latter class: A admits percentage in questions 1 and 2, but has not completed his card index system and cannot give exact figures. B admits a certain percentage in questions 1 and 2, but impossible to give exact figures. C admits a certain percentage of cases in answer to both questions, but does not know the figures. D: "I cannot give the percentage, but do not think it to be very large." E: "I do not see

enough patients complaining of pain in the back associated with prostatitis to give a helpful answer in terms of percentage." F: "Have no figures of any value." G: "Have not had any cases of prostatitis referred to me with back pain." H, answering No. 1, says: "In chronic cases practically all." Answering question 2, "I am unable to say, but a small per cent." I, answering question 1, "I do not know." Answering question 2, "A small percentage." Now I have just presented the answers from nine correspondents, and they present no definite figures. From seven other orthopedic surgeons who have definite percentages to offer, I received the following data:

1.	Answer to question 1—5 per cent.
"	" " " 2—10 to 15 per cent.
2.	" " " 1—10 to 20 per cent.
"	" " " 2—20 per cent.
3.	" " " 1—Has no statistics.
"	" " " 2—30 per cent.
4.	" " " 1—Between 30 and 40 per cent.
"	" " " 2—Not over 10 per cent.
5.	" " " 1—30 per cent.
"	" " " 2—30 per cent.
*6.	" " " 1—50 per cent.
"	" " " 2—60 per cent.
*7.	" " " 1—25 to 50 per cent.
"	" " " 2—50 to 75 per cent.

To sum up these answers I note that all of the sixteen representative orthopedic surgeons of this state admit they find x-ray pathology in the lumbo-

*Data taken from histories in both clinic and private patients after careful survey.

sacral and sacro-iliac joints in patients complaining of pain in the back associated with prostatitis. Also in patients complaining of pain in the back they find various percentages of them suffering with prostatitis. Nine of the doctors do not offer any definite figures, whereas seven give definite percentages to both questions. To the six answers in question 1 of this group, I find that the average is 28 per cent, or, in other words, that among thousands of cases treated by these orthopedic surgeons they find among the prostatitis with pain in the back definite x-ray lesions of the lumbo-sacral and sacro-iliac joints in twenty-eight out of every one hundred cases. The seven answers to question 2 of this group averaged 32 per cent, which means that, of patients complaining of pain in the back, thirty-two out of every one hundred have prostatitis. Though the average percentage in the answers to questions 1 and 2 are 28 and 32 per cent, respectively, yet I note that some of the surgeons report much higher figures, from 50 per cent to even 75 per cent. These percentages of joint affections with prostatitis are remarkable when we take into consideration the fact, following the researches of Rosenow, that the selective action of the various types of streptococci emanating from the various foci of infection may have a predilection for the tendon sheaths, muscles, and joints, and that in very mild involvement of the joints, as well as in even severe infection of the back muscles with their tendons, they may very often show no definite lesions on the x-ray plate. Thus, in many cases there may exist definite involvement of the muscles, tendons, and joints of the back attributable to bacteria from prostatic foci without any demonstrable lesions.

DIAGNOSIS

All patients should have general examination by someone capable, who should refer them to proper specialists. Specialists cannot be efficient in general examination. Our investigation includes: Urine, complete chemical and bacterial examination. With the patient showing definite chronic complications, urine is drawn from the bladder with sterile precautions for culture and inoculation of guinea pigs; careful examinations per rectum and charting of the prostate and seminal vesicles, Cabot test, microscopical, cultural examination of massaged secretions; examination of urethra and bladder with urethroscope and cystoscope, charting the findings if necessary; catheterizing the ureters and taking x-ray pictures of the whole tract, including kidneys, ureters, bladder, and other organs of the pelvis to discover abnormalities.

TREATMENT

Non-surgical—Seventy-five patients were treated in the routine manner by massaging the prostate, stripping the seminal vesicles, sounds, instillations. Five of these received vas injections. Thirty received, in addition to regular treatment, intermuscular injections of autogenous and stock vaccines. The influence of the vaccine on the pus content of the prostate and seminal vesicle secretions was disappointing, but the backache was relieved entirely in approximately 22 per cent. Mixed vaccine rich in gonococci, given during the acute stage of gonorrhea, reduces the percentage of complications in the

prostate, seminal vesicles, and epididymi. The majority of these patients were under treatment by the orthopedic and general surgeons for static conditions, painful joints and foot defects, etc. The few cases that were not under the orthopedic care were not relieved of back pain until the secretions were much improved. In our opinion good results in backache with prostatitis depend upon co-operation between consultant, the surgeon handling the case, and the patient. Other factors that influence the results obtained are assurance that the ejaculatory and prostatic ducts are patent, dilation of strictures, emptying and cleaning the glands of Littre, destruction of polypi, eradication of infections and inflammations elsewhere in the genito-urinary tract along with distant foci. The general physical condition of the patient must be considered; hygiene, diet, tonics are indicated in nearly all cases. Injections of various antiseptics intravenously are being tried, with reported good results.

Surgical—Vas injection, according to the dictates of Belfield, and modifications of the same idea are of great assistance in some of the resistant types. Fuller advises in extreme cases seminal vesiculectomy or seminal vesiculotomy, and reports 50 per cent are cured. O. S. Lowsley reports ten surgical cases representing 29.6 per cent, two vesiculotomy, eight vesiculectomy, with good results in three, fair in six, poor in one. Young advises his perineal prostatectomy. In the five cases in which we performed vas injection, good results were obtained in four. The other cases did not respond. His arthritis is growing steadily worse and will probably require radical operation.

The onset of backache occurs most frequently between one and two years and two and four years following gonorrheal infection. Diagnosis in 70 per cent of cases was prostatitis and seminal vesiculitis; in 30 per cent prostatitis, seminal vesiculitis, and lithtritis. Urethral strictures, either slight or well developed, in 35 per cent; polypi, polypoid masses, and excrescences occurred in 30 per cent; urethritis and trigonitis existed at intervals during the disease.

I wish to express my thanks to Dr. Redewell of the University of California for his assistance in preparing abstracts.

SUMMARY

1. Until recently writers considered pain in the back due entirely to static conditions, muscle or ligament strain, and nerve involvement—excluding arthritis patients.
2. Rosenow and his followers have shown that bacteria from foci of infection have selective action and the different types produce myositis, myalgia, synovitis, and arthritis.
3. Eradicating the focal infection of the prostate and seminal vesicles, as well as the tonsils, teeth, adenoids, appendix, etc., will cure cases of myalgia, myositis, synovitis, and neuritis.
4. We have in prostatitis analogous organisms to those reported by Rosenow in other foci.
5. Orthopedic surgeons find in backache associated with prostatitis, x-ray lesions of the pelvic joints in an average of 25 per cent of patients.

6. Only by taking complete histories and making careful diagnoses can prostatitis patients with backache be properly treated.

7. In treating prostatitis all contiguous organs must be carefully looked after, in order to eradicate all possible foci of infection, i. e.: seminal vesicles, bladder, kidneys, ureters, vas deferentia, epididymii, urethra.

8. One of the most important causes of backache in man is prostatitis. Routine examination of the prostate should be made in all male patients complaining of backache, and, if involved, proper treatment given.

9. There is no specific cure for chronic prostatitis, and the fact that it takes from months to years of careful treatment to eradicate inflammation in that gland, we must believe that when we find such inflammation the cause of backache in so many patients, full relief will come only with co-operation between that wonderful bulwark of medicine, the general practitioner, the general and orthopedic surgeon, the urologist, and last, but most important of all, the patient himself.

380 Post Street.

DISCUSSION

FRASER L. MACPHERSON, M. D. (380 Post Street, San Francisco)—Dr. Player's paper is of extreme interest to me because I have had an opportunity to follow some of his patients from an orthopedic standpoint.

It is remarkable how fast low-back pain associated with prostatitis will clear up under urological treatment. One can usually be suspicious of a prostatitis if a patient complains of low-back pain not associated with any definite history of injury and on examination shows no list and refers pain to sacrum. Patients that do give a history of an injury and fail to get relief from good orthopedic treatment will usually be found to have a prostatitis. This is often true of many industrial cases which drag on indefinitely.

Prostatic examination is too often neglected by the profession because of its disagreeable feature. Even if it is done one is apt to be satisfied with one massage. As Dr. Player mentioned, it is necessary to massage three or four times on consecutive days in order to determine a prostatitis. Many doctors are willing to take a patient's denial of a Neisser rather than make an examination. These cases are the ones that usually show an infection, although many are non-specific in nature.

It should be a rule in every case of low-back pain showing x-ray changes to examine the prostate, just as we routinely examine the teeth and tonsils.

Having eliminated the prostate, teeth, and tonsils as foci of infection, the co-operation of the orthopedist is necessary to correct static faults, such as poor posture, short achilles, pronated feet, and weak musculature, in order to relieve a joint that has been injured through disease as well as strain.

C. P. MATHE, M. D. (Phelan Building, San Francisco)—Dr. Player emphasizes the fact that in 500 cases of prostatitis, 60 per cent complained of backache as their outstanding symptom. When sacro-iliac, lumbo-sacral, or hip pain is found associated with an urethral morning discharge, prostatitis should be strongly suspected.

In 1921 Player and I reported sixty-eight cases of chronic prostatitis and seminal vesiculitis complicated by polypi of the vesical neck and posterior urethra. In reviewing the sixty-eight cases we found that fifty-seven had pain and discomfort in perineum, fifty-two had dull lumbo-sacral pain (backache), twenty had inguinal pain, thirteen had hypogastric pain, fifty-two had repeated or constant morning drop.

We noted the fact that morning urethral drop occurs as frequently as the lower back pain. When both were

present the prostate was found infected in 99 per cent of the cases.

Many cases are overlooked due to an incomplete or incompetent examination of the prostate. The prostate must be examined four times by a competent urologist before a negative report can be reliably given. If no secretion is obtained the prostate should be massaged on a bladder in which sterile water has been introduced, the urine voided, then centrifuged, and examined for pus and organisms.

The co-operation of the patient is necessary in order to obtain relief. He must be assured that the treatment will be of long duration. Player shows that the average uncomplicated case of prostatitis usually clears up in less than a year. The complicated cases require longer time. In those whose resistance is good the length of time is shorter. I have observed that robust athletes clear up rather quickly, whereas 50 per cent of syphilitics show practically no improvement even after years of treatment.

The orthopedist well realized the importance of prostatitis as a possible cause of lower back pain. It is the general practitioner who sees large groups of patients that should be brought to realize that in at least 33 per cent the common complaint causing so much discomfort and suffering can be relieved by a careful examination and treatment of the prostate gland.

GEORGE J. MCCHESENEY, M. D. (Fitzhugh Building, San Francisco)—This article of Dr. Player's is a timely one in that it once more reminds us of the importance of focal infections in spinal arthritis, which we are too prone to neglect. This is shown by the rather sad results of the questionnaire to orthopedic surgeons, those results not being of such accuracy and unanimity as would indicate that the focal liability in prostatitis was receiving the proper attention it should from orthopedists. Personally I confess to being more or less delinquent, and for the following reasons:

As Player states, a proper urological opinion can only be obtained after three or four examinations. This makes an orthopedic surgeon's opinion concerning the prostate just as valueless as an orthopedic opinion on teeth or tonsils, but in the latter instances he can refer the patient to a dentist or a throat specialist and get an opinion as to the liability of focal infection at one interview, whereas in the case of an opinion concerning the prostate, in private practice one might hesitate in sending a patient for rather prolonged urological examination, unless the indications were strong as to the necessity for it.

The temptation is present to shirk one's responsibility, and it seems to me that if a method could be found to obtain a positive urological opinion at one interview it would be of great benefit to all concerned.

Of course, there may be serious cases that are admitted to hospitals where this objection does not qualify.

There can be no argument as to the soundness of Dr. Player's conclusions and the means by which he arrives at them.

H. H. MARKEL, M. D. (380 Post Street, San Francisco)—As presiding officer of this section on orthopedic surgery I am especially glad to hear Doctor Player's results. I am very sure that many, many cases of low backache are caused by prostatitis, and many cases of injury are aggravated and prolonged by it. Many physicians are satisfied with making a single examination, and when the secretion is found to contain little or no pus, to call it negative. But if such a case be re-examined two or three times an increasing amount of pus will be found, and as treatment is continued a still greater amount will be secured. I believe that it is most important that these low percentage cases receive proper treatment and not consider the pus found to be due to traumatism of the prostate, as some would have us believe. The papers in this symposium have been very gratifying to me, and the attendance has been very pleasing as well, showing the interest the subject has for all medical men.

DOCTOR PLAYER (closing)—I wish to express my thanks to those who have discussed the paper. It is gratifying to know that their opinions coincide very closely with my conclusions.

Dr. McChesney raised the question as to the possibility of a quicker method of diagnosing prostatitis. I agree

with him that it is oftentimes difficult for a patient to return to the office for massage on four consecutive days. It is also expensive for the patient, but I am sure any urologist would be only too glad to make a nominal fee according to the means of the patient.

The glass tests are not satisfactory in themselves and I know of no other means at present other than prostatic massage and microscopic study of the secretion obtained which will give us positive data. McChesney's suggestion, however, is worthy of consideration.

CONSIDERATION OF PROGRESSIVE MUSCULAR DYSTROPHY WITH PSEUDO-HYPERTROPHY FROM AN ENDOCRINE STANDPOINT

By CLIFFORD WRIGHT, M. D., Los Angeles

Dysfunction of the pituitary gland considered etiologically important.

Recent literature and clinical evidence commented upon.

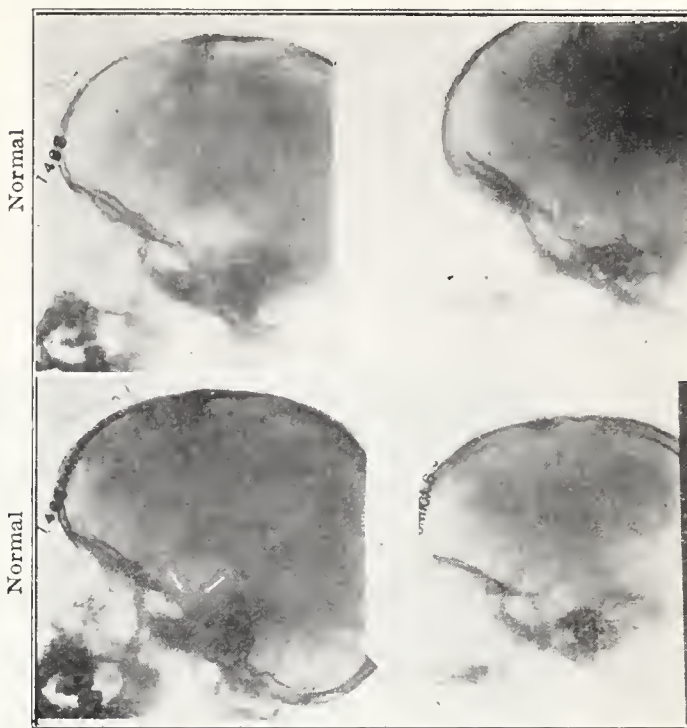
DISCUSSED by H. Lisser, San Francisco; H. Douglas Eaton, Los Angeles; Edward N. Reed, Los Angeles.

WHEN the earlier investigators of progressive muscular dystrophy discovered that there was no evidence of pathology changes in the brain and central nervous system, it became necessary to look further for the etiology of this interesting, yet quite irregular group of muscle disturbances. That they are endocrinopathies, probably pluri-glandular, seems borne out by the frequent association with other glandular disturbances, as Grave's disease; Addison's disease; acromegaly; and myxedema, and that many cases show pigmentation; vitiligo; hypo-glycemia; asthenia, and many other endocrine symptoms. Several cases have shown spontaneous cure at puberty, probably through some action of the gonads or other endocrines.

The pituitary gland, particularly the anterior lobe, has a very marked effect on the skeletal growth; muscle development and the maintenance of muscle tone and any disturbance of these may depend on some pituitary condition. I have had a series of nineteen cases of progressive muscular dystrophy with pseudo-hypertrophy, and it is the association of these conditions with other symptoms of pituitary disease that will be considered here.

In the progressive muscular dystrophies due to the irregularity of muscle involvement, the course of the disease; the absence or presence of contractures and other factors, a classification suitable to all cases is not easy.

Erb's classification into hypertrophic and atrophic forms has been usually followed, but one specifying a rapid and slow type is quite practical. While usually the earlier the condition starts the more rapidly progressive it is, this is not always so. One of my untreated patients, 9 years old, who has been affected six years, is practically bedridden; one at 12 who has been sick since 3 years of age, and one 15 who has had paralysis since 2 years of age, show slower progress of the paralysis. Heredity must play a part in this disorder, for in some instances several generations of the same family have shown some form of the disease. In 1916, Timme of New York reported a series of fourteen cases extending through three generations in one family. Twice in my series two brothers were affected, and



Sella turcica in each instance smaller than normal.

the great-grandmother of another patient and her six sisters all developed the condition at about 50 years of age, and a daughter of one of these women was affected. Of my nineteen cases, twelve are boys and seven are girls.

The usual tendency of the disease is to progress to complete invalidism showing exacerbations lasting from one to several weeks, when the patient shows more active symptoms and frequently is bedridden. These increase in severity and duration, as well as frequency, and death often comes at 16 to 18 years in the earlier cases, while the slower cases continue on to old age. Death may be caused by some intercurrent condition or from involvement of the respiratory or cardiac centers.

SYMPTOMATOLOGY

At first it is noticed that the child is clumsy, falls frequently, and is unable to walk up or down stairs. Later the typical waddling gait appears, and after falling, the child, in rising, will crawl up its own legs. The legs are usually first affected and show the typical pseudo-hypertrophy of the calf muscles, with atrophy of the shoulder girdle. Knee-jerks are absent; the paralysis is irregular. In no cases have I seen facial involvement. One has atrophy of the thenar and hypothenar eminences. Atrophy usually follows the false hypertrophy. Contractures are frequent and varied. Those of the heel cord are most frequent and prevent standing in many cases; others are equinovarus; hamstring contractures and scoliosis. Microscopical muscle changes are splitting of the muscle fibers, proliferation of nuclei, proliferation with hyperplasia of vascular tissues and deposit of connective tissue and fat. Sometimes muscle fibers have entirely disappeared and the muscle becomes pale. The electrical reactions are normal. The sphincters are intact. Sensibility is intact, also the special senses. With these, and most interesting from my standpoint, are the following pituitary symptoms: Large, round head; round face; spaced

teeth; heavy central incisors; pituitary type of hand, smooth mottled skin, poor nails and sexual underdevelopment, all found in anterior lobe insufficiency and girdle obesity; high sugar tolerance; and weak pulse found in posterior lobe conditions. A large percentage of my patients were backward mentally. In addition, in most cases, x-rays show an undersized sella turcica and rarification of the bony tissues, both indicative of pituitary disturbances. These children always appear to be in good general health,

cluding bracing for support; prevention and correction of deformities and graduated muscle training and organotherapy. For several years I have used pituitary products by mouth and hypodermic. Whole gland powder is given by mouth, and when indicated pituitrin is given hypodermically, and occasionally adrenalin and small doses of thyroid have been used.

While I have had no complete cures, a large percentage of patients have been benefited to the extent



FIGURE 1

Showing round head, round face, and spaced teeth.

Undeveloped sexual organs; large calf; atrophy at the shoulder girdle, etc.

are happy, not constipated, rest well, and nearly all are voracious, indiscriminate eaters.

Case No. 1—This boy (see Figure 1) is 10 years of age. A younger brother has the same condition. Note underdeveloped sexual organs, large calf muscles with atrophy around the shoulders, large head, large round face, spaced teeth. This boy has the typical mottled skin and small, graceful, tapering fingers. The x-ray shows a sella turcica smaller than normal for this age, which is seen at the left. All the x-rays shown were taken with 24-inch plate tube distance. This makes the sella appear smaller than if taken closer. This different plate tube distance probably accounts for some of the discrepancies in tables of sella measurements. This patient has been under treatment three years and has made steady improvement, but is unable to stand at this time, due to contraction of the heel cords, for which his parents have not allowed operative procedure.

Case No. 2—This girl (see Figure 2) is 10 years of age, shows mild girdle obesity, the typical muscle condition, large head, large face, pituitary type of hands, and spaced teeth. X-ray shows small sella turcica.

TREATMENT

Includes general care—orthopedic supervision, in-

cluding bracing for support; prevention and correction of deformities and graduated muscle training and organotherapy. For several years I have used pituitary products by mouth and hypodermic. Whole gland powder is given by mouth, and when indicated pituitrin is given hypodermically, and occasionally adrenalin and small doses of thyroid have been used.

2417 South Hope Street.

DISCUSSION

H. LISSER, M. D. (380 Post Street, San Francisco)—Doctor Wright deserves commendation for adding his observations and experience to the literature, which now contains many interesting records—metabolic, clinical, and pathological—which, taken together, suggest rather strongly an endocrine origin for progressive muscular dystrophy. The writings of McCrudden, McCrudden and Sargent (Janney, Goodhart and Isaacson), Timme, Boveri and von Werdt are especially worthy of review in this connection. As yet there is no agreement in assigning the primary causative role to any one ductless gland, some implicating the thyroid, others the pituitary, still

others the adrenals and pineal. In this uncertainty some writers prefer a discrete caution and consider the disease of pluriglandular origin. Although a coincidental affection of several glands is conceivable, it should be recognized that the great majority of endocrine diseases, of which we have any positive knowledge and which we are able to diagnose in life and verify at autopsy, are syndromes for which a single gland is primarily responsible and whose dysfunction clearly dominates the onset and subsequent course of the disease.

If further investigation should prove a uniglandular origin for this disease, I would venture to predict (in agreement with Wright) that the hypophysis will be

for several years. He has been working in a store about sixteen hours a day. This patient is by no means cured, but no one could question the veritable transformation in this man's appearance, strength, and vitality.

Since no measures other than orthopedic assistance are in any way beneficial for these unfortunate individuals, long-continued organotherapy is at least deserving of an adequate trial, and when more potent preparations are available, we may perhaps be rewarded by more striking and consistent success.

H. DOUGLAS EATON, M.D. (1136 West Sixth Street, Los Angeles)—It has been most interesting to read Doctor Wright's experiences with the use of pituitary medication



FIGURE 2
Shows spaced teeth, large round head, round face, and pituitary type of hand. Typical muscle condition, moderate degree of girdle obesity.

found primarily responsible. Hypopituitarism includes many of the phenomena characteristic of this disease—hypoglycemia, impairment in the power to store glycogen, adiposity, trophic changes in hair, skin, tendons, and nails; and, secondarily, genital infantilism with creatinuria, as is also found in eunuchoidism.

My personal experience in the glandular treatment of progressive muscular dystrophy is confined to one patient, and is, therefore, of little significance. This patient, nevertheless, has exhibited an amazing improvement, far and beyond what could be expected from the natural course of the disease. The malady is usually progressive, though sometimes stationary for a time; remissions are not noted. This patient has been observed for two and a half years. The treatment has consisted of whole gland pituitary extract by mouth and by injection (three injections a week) continuously administered since November, 1921. He has lost fifteen pounds in weight. He can raise himself on his toes, which he could never perform previously. He can walk upstairs, without climbing up his legs. Formerly he could not walk two miles; now he walks six to seven miles fishing. He can walk through the snow (lives in Truckee, California), which admittedly is a severe test for the weakened atrophied muscles of back, thighs, and legs. He was unable to control his hand in writing; he now can write for hours. Before he could not get up on his hands and knees in bed; he can do this easily now. He does not use a cane now; which he did

in progressive muscular dystrophy. If he has succeeded in arresting one case by its use, he has accomplished more than has been accomplished previously by any medication.

My experience with endocrine medication in progressive muscular dystrophy has been unsatisfactory up to date. I have been using pituitrin; the whole pituitary gland substance; and thyroid and adrenalin, alone and in various combinations, both by mouth and hypodermatically at the Children's Hospital for some years. I have attempted to suit the medication to individual indications, and have also tried using pituitary persistently, irrespective of definite evidence of hypopituitary function.

In looking for the explanation of my lack of success, I have felt that many of my patients were not pure types of dystrophy; many have shown changes in the reflexes and mental deficiency as well. I am planning to prove my diagnosis in the future, when possible, and restrict my endocrine experimentation to proved cases.

The other reason for my failure probably is, that pluriglandular dysfunction are present in progressive muscular dystrophy, and it is often difficult with present limited knowledge of endocrinology to determine the exact medication for a given case. Timme of New York, in a recent conversation with me, agrees in this hypothesis. Timme states he has had four cures in seventy-five cases, with a greater number of patients much improved as the result of pluriglandular medication. I also question

whether there may not be another important etiological factor as yet unrecognized.

We are indebted to Wright for presenting his interesting work, and emphasizing the hope that we may really learn to help such a distressing condition as progressive muscular dystrophy.

EDWARD N. REED, M.D. (2417 South Hope Street, Los Angeles)—I have observed a number of these cases at the Orthopedic Hospital School; and I have carried out with them the indications for prevention of deformities and for their correction when present. More than this, I have given them physiotherapy, baking, massage and muscle training, faithfully carried out over long periods of time, and proper bracing when indicated. I have learned that the best I could hope for was an arrest of the progress of the disease, apparently, in a certain number of patients—though for how long the arrest could be maintained I do not know. My experience has failed to show much, if any, improvement by physiotherapy and muscle training alone.

On the other hand, I can testify to the improvement in several of Wright's patients. These patients also had physiotherapy, muscle training, and bracing. But I feel that the results of Wright's treatment were very evident, in that with a number of the patients whom he treated showed demonstrable improvement.

DOCTOR WRIGHT (closing)—Doctor Lissner's patient was quite instructive, and it would seem, from the history, that if the case was not entirely cured it was benefited to the extent that the man was able to carry on his usual activities.

One of our patients, a girl, has been under treatment for six years, and while at first she had to be wheeled to and from school she now walks and is taking dancing lessons. This girl's mother declares that a cure has been effected; however, I feel that perhaps there is still some muscle weakness.

As Doctor Reed has said, orthopedic measures alone have failed to greatly benefit these patients, but those who have had orthopedic treatment plus organotherapy have shown beneficial results.

Arsenic Poisoning—Twenty-eight cases of arsenic poisoning are reported by G. B. Lawson, W. P. Jackson and G. S. Cattanch, Roanoke, Va. (Journal A. M. A.). Large quantities of arsenic were demonstrated to be present in cider which had been served at the noon meal. It was later learned that the barrel had contained an arsenic compound used for spraying trees. Thirteen of these patients died, the first death occurring in six hours, and the thirteenth on the thirteenth day after the taking of the poison. Ten of these deaths occurred in the acute stage, and the other three during the subacute stage, into which the patients had passed with a cessation of the acute symptoms on the second day. Immediately following the onset, vigorous supportive and symptomatic treatment was given; and nine patients, all of whom survived, repeatedly lavaged their own stomachs with warm water. After the Marsh test had demonstrated an abundance of arsenic, it was decided to use sodium thiosulphate with the hope of inactivating the remaining arsenic by the production of its nontoxic, insoluble sulphid. No immediate improvement was observed following the use of sodium thiosulphate. To be of possible value in acute poisoning, it should be given at once and in maximum doses. Analysis of samples taken at the time of the poisoning showed the presence of 3.38 grains of arsenic (As_2O_3) per fluidounce. Most of the patients drank several glasses of the cider, but because of the vomiting and diarrhea it was impossible to determine the amount retained.

Sinusitis and Swimming—H. M. Taylor, Jacksonville, Fla. (Journal A. M. A.), points out the modifications which the aquatic animals have for their environment and the striking absence of such adaptations in man. Man is essentially a terrestrial being, and his anatomy and physiology are not modified for a water environment. When man is out of his normal sphere he must understand what limitations Nature has placed on him, and not ignore the fundamental laws that regulate his own being.

THE TREATMENT OF EARLY CARCINOMA OF THE UTERUS

By J. W. SHERRICK, M. D., Oakland

Treatment of early carcinoma of the uterus implies an early diagnosis, detailed knowledge of the histologic picture, its gross and macroscopic characteristics, its methods of spread and the clinical course.

DISCUSSION by William H. Gilbert, Los Angeles; A. J. Lartigau, San Francisco.

MY CONCLUSIONS are based on a careful summing up and weighing of the opinions advanced by different authorities, who, from their experience and the clinical material at hand, may speak with conviction. Owing to the mass of literature on this subject and the necessarily divergent opinions expressed, it is impossible to quote extensively to prove the points under consideration. But from an unbiased study, aided by personal experience, I have reached the views as set forth and feel that they represent the consensus of current opinion of surgeons and gynecologists.

One of the most important and puzzling questions facing physicians is the treatment of early carcinoma of the uterus because of the prevalence of the disease, its poor prognosis and the problem of early diagnosis. Our task would be relatively easy if we could be assured that the patient would report when the disease is in its early stages, for then the line of procedure is fairly clear with a high percentage of cures resulting. But the very nature of this condition militates against an early diagnosis and adds enormously to our responsibility and burden. Speaking generally, it seems that from the vast detail of therapeutic measures that have been utilized from time to time, two procedures stand out as most rational, namely, radical operation and radium and deep x-ray therapy.

In carcinoma we are dealing with a distinctly local affection in the early stages, a parasitic epithelial new growth which is capable of growing without limit to infiltrate and destroy the tissues in which it originates and of spreading beyond the anatomical bounds of these organs to hematogenous and lymphogenous metastases in other parts of the body. It is capable of perpetual proliferation, its cells multiply without purpose or effect, and may remain latent in the host's tissues for years. It may exhibit cyclical changes with periods of rapid or of slow growth or even of retrogression. Its susceptibility to extraneous influences and its histologic structure vary from time to time. It presents no specific toxins nor does the organism react to form antibodies, but in the early stages it apparently may call forth an increased metabolism in the host's organs with later a failure to respond to this stimulus, at which time the cancer begins to live at the expense of the host.

Thirty per cent of cancer in women occurs in the uterus. Histologically uterine cancers, while having certain points in common, have not a fixed and unvarying structure. Each individual tumor presents its own particular characteristics with varying degrees of malignancy and within limits of varying susceptibility to therapeutic efforts. But clinically, there is no distinct difference in its varying forms, structure and location. For purposes of treatment,

we must deal with two broad classes, cervical carcinoma and corporeal carcinoma.

Treatment of early carcinoma of the uterus implies an early diagnosis, detailed knowledge of the histologic picture, its gross and macroscopic characteristics, its method of spread and the clinical course. Appreciation of the macroscopic picture is, in the minds of many, more important from a prognostic and therapeutic standpoint than knowledge of the microscopic appearance. This is true because we are learning that more and more must we depend on our visual and tactile sense, aided by careful clinical history and symptoms, in arriving at a working diagnosis which will permit prompt and efficient treatment. Yet a knowledge of the finer structure seems also necessary to enable us to place the tumor from a prognostic and therapeutic standpoint. I refer to such questions as the exact seat of the primary growth, the natural resistance of the immediate and surrounding tissues, the histologic makeup of the tumor, its growth characteristics; for upon these will depend its type and rate of spread, its tendency to metastasize early and extensively, or not. In carcinoma of the cervix there are two main types, squamous, or solid alveolar carcinoma, and adenocarcinoma. While there is no characteristic difference in incidence, symptomatology, physical signs, course or complications between the two forms, yet the type of spread and the stage of metastasis varies and adds materially to the prognosis and treatableness of the condition. Cancer of the uterine body is usually of the adenocarcinoma type. Rarer forms of malignancy will not be discussed.

Cancer cells, through a biochemical stimulus, cause angioplastic reactions in surrounding connective tissue, but the epithelial growth is disproportionate, resulting in infoldings of the surface and pressure and flattening of nearby soft tissues. Growth proceeds in all directions, being favored by diminished pressure and good nutritive conditions, and infiltrates and permeates surrounding tissue by pushing into the natural interstices, especially the lymph spaces, which are devoid of endothelial lining; thence into the lymph vessels along which it advances freely. By infiltration and lymphatic permeation process it extends into the cervical wall, upward toward the uterine body, outward toward the parametrial connective tissue and along the surface to the vaginal wall. Naturally, cancer beginning in the cervical canal will more quickly involve the parametrial connective tissue and lymphatics than cancer beginning on the vaginal portion. The spread, then, is by continuity, by the lymphatic system direct, or as secondary nodules or emboli, and by the blood stream. Involvement of the pelvic connective tissue occurs comparatively early in the form of discreet nodules, 75 per cent of the operative cases presenting this complication. More extensive involvement of neighboring tissues, such as the bladder and rectum, with marked ureteral complications, hydronephrosis, pyonephrosis, etc., need not concern us here, as it is a late picture.

The uterine, cervical and vaginal lymphatic drainage systems are of prime importance in the question under consideration. These structures present a freely communicating and continuous capillary network which gives rise to connecting

trunks that follow the course of the blood vessels to converge at the sides of the uterine isthmus and cervix. Collecting trunks from the cervix run outward along the course of the uterine artery to empty into external iliac glands near the obturator foramen. Some pass behind and below the ureter and up and outward to the internal iliac nodes; others pass along the sacrouterine folds to the nodes of the sacrum and promontory. Those of the lower body drain into the external iliac nodes along with the cervical chain, while those from the fundus proper follow along the course of the ovarian vessels to empty into lumbar nodes just below the hilus of the kidney. A few follow the course of the round ligaments to the upper group of superficial inguinal nodes. The most important groups of nodes, because of the frequency and the stage of involvement, are the interiliac situated between the internal and external iliac arteries and along the common iliac artery. The uterine lymphatics diminish very materially with establishment of the menopause, which is of importance, in explaining the rate and extent of metastases. The frequency of gland involvement and the groups involved are very inconstant. In one series, 28 per cent of women dead from cancer showed no gland involvement; 33 per cent of operated cases showed carcinoma of the glands, and 33 per cent enlarged glands, but the involvement was inflammatory with no carcinomatous glands present.

With these facts in mind we are in a position to consider the treatment of early uterine carcinoma. On superficial examination it would seem a question that is easily answered, i.e., radical removal in the early stage with the borderline cases presenting the real problem. Unfortunately, it is far from being such a simple problem. Because of its insidious development and the absence of outstanding symptoms early, too frequently the disease is quite extensive before it is discovered or even suspected. To this must be added the unfortunate fact that through modesty, unreasoning fear of the condition, or ignorance, which attributes the symptoms to the menopause, piles, etc., the patient often waits for months (average 6 to 11) before seeking advice. Furthermore, too frequently there exists carelessness, or inadequate experience on the part of the attending physician. These factors then suggest the difficulties encountered but offer no solution of the problem. I have no wish to outline any special plan for working out this question. Various methods of procedure are in use in the different states under the direction of the Society for Cancer Control, which yearly carries on a campaign of publicity, including clinics, lectures, newspaper propaganda, etc. This work has been admirable in the instruction and sound advice given forth with its slow leavening influence, but, after all, the crux of the problem rests with the physician.

It seems wholly unnecessary to even mention symptoms, but we are too prone to overlook the patient's statement that she has noticed a leucorrhœal discharge as an entirely new symptom or an altered amount and character of leucorrhœa previously present. This at first is of a watery, serous nature, somewhat irritating and becoming altered later to yellow, brown, green, bloody and foul as bacterial

invasion and ulceration occur. More frequently the first symptom complained of by two-thirds of these cases is hemorrhage, i.e., post-menopausal bleeding or an alteration in the character of the menstrual flow such as increased duration and amount of flow, increased frequency, irregularity of flow, etc., associated with trauma often. Frequently slight bleeding is completely overlooked by a large percentage of women. Pain, loss in weight and strength, cachexia, are all late symptoms and need not concern us here.

Since there are then no outstanding early symptoms, and because so often the patient's general condition early is improved, we must depend on education and our own conscientious efforts to arrive at an early diagnosis. This demands intelligent attention to details, experience in the different types of cervical lesions, frequent observation and study in every doubtful case, including inspection, palpation for any enlargement, swelling, growth, irregularity, suspicious induration, loss of elasticity, friability, parametrial and ligamentous thickening and resistance, etc. I would emphasize especially the macroscopic and clinical picture but in case of doubt the curet or a biopsy must be resorted to and submitted to the pathologist for study, preferably by frozen section method with preparations complete for immediate operation, if a positive diagnosis is returned. This eliminates the increased danger of hematogenous, lymphogenous and implantation metastases arising from the cut surface. I cannot subscribe to the view that every suspicious case should be subjected to operation or radium on suspicion alone. By careful study and intelligent observation of patients we can arrive at a diagnosis. Cases that present no difficulties in diagnosis offer little hope of cure as a rule. A good working rule is to consider every suspicious case as carcinoma until proved otherwise.

I believe that the treatment of early carcinoma of the cervix should be by radical operation where no contraindicating factors exist. The percentage of operability and of what constitutes an operable case varies in different hands, being from 40 per cent to 60 per cent and depending on the stage of the disease when first seen, and the skill of the operator. Operability means curability and implies early diagnosis. The proportion of surgical cures, i.e., freedom from recurrence after five years, varies from 40 per cent to 50 per cent plus, and the absolute curability of cervical cancer derived from a study of the total number of cases varies from 16 per cent to 25 per cent. These percentages are gradually being increased by improvement in technique and surgical judgment, by early diagnosis and all that it implies, and by the judicious use of x-ray and radium as post-operative measures. Surgical treatment demands great care in the choice of patients and an accurate knowledge of the origin and spread of the disease, of its local character early and at the time of the contemplated treatment, of its permeation of lymphatics and surrounding connective tissue, and of the lymphatic drainage system. It means wide removal of the common avenues of extension, including the upper vaginal cuff, the tubes, the ovaries, the broad ligaments, the parametria, the iliac and sacral lymph glands, etc. It means intelligent consideration of contraindicating

factors such as heart, kidney and tuberculosis. In 60 per cent of the patients deemed operable cancer has extended beyond the uterus and the actual condition of the parametrium and lymph glands cannot be determined by clinical examination. Conflicting statistical reports exist as to the results in general and as to the percentage of gland involvement remaining after operation as they include every type of case, many of which were hopeless. Glands are involved in from 30 per cent to 50 per cent of the early or operable cases. Surgically, the disease should be considered hopeless if it extends beyond the parametria, but the mere technical difficulties offered by radical surgery are no excuse for failure to employ it because of what it offers in the hope of cure. Limited surgery is useless.

The field for radium is indeed broad, including the inoperable and questionable borderline conditions, but its real field in early cases is not sufficiently tried and proved to warrant the throwing aside of surgery in early and operable cases. On the one hand we have carefully worked-over statistics gathered from thousands of patients treated by radical operation during the past twenty years and the ground is well outlined. On the other hand, radium *intelligently* applied, is too recent to permit of similar statements drawn from sufficiently large series to meet these requirements. We do not know what the years may bring forth in these radiated cases. Moreover, there is great uncertainty in radium technique, with constant changing and as yet no standardized outline of treatment has been developed. The pendulum at present seems to be swinging back from the massive primary dose of radium to the fractional small dosage with a large number of radiologists following no special system but laying primary emphasis on proper screening. Theoretically, radium seems an ideal therapeutic weapon with which to attack cervical carcinoma, since it can be inserted into the center of the malignant mass with resulting radiation of the pelvic tissues within a radius of six centimeters. Practically radium in ordinary dosage has power probably to kill only cancer cells lying within a radius of two to three centimeters. Beyond this distance the rays may be so weak as to stimulate cancer cells without destroying them. The close proximity of the bladder, ureters and rectum (2 cm. at best) render them subject to severe injury. While it is theoretically possible by supplementary cross-firing through different portals of entry to attack the parametrial wings and gland areas with the longer gamma rays, this requires such enormous doses of radium that it is removed from the realm of practicality. Moreover, radium, especially in unskilled hands, possesses vicious and annoying possibilities, namely, proctitis, nausea and vomiting, obstructing fibrosis with pinching of nerve trunks, general systemic reaction, fistula, etc.

The general systemic reaction with lowered resistance and predisposing to infection and intercurrent disease, the particular cell reaction and the general blood reaction are factors that we know little about. Other problems are measurement of dosage, standardization, ionization and osmotic changes in cells and fluids, effects on basal metabolism, the role of the cell lipoids and cell decay products, methods best calculated to stimulate the

patient's immunity, etc. Further, the expense of radium, the relative shortage of supply in some countries, the expense of installing proper x-ray apparatus, as well as the question of intelligent technique, necessarily limit the usefulness of this method. These, with other problems, must be cleared up before we can hope through comparative statistics to appreciate the limitations and possibilities of radiation. There is the additional factor of prolonged treatment which many patients will not follow to the end, and the fear of a recurrence in organs that have not been eradicated. The argument that recurrences following radium treatment will occur during the first year, if at all, does not hold, as shown by Bumm. We are all anxious to cure and in spite of a 10 per cent to 30 per cent surgical mortality, with the recent results pointing more and more to the lower figures, the results as yet justify operation in the early case of cervical carcinoma. The fact remains that about 50 per cent of operable carcinomas of the cervix may be permanently cured by surgery. According to Bumm's studies, the percentage of cures in operable and borderline cases of carcinoma of the cervix is one-third less with radiation than that obtained by operation at the end of six years, although reports exist from a few German clinics, Deoderlain, Seitz and Zweifel, with a claim for results with radium that equal those obtained by operation.

In borderline cases surgery offers only a 10 per cent to 15 per cent chance of cure and radium is, therefore, the treatment of choice, Bumm showing a 23 per cent five-year cure, 19 per cent four to five-year cure, and 39 per cent three to four-year cure. Perhaps in time, with improved radium technique, this may replace surgery even in the early cases.

Radium is a very questionable agent as a pre-operative prophylactic measure in operable cases or to render borderline cases operable. It increases the difficulties of operation, may give rise to septic complications, cannot reach the limits that surgery can, may stimulate outlying cancer cells, devitalizes normal tissues and renders them more susceptible to sepsis and possesses no special advantage as a preliminary "cleansing" measure over judicious cauterization (Graves). When it is used, surgery should follow within a period of three weeks.

As a post operative measure where there is a reasonable doubt that all of the diseased tissue has been removed, radium or deep x-ray therapy should be used as soon as the tissues have healed. Otherwise it possesses the dangers as above outlined, enhanced by the thinness of the tissues remaining, and exposing vital structures to radium burns. The judicious use of deep x-ray therapy as a post-operative measure would seem to offer more than radium, especially where the pelvic wings are to be treated. This avoids the dangers offered by radium in scar tissue and in organs such as bladder and rectum. Early cases rendered inoperable by such contraindications as renal disease, old age, obesity, diabetes, heart disease, etc., should be treated with radium.

In Graves' opinion, borderline cases are usually incurable by either operation or radium, but exploratory incision is justifiable with radium being

less dangerous and offering better chances for prolongation and comfort of life in cases of doubt.

Deep x-ray therapy as a primary procedure in pelvic malignancy is not rational, but may be used to advantage in cross-fire. To destroy cancer cells in the pelvis requires several portals of entry with deep therapy technique and in the presence of metastases there should be more to allow of thorough treatment of the various fields. This entails dangerous effects on the intestine, skin, bladder and is both time-consuming and expensive.

In cases of early carcinoma of the body of the uterus, surgery offers by far the greatest chance for cure. These conclusions are based on the type of lesion usually present, the usual advanced age of the patient with firm uterine walls, its relatively less malignant character, its slower spread with late involvement of the peritoneum and parametrium and late metastatic complications. Its operability is high (90 per cent plus) and final results are good with 51 per cent of five-year cures.

The following points in surgical technique should be emphasized: Cases for operation should be selected with the greatest care, an exploratory incision being resorted to in case of doubt. This procedure requires skill, careful technique and courage to proceed or even to desist where conditions seem to warrant. A careful cystoscopic examination of the bladder base is essential. Thorough cauterization of the cervix should be done immediately preceding operation and followed by tight suturing of the external os to prevent contamination of the operative area. This, aided by thorough sterilization of the vaginal canal with idodin, adds materially to the success of the operation. Some prefer radiation ten days to two weeks previous, but done without anesthesia, as these patients do not tolerate well a second anesthetic. The abdominal route offers a far better avenue of approach and greater opportunity for wide removal of the involved structures. A careful, systematic technique, based on exact anatomical knowledge, operative experience and skill and sound surgical judgment, should be followed.

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DISCUSSION

WILLIAM HENRY GILBERT, M. D. (Brockman Building, Los Angeles)—Cancer of the uterus is a subject so big and so full of important situations that it is very hard in the short space allotted one to cover the entire field. Dr. Sherrick's paper has so thoroughly covered the entire field that it is hard to find a point of entrance in order to intelligently bring out anything that he has not touched upon. Every man who has extensively practiced surgery is confronted with two things, namely, the high mortality rate that goes with radical Wertheim surgery, and the high percentage of post-operative recurrence of cancer of the uterine cervix. The great difficulty lies in seeing these cases early in their existence. Practically all of them come to us when the disease has advanced to a point when visual and digital examination of making a diagnosis is obvious. When this point has been reached 90 per cent have passed beyond the usefulness of curative measures of any kind. The slight percentage of recoveries without recurrence, whether the treatment be surgical or otherwise, is no argument in their use as a measure to be advocated indiscriminately. The hope of curing cancer of the cervix lies in early diagnosis and I am not entirely satisfied in my own mind as to whether surgery or radium and x-ray therapy offer the

best course to pursue. Personally, I have ceased to operate on cancer of the cervix where the disease has advanced to the point when the diagnosis is easily made. I believe that then radium offers a better palliative measure than does surgery or Percy's cautery. One cannot be too careful in the prognosis given these unfortunates. I am satisfied that the people as well as physicians are realizing that the hope of absolute cure in these cases lies in early diagnosis. It is a terrible condition of affairs for a patient to present herself with the entire lower segment of the uterus destroyed by cancer and to learn that this patient has been under treatment for months for ulcer of the womb. The saddest thing in this whole picture is the fact that these patients could have been saved but for the mistake in the diagnosis.

When any physician is in doubt as to the malignancy of a badly lacerated and eroded cervix he should have no hesitancy in calling for surgical and pathological consultation. It is just as important in borderline cervix conditions to have a competent pathologist at hand as it is in breast cases when breast neoplasms are about to be removed. Surgeons are extremely fortunate because, unlike the physician dealing with cancer of the stomach, we can, with the greatest of ease, secure a specimen of suspected tissue and immediately ascertain whether or not the trouble is suitable for plastic repair or a complete hysterectomy to be followed by high voltage x-ray therapy. The successful treatment of cancer, in my opinion, is not any one individual agent but a combination of early diagnosis, surgery, radium, x-ray and Percy's cautery, which, unquestionably, has a place in treatment in all forms of carcinoma. I believe that the internal use of colloidal gold is going to add considerably to our armamentarium in the treatment of cancer. The experience of Ochsner has proven it a benefit in the post-operative handling of these cases.

AUGUST JEROME LARTIGAU, M. D. (391 Sutter Street, San Francisco)—When all is said regarding the present treatment of cancer generally, the outstanding facts of experience remain that our present methods are on the whole inadequate and unsatisfactory. The keynote to more successful results lies, as has been repeatedly emphasized by Dr. Sherrick and many others, in the recognition of the disease in its earlier manifestations; and with this in mind the education of the laity and even the physician must be pushed to the point where only wilful self-neglect can prevent timely and proper treatment and a higher percentage of cures.

While there is an agreement as to the fundamental importance of this aspect of the problem, the merits and limitations of radio-therapy and operative treatment have unfortunately not yet been clearly determined. Many are now advocating the radium treatment of earlier operable cases of cervical carcinoma by radiation alone and the figures they advance in support of their claims cannot be disregarded, but, notwithstanding the brilliant achievements along these lines, it seems to me that for the present at least, radical operation followed by radiation or not, still appears to be the line of action which is most likely to yield the surest and best results. In advanced inoperable cases on the other hand, as well as in many of the borderline ones, radiation remains our most effective remedy, the palliative effects being nothing short of wonderful in many instances.

The question as to whether or not preoperative radiation should be routinely practiced is still a mooted one. Further experience will be necessary before any conclusions can be drawn regarding this point. In my own experience I have not observed any of the drawbacks mentioned by other writers; nevertheless, it is well to keep them in mind.

DOCTOR SHERRICK (closing)—There is just one point that I want to emphasize more strongly, i.e., the effect of x-ray and radium on the blood. As shown by Von Kiehm, even in castration doses there is a decided decrease of both white and red cells with a definite and significant drop in hemoglobin while the blood platelets increase. The blood picture is extremely slow to return to normal and convalescence is much slower. These factors we cannot ignore in dealing with massive doses of x-ray therapy and in our enthusiasm for radium in uterine carcinoma that is not far advanced and in prophylactic preoperative or in post-operative treatment.

ABOUT INFECTIOUS JAUNDICE IN UTAH

By JOSEPH H. PECK, M. D., Tooele, Utah

Tooele and Lincoln, towns of a common water supply, seem to suffer most severely, while Grantsville and Stockton, which each have a separate supply, are practically free from the disease.

The disease affects preferably children three to twelve years of age, no difference in the sexes. I have never seen it in a nursing baby and only three adult cases in five years.

I know of no treatment of any benefit except an earnest endeavor to keep up the water intake and watch for signs of an acidosis which may occur in the persistent cases.

DISCUSSION by George A. Cochran, Salt Lake City; W. W. Boardman, San Francisco; Donald J. Frick, Los Angeles; T. B. Beatty, Salt Lake City.

PROBABLY the most complete review of the infectious jaundice situation in our recent literature is a paper by Blumer, read at the San Francisco session of the American Medical Association, 1923. In this he tabulates the epidemics over the United States from the initial one, which occurred in Virginia in 1812, to and including 1922. The most striking thing about the incidence of the outbreaks is the great increase in number and distribution since the late war.

In his report he lists only one break in Utah, that at Kaysville, in 1915. I feel that this subject has been neglected in our state and that perhaps if it were drawn to our attention that it might be a means of getting more complete reports of the incidence in Utah and that a better means of control might be determined.

First as to the name: This condition is not the infectious jaundice of our textbooks. Most writers ignore it entirely and those who have done work on it are unanimous in stating that it is in no way related to Weil's disease. With exception of jaundice they have nothing in common.

Incidence: In the five years I have been living in Tooele, I have seen outbreaks, both in spring and fall, of each year, and Drs. Phipps and Davis tell me that they have had it to deal with for twenty-five years, at least in occasional outbreaks.

Tooele and Lincoln, towns of a common water supply, seem to suffer most severely, while Grantsville and Stockton, which each have a separate supply, are practically free from the disease. In 1923 almost every child in the Lincoln school, about twenty in number, was affected in a period of six weeks, and I will give below a detailed report of cases occurring in my own practice in Tooele during October and November of this year.

For those not familiar with Blumer's paper, I will give a brief description of the condition as we see it in Tooele County. A child shows loss of appetite, sometimes for a week before the onset of the severe illness, and if closely watched it will be noticed that its stools, though solid, are getting light in color and very foul. I have never seen fever at this stage. After this prodromal period vomiting commences and is usually very severe, many patients being unable to retain even water for twenty-four hours or so. This is accompanied by a fever of various degrees, some running as high as 105. After twenty-four to forty-eight hours of this the child

begins to show jaundice, some in conjunctiva only, more often, however, the discoloration is intense, the whole body being markedly yellow. This lasts rarely more than forty-eight hours when the child rapidly clears up and appetite and bowel movements return to normal, though the jaundice may last a week and the child refuse any food for an even longer period. On the other hand, light stools may give only clue to nature of condition.

The urine contains bile, never, however, showing albumin as in Weil's disease. Liver usually palpable and tender. The leucocytes are only moderately increased, 12-15000 being the maximum. No relapses or conjunctival hemorrhages as in Weil's disease, though a child may have a second attack. Itching is not as marked as in jaundice from other conditions. Bacteriologically, nothing has been discovered which sheds any light on the mode or cause of the infection.

I have fed urine soaked carrots to a pig and injected him intraperitoneally with blood from a severe case without upsetting his well-being in any way whatever. Weil's disease always being fatal to a pig and the causative spirillum found with ease in his blood.

Occurrence: The disease affects preferably children three to twelve years of age, no difference in the sexes. I have never seen it in a nursing baby and only three adult cases in five years. These in adults, however, occurred when no epidemics among the children were on hand, so probably could be classed as catarrhal jaundice, which is considered by Blumer as likely sporadic cases of the above condition.

Treatment: I know of no treatment of any benefit except an earnest endeavor to keep up the water intake and watch for signs of an acidosis which may occur in the persistent cases. I have not found it necessary to use glucose solution to combat it, but believe such a condition might arise in a debilitated baby.

Upon return of appetite children seem to relish zweibach and other starches and for several days are unable to handle the usual amount of milk without pain after ingestion.

The following tabulation of cases answers the question of its infectivity:

1. On September 28, Beth Porter, eight years old, took sick with vomiting, chalk stools followed by jaundice of four days' duration.

2. October 9, Marjory Orme, five years old, her playmate and neighbor, followed with same story.

3. October 11, Vivian Stephens, four years old, playmate of first two and cousin of Orme child, took sick.

4. October 13, June Staples, four years old, cousin of Orme child, who lived two blocks away and visited infected neighbors two or three times a week, took sick with same story.

5. October 20, Nathan Porter, three years old, cousin and occasional playmate of Beth Porter, living one-half mile away, had same course with exception of a diarrhea. No effort had been made to keep above children from playing with first case until jaundice was marked.

6. November 4, Willard Stephens, nine years

old, brother to case three, came down with same course.

7. November 13, Ned Stephens, three years old, took sick. No vomiting and only conjunctiva involved. Brother to case three.

8. November 15, Blanche Stephens, six years old, sister to case three, same course plus convulsions at onset.

By this time the mothers in the neighborhood agreed with me that the disease was contagious and kept their children at home, so our last new case was two weeks ago.

Several other cases occurred during this time, but could not be traced to this particular neighborhood. Three cases in the McBride family in Lincoln and one Shields baby were sick in October and several cases were reported to me by neighborhood gossip. These not occurring in my own families were not followed up.

Prognosis seems always good with no sequela, though deaths in women during pregnancy and very young children have been reported. The child, however, is most miserable for two weeks and I believe more school time is lost in our district from this than from tonsillitis or any other common condition.

In conclusion let me say portions of rural Utah, Tooele County at least, are suffering from an endemic disease causing vomiting and jaundice of ten days or two weeks' duration, markedly infectious to children of two to twelve years of age, for which no cause is known and no method of transmission is as yet discovered.

Tooele, Utah.

DISCUSSION

GEORGE A. COCHRAN, M. D. (Deseret Bank Building, Salt Lake City)—The cases of infectious jaundice observed during the past six months have numbered four. The infectious nature of the disorder has not been conclusive.

The ages range from twelve to eighteen years. The history of the cases are similar. The patient complains of malaise and fever with a dull, heavy ache in the epigastrium. The jaundice is progressive and becomes very intense. The temperature ranges between 100 and 102. Itching is slight. Food increases the discomfort. The urine is dark brown. Leucocytosis ranges between 12-14,000.

It requires three to four weeks for the disorder to run its course. I have not seen two cases in the same family but Dr. Peck's cases seem to establish that it is a disorder disseminated by contact.

W. W. BOARDMAN, M. D. (Union Square Building, San Francisco)—Doctor Peck's report calls attention to the confusion at present existing in connection with the various types of jaundice associated with gastro-intestinal disturbances and fever. A brief review of the literature will show a multiplicity of terms and confusion in their use.

It is generally recognized that epidemics of jaundice do occur, some of which are dependent upon infection by the spirocheta ictero-hemorrhagica. It is less generally recognized that in other epidemics, the spirocheta is not the etiological factor. In the majority of these latter epidemics, the active agent has not been discovered, although in some an organism of the typhoid-para-typhoid group has been found. Differentiation of these two groups of epidemic jaundice, on clinical grounds alone, is difficult or impossible and the only positive method must rest upon the demonstration or failure to demonstrate the spirocheta ictero-hemorrhagica. This fact explains some of the confusion in the literature, as several epidemics have been reported as due to the spirocheta ictero-hemorrhagica when there is no proof that such was the

case. It is therefore important to keep in mind that epidemic jaundice does occur in the absence of the spirocheta ictero-hemorrhagica, as pointed out by Peck and others.

Another source of confusion in this field is the commonly held conception of so-called catarrhal jaundice, as the result of obstruction of the ampulla of Vater. Jones, Minot and others have demonstrated the impossibility of differentiating catarrhal jaundice from epidemic jaundice of unknown etiology on either clinical or pathological grounds and it would therefore seem desirable to dispense with the term "catarrhal jaundice," substituting sporadic infectious jaundice in its stead. With this conception of catarrhal jaundice, the entire subject becomes clearer.

Following Jones and Minot, I should like to suggest the classification of all these types of jaundice as infectious, occurring either sporadically or in epidemics. The sporadic cases are the cases of so-called catarrhal jaundice, the etiology of which is as yet uncertain. The epidemic cases occur in two groups, the one due to the spirocheta ictero-hemorrhagica—the other due to, as yet, unknown agents.

Few cases of epidemic jaundice have been reported from the Pacific Coast—one by Tickell from Grass Valley in 1922, was accepted as dependent upon the spirocheta ictero-hemorrhagica, but without proof.

It seems probable that with a better understanding of this subject, more frequent epidemics will be recognized and it is to be hoped that with our improved methods of studying biliary tract infections, definite knowledge regarding the etiology of these conditions will be obtained.

DONALD JACKSON FRICK, M. D. (1136 West Sixth Street, Los Angeles)—Light cast on the field of infectious jaundice reveals a jumbled array from which Weil's Disease, through the work of Inado and Ido in 1915, has extricated itself. What remains, with its motley of terminology, is awaiting a careful untangling. The clinical differentiation of cases of infectious jaundice, with an effort to rule out Weil's Disease, is not as simple as one might gather from Doctor Peck's paper. Still with the definite results which are obtainable through guinea pig inoculation, Weil's Disease can be ruled out in any given case. Early in the disease the blood should be utilized for such tests, while after the ninth day the urine will contain the organisms in larger numbers than the blood.

Certainly Weil's syndrome should be included under any general heading of an acute infectious jaundice.

That a better understanding of this condition has differentiated it from the general class gives promise that gradually the causative agents will be sufficiently understood to make possible a complete classification under the heading, "Infectious Jaundice."

Doctor Peck has, in this study, ruled out spirocheta ictero-hemorrhagica as the etiological factor. His cases, fall, therefore, into the general class of unknown etiology.

Jones and Minot have made many investigations in this field, placing the sporadic case (formerly classified as catarrhal jaundice) definitely under the general classification.

Although it seems futile to haggle over classification when there is so little known of etiology, still there is nothing to be gained by retaining so archaic and meaningless a term as catarrhal jaundice.

Epidemics of infectious jaundice are of not uncommon occurrence, particularly in war times. It has been considered that in some of these large series of cases bacillus coli or members of the typhoid group have been the causative organisms.

The clinical similarity of these outbreaks is marked. The sporadic cases, though as a rule less stormy, present much the same general picture.

In a case of such persistently repeated outbreaks as Peck experiences in his section of Utah, one feels that a study of duodenal contents of these patients along bacteriological lines might yield fruitful returns.

Doctor Peck has here brought out interesting proofs in the seasonal incidence and geographical distribution of the epidemics in his section. In these, together with his observations of contact cases, he has laid a foundation for further valuable investigation.

In the widely diversified life of the average busy

practitioner there is so little time for other than purely clinical investigation that one must congratulate Doctor Peck on his careful study.

T. B. BEATTY (State Board of Health, Salt Lake City)—I wish to congratulate Doctor Peck on his careful study and timely paper on a subject which deserves more attention than it has received in this country, doubtless owing to the mild type of the disease, which is attended with an almost negligible mortality, and the further fact that the extent of its prevalence has not been recognized.

Dr. Peck's record of many cases extending over a long period in his locality undoubtedly could be duplicated in many places. Neither health authorities nor others interested in the study of the disease have had knowledge of the actual conditions as no provision has been made for systematic reports. It is my opinion that this situation should be remedied either through notification required by law as in the other communicable diseases, or voluntary reports by physicians to boards of health.

While the literature shows a curious diversity of opinion on nearly every phase of the subject, certain facts are obvious: the disease is severe enough to cause much interference with school attendance, suffering and other inconveniences, and it is communicable. These facts justify serious efforts on the part of the medical profession to clarify the existing state of confusion of ideas as to etiology, mode of transmission, prophylaxis, etc.

The only outbreak heretofore reported to the State Board of Health in Utah was that referred to in Kaysville which was reported by Dr. Sumner Gleason in 1915. About forty cases occurred and contacts were traced in nearly all of them similar to those reported by Dr. Peck.

The fallacy of the theory advanced by some writers that the disease always originates in and is spread through rats was definitely disproved in that outbreak as there were no rats in Kaysville.

I wish to assure the members of the society that the State Board of Health will render all the assistance in its power through its Laboratory and Bureau of Epidemiology in assisting them in their study of the disease and measures of prevention. I also hope that hereafter the board will be notified in all cases diagnosed as infectious jaundice.

Lesions of the Extremities Associated With Diabetes Mellitus—A series of fifty-two cases of diabetes mellitus with associated lesions of the extremities has been observed by Frederick A. Collier and Phil L. Marsh, Ann Arbor, Mich. (Journal A. M. A.). The cases were unselected and represent 8 per cent. of all cases of diabetes mellitus seen during this time. As an outstanding fact, all the patients in the entire group had mild diabetes of long standing. In no case had there been adequate treatment, and glycosuria had been uncontrolled throughout the course of the disease. In fact, the very mildness of the disease was responsible for its neglect by both patient and physician. It was only with the advent of visible complications that the patients came for treatment. All these patients presented lesions in the lower extremity, and none had significant lesions in the upper extremity. Of these patients, eight, all women, had ulcers that had not responded to local treatment. All of them had definite varicose veins, which were thought to be responsible for the ulcers. It is of interest to note that the knee-jerks were present in all but two of the patients. Under dietetic treatment, the ulcers healed promptly with a continuation of the same type of local treatment that had failed previous to the institution of the diet. In twenty-four cases, infection was the initial event. The portal of entry was through some break in the skin, as an abrasion from a shoe, the trimming of a corn, a crack in a callus, all trauma of a minor nature in an unwashed foot. From here the infection spread slowly or rapidly. There were twenty cases of gangrene; five of these cases were complicated by infection. The authors direct attention to the fact, however, that not all lesions of the extremities associated with diabetes mellitus are gangrene. The use of insulin aids treatment of the types with infections by preventing coma and abolishing glycosuria. The prognosis is still grave in the group in which there are both impaired circulation and infection.

THE X-RAY DIAGNOSIS OF DISEASES OF THE NASAL ACCESSORY SINUSES, WITH SPECIAL REFERENCE TO SPHENOID AND ETHMOID DISEASES

By ROBERT A. POWERS, M. D., *Palo Alto*

After many trials I became convinced that accurate ethmoid and sphenoid interpretation was more nearly possible with the stereo method and adopted the 107° angle plate with the addition of an upward tube shift, the patient being erect to bring out fluid levels.

Mapping of the ethmoid sinuses within definite bony landmarks is an uncertain method in many cases.

Steroscopes of the paranasal sinuses is a valuable method which should not be discontinued.

A combination of Granger's 107° angle with a 5-inch upward tube shift at 40-inch distance through a small dental cone, with a lateral and a Waters projection in addition gives the most useful information regarding the paranasal sinuses.

DISCUSSION by Robert R. Newell, San Francisco; Frederick H. Rodenbaugh, San Francisco; James B. Bullitt, San Jose; H. J. Ullmann, Santa Barbara.

THE need for a standard method of sinus radiography is great. The fact that so many methods are in use is proof of the inadequacy of any of them. While some difference of opinion occurs in the interpretation of maxillary and frontal sinus conditions most of the controversy centers about the sphenoidal and ethmoidal cells. As the condition of these cells is most difficult to diagnose clinically, it is important that the radiologist render accurate information. Frequently, too, errors in ethmoid interpretation are not uncovered due to their inaccessibility, which leads the radiologist into a routine which cannot fail in time to cast discredit upon the method and its value. A glance at the ethmoid capsule removed from the dried skull will show a complicated labyrinth of thin-walled cells which have completely honey-combed the bone. Indeed, sometimes even the wings of the sphenoid, the maxillae and the nasal bones are invaded as well as the middle turbinate bones. These multitudinous cells, unlike the mastoid, are completely surrounded by the bones of the face and skull. To correctly interpret bony thickening, erosion and exudate is difficult and, at times, impossible. A radiograph, made in any direction, will represent the superimposed shadows of from four to fifteen cells, in addition to those of the enveloping structures. Mastoid interpretation is easy in comparison as the cells can be uncovered without difficulty.

In an attempt to determine by which method or methods the most information could be obtained, I have studied the methods of Van Zwaluwenberg, Pfahler, Blaine, Grier, and Granger. Van Zwaluwenberg introduced the vertical stereoscopic shift which greatly aided symmetry. Pfahler projected the ethmoids and sphenoids vertically downward on an intra-oral or extra-oral plate. This method appears to have value in sphenoid interpretation, but has been found most confusing in ethmoid conditions as the ethmoid cells nearly always appear opaque. Blaine's method for standardizing sinus technique includes the 23° angle. The Waters position, a vertical extra-oral position advocated by Law, and a lateral view. He excludes stereoscopy and depends on 23° angle for the ethmoid shadows. Grier

omits the Waters position and the lateral, taking four postero-anterior plates, each one stereoscopic with the next—an excellent method, but incomplete, in being all in one direction, antero-posterior.

The exhaustive study of Granger has been found most useful. In brief, his method consists in using a perforated plate-changing tunnel with a hole for the nose, the head resting on the glabella and the alveolar process of the superior maxilla. One antero-posterior view is made on a 23° angle board. Another is made on a reversed 17° angle board. One lateral projection is made. Granger, by standardizing the position, holds that the ethmoid and sphenoid cells will fall within definite areas limited by bony landmarks and checked by comparing corresponding areas on the three different exposures. He also called attention to the curved line of the upper margin of the sphenoid in the 107° angle, mentioning that a thickening of this line meant hyperplasia, an absence, fluid, or polyps. While I have found these contentions to a certain extent true, certain difficulties arise in using the method unmodified. They are:

1. The exclusion of stereoscopy.
2. The normal variation of skull angles precludes absolute standardization of the 107° angle. In an examination of but a few specimens I have found a 15° variation, which is enough to alter the position of the curved line.
3. There is a normal variation in the thickness of the curved lines due to difference in degree of pneumatization of the sphenoid body.
4. A posterior ethmoid may and frequently does overlie the sphenoid and underlie the curved lines.
5. It is impossible to accurately map the ethmoid cells within prescribed boundaries due to differences in degree of pneumatization, the posterior ethmoids often invading the anterior ethmoid region and vice versa.
6. In the Granger 107° angle position, the ethmoids are obscured by the frontal, sphenoid and basilar portion of the occipital bone.
7. In the 23° angle plate they are obscured by the nasal bones, turbinate bones and the lower half of the antrum by the petrous portion of the temporal bone.

After many trials I became convinced that accurate ethmoid and sphenoid interpretation was more nearly possible with the stereo. method and adopted the 107° angle plate with the addition of an upward tube shift, the patient being erect to bring out fluid levels.

It was found that at normal distance, 22 inches, the second plate gave a projection similar to the 23° angle position and an excellent view of the ethmoid capsule, uncovered, but not of the sphenoids in all cases. At the suggestion of Drs. Chamberlain and Newell of Stanford University Hospital, the tube plate distance was increased to 40 inches, which brought out shadows at a distance from the plate. It was found, however, that at this distance a 2½ inch shift gave little displacement of the petrous portion of the temporal bone and the ethmoids were not sufficiently uncovered to be ideal. The shift was changed to 5 inches and the result was

found to be most gratifying, as one plate gave Granger's 107° angle position with the curved line and the other gave an excellent view of the ethmoid capsule. Viewed singly much was added to the ethmoid and sphenoid study and viewed together, it was found that the accommodation of the eyes gave a stereoscopic image quite as good as with the 2½ inch shift, but with a much more favorable uncovering of the pneumatic structures. All plates are made 40 inches in the erect position, using a small dental cone. The Bucky has not been found necessary. Indeed, the films appear clearer without it. A very definite idea of the ethmoid structure can be obtained both as to density and hyperplasia. The sphenoids are clearly brought out. A lateral view is added to determine the depth of the frontals and as a check on the location of ethmoid or sphenoid density. The Waters position is substituted for Granger's 25° angle position as the writer believes more information is obtained.

CONCLUSION

1. Mapping of the ethmoid sinuses within definite bony landmarks is an uncertain method in many cases.

2. Stereoscopy of the paranasal sinuses is a valuable method which should not be discontinued.

3. A combination of Granger's 107° angle with a 5-inch upward tube shift at 40-inch distance through a small dental cone, with a lateral and a Waters projection in addition, gives the most useful information regarding the paranasal sinuses.

The Palo Alto Hospital.

DISCUSSION

ROBERT R. NEWELL, M. D. (Stanford University Hospital, San Francisco)—Dr. Powers has gone ahead with the specialized x-ray study of the ethmoids and sphenoid. I, too, have adopted Van Zwaluwenberg's method of 40-inch distance and sagittal stereo. shift for the ethmoids. I would be very unwilling to give up the stereo., however much Granger may have taught us about the appearance of the sphenoid and ethmoids on single films. It seems to me worth while to take the films with the patient sitting, as does Powers, in order to show fluid as different from soft tissue filling the sinuses. I have found it worth while also to make one horizontal ray exposure with the patient lying on his side. Free fluid will gravitate to the dependent portion of the sinus and demonstration of this shifting proves that the observed density is in fact due to fluid and nothing else. I am using the Bucky diaphragm for routine sinus studies, believing that the contrast is thereby improved. I must agree with Dr. Powers that it is not essential, however. I continue to depend on the Waters position for the best x-ray evidence in regard to the maxillaries.

FREDERICK H. RODENBAUGH, M. D. (516 Sutter Street, San Francisco)—I have been greatly interested in observing Dr. Powers' demonstrations of sinus technique, and feel certain that he has done much to clarify the difficult phases of accessory sinus disease.

My practice has been to use Van Zwaluwenberg's technique in the examination of ethmoids and sphenoids, and it has been satisfactory. It is my impression that familiarity with the method will enable one to determine, with a fair degree of accuracy, the presence of ethmoid and sphenoid disease. In addition I have used a mouth film for a sagittal projection of sphenoids which has been helpful in determining the size of sphenoids, and their comparative densities. The diagnosis of ethmoid disease has not been successful with mouth films. As a routine I have not used the Bucky diaphragm, and have not felt the necessity for its use after comparisons.

Doctor Powers is to be congratulated on the technical

accuracy of his work and very interesting group of cases he has presented.

JAMES B. BULLITT, M. D. (Garden City Bank Bldg., San Jose)—The difficulties attending the study of paranasal sinuses are generally recognized by roentgenologists who have strongly felt the need of improved methods in the examination, especially of the sphenoidal and ethmoidal cells. Therefore the proposals of Granger were received with great interest, although his conclusions are yet to be confirmed. Powers disputes Granger's statement that with the 107 degree angle it is possible to make strikingly similar radiographs of very differently shaped heads. Powers in a few specimens finds a variation of as much as 15 degrees. As Granger's findings are primarily and largely based on the correctness of this proposition, it is to be hoped that further and accurate studies will soon appear dealing with this phase of the subject.

Powers' idea of using Granger's angle board position at a distance of forty inches and combining with it the making of stereoscopic plates with vertical instead of lateral shift, as proposed by Van Zwaluwenberg, appears most logical.

Doctor Powers' proposal appears to be a distinct advance toward the goal of a better exposition of the pathology of the sphenoidal and ethmoidal regions.

H. J. ULLMANN, M. D. (Santa Barbara Cottage Hospital, Santa Barbara)—I was much interested to hear that Dr. Powers had not been able to get essentially similar pictures with the Granger position. So far I have been fortunate in being able to do so, and it will be a blow to find that I cannot. Since using the Granger position and his recommended 107 degree angle, I have felt considerably happier in attempting to interpret films of the sphenoidal region, but the ethmoids still remain a great trial and stumbling block. Doctor Powers' method of combining the glabellar-maxillary position with a 40-inch distance and vertical stereo. shift appeals to me strongly and I am going to give it a trial.

DOCTOR POWERS (closing)—I hope that I have not given the impression that the method I am using is an easy solution of the ethmoid and sphenoid problem. It is simply an attempt to combine the best of many methods on four plates and has been found to be an improvement in my hands. Special cases will require more, such as the vertical intra-oral method in certain hyperplastic sphenoid cases.

Isthmospasm of the Fallopian Tube—Isthmospasm of the fallopian tube is described by W. T. Kennedy, New York (Journal A. M. A.), as being an obstruction between the meeting of the ovum and the spermatozoa and may be the only obstruction preventing the passage of a fertilized ovum from the tube into the uterus—a predisposing factor in ectopic gestation. Isthmospasm is one condition that will explain selective sterility. Attenuation of an isthmospasm would explain some conceptions. Isthmospasm exists in some women complaining of sterility or sterility and dysmenorrhea, and is frequently associated with antelexion. Isthmospasm is caused by the improper balance of the autonomic and sympathetic innervations, either the autonomic being in excess or the sympathetic being deficient. A tube, having an apparently normal ampulla and no evident abnormality of the isthmus, even though it obstructs the passage of carbon dioxide gas by insufflation, should not be removed at operation because we may render a patient permanently sterile who is now only temporarily so.

Raynaud's Disease Complicated With Gastric Ulcer—The case reported by Julius Friedenwald and William S. Love, Baltimore (Journal A. M. A.), presents a typical instance of Raynaud's disease complicated with gastric ulcer. While it is most difficult to demonstrate a definite relationship existing between the two affections as occurring in the same patient, it is extremely interesting to note, and it is quite possible to conceive, that both may have originated in a vascular spasm. That similar spastic manifestations of the blood vessels occur in the internal organs in Raynaud's disease is revealed in the well observed attacks of hemoglobinuria and of abdominal colic noted at times in this affection.

EXTRAPLEURAL THORACOPLASTY

SCOTT D. GLEETEN, M. D., *Monrovia*

This operation is generally applicable in patients where artificial pneumothorax is indicated and cannot be given. It may be done in any number of stages under local anesthesia.

It produces very little shock. I make a plea that it be more generally used.

DISCUSSION by *Ralph B. Scheier, San Francisco; Harold G. Trimble, Oakland; J. W. Robinson, Los Angeles.*

DISEASE of the chest presents to the clinician more problems in mechanics than that of any other part of the body and the recital of the obstacles met and overcome is one of the most interesting stories in medicine.

The evidences of disease within the chest have been carefully studied, particularly since Laennec; abscesses were recognized, the cavities of tuberculosis were diagnosed, bronchiectasis was known, but the problem of the treatment of these conditions by drainage and the approximation of the walls of the diseased areas within the rigid chest wall was one of great difficulty. Thoracoplasty, as a means of overcoming the rigidity of the chest wall, was first brought to the attention of the medical world by Carl Spengler in 1890. In 1905 Brauer and Friedrich adopted an operative plan similar to the Schede, which afforded excellent exposure of the ribs, but was attended by so much shock and such a high mortality rate that it fell into disrepute.

Wilms operation was much simpler and more easily done, was attended by much less shock and really gave impetus to surgery for the relief of subacute and chronic inflammatory intra-thoracic disease.

This operation consists of the removal of a section of the first seven or eight ribs through a para-vertebral incision followed in a few weeks by a section of the costal cartilages of the corresponding ribs. This allows underlying cavity or abscess walls to approximate, affords an opportunity for more or less lung rest and gives a vertical column of rib sections against which pressure can be made without injury to the underlying viscera. It does not, however, secure complete collapse either in the horizontal or the vertical plane.

Sauerbruch's operation done through a para-vertebral incision with removal of a section of the first to the eleventh ribs, including the angles, is the operation of choice. It is done in at least two stages under novocaine-adrenalin anesthesia. From 4-11 centimeters is resected from each rib, depending upon the ease of access, condition of the patient, etc.

I have been able to collect some recent reports of this operation, including H. Hauke, who says that as between artificial pneumothorax and thoracoplasty (Sauerbruch), thoracoplasty will be found the easier to perform. He believes the lung compression to be more uniform than in artificial pneumothorax. Gravesen uses Sauerbruch's method but he fortifies novocaine anesthesia with ether during the difficult parts of the operation.

Santy and Guilleminet also use a modified Sauerbruch operation in the treatment of bronchiectasis and quote Sauerbruch's report of thirty cases with but one death. Archibald follows Sauerbruch's plan, using a two-stage operation under novocaine and

nitrous oxide anesthesia. He says he used to think that artificial pneumothorax should be tried first but now believes that a certain percentage of cases do better if thoracoplasty is done in the beginning, such as where refills would be difficult to obtain. Hedblom reported a series of ten cases of unilateral, so-called, bronchiectasis, in which he used a many-stage operation with resection of 6-12 centimeters of as many ribs as he deemed necessary through a para-vertebral incision. After resection absolute alcohol was injected into the nerve trunks. The remaining sections of the corresponding ribs were later resected through an anterior incision. He used novocaine, fortified with nitrous oxid oxygen anesthesia. Thearle reports thirteen cases done by Sauerbruch's method with two cures and six markedly improved. He uses local anesthesia but does the work in one stage. Lambert and Miller review twenty cases treated by Sauerbruch's method. They are not clear as to the anesthetic used but append the results of several operators which I have taken the liberty of copying.

	No. of cases	Operative mortality pct.	Late mortality pct.	Total mortality pct.	Cured or greatly improved pct.
Sauerbruch	381	12	....	....	35
Gravesen	105	....	....	9	41
Stocklin	100	....	....	24	37
Bull	92	10	25	35	45
Archibald	15	14	8.5	22.5	42
Lambert and Miller.....	20	15	15	30	55

Watson reports four cases and advises that thoracoplasty be done in cases in which artificial pneumothorax cannot be given. He uses local anesthesia.

In my opinion there are four main types of subacute or chronic inflammatory intra-thoracic disease in which extra-pleural thoracoplasty may be indicated, and the indications for thoracoplasty are virtually the same as for artificial pneumothorax, namely, severe more or less unilateral cases of tuberculosis that are not doing well or that it appears will not do well under sanatorium or home care; severe more or less unilateral bronchiectasis or lung abscess cases that are not improved by postural drainage or vaccines; and the chronic unilateral post-influenzal cases resembling tuberculosis and requiring practically the same surgical treatment.

In the aforementioned types there is a great class of cases in which artificial pneumothorax cannot be given at all because of pleural adhesions, or in which the space is so small that no beneficial result can be expected from artificial pneumothorax, and cases receiving artificial pneumothorax who have lost their free spaces following an attack of pleuritis. In these cases thoracoplasty offers considerable hope. Neither the presence of air following a pneumothorax nor a small pleural exudate in the side to be operated upon is a contra-indication. Early unilateral renal tuberculosis, slight laryngeal involvement, or a bronchial fistula, need not interfere with the use of thoracoplasty. The contra-indications are other serious visceral diseases or complications of existing disease such as amyloid, etc. In general, the patients who are fairly well nourished and whose digestion is good, do best—notable gain in weight is rather

unusual following either artificial pneumothorax or thoracoplasty.

The patient who is about to be operated upon should be under the observation of the surgeon for some time and should be gotten into the best physical condition possible. The blood picture should be carefully studied and if an anemia is present appropriate remedies should be used. It should also be seen to that the elimination is good. If the patient is in the habit of clearing out cavities or bronchiectatic areas, this should be done before he is placed on the table. An hour before the time of the operation he should be given morphine sulphate grain, one-eighth, hyperdermatically, and another one-eighth grain of morphine may be given when the patient enters the operating room if it is thought necessary. He should lie on the least affected side with a folded pillow between the shoulder and the hip to separate the ribs. See that he lies comfortably and that the nurse is a good moral anesthetist. The 1 per cent novocaine adrenalin solution should be freshly prepared. We are in the habit of making a small wheal with a fine platinum needle as a point of entrance for the steel needles which are used for further infiltration. These needles are 22 gauge and four centimeters long, ten and twenty cc. Luer syringes are used. A wheal is first made three to four fingers' breadths from and parallel with the spinous processes extending from the twelfth to the fourth ribs. Through this the needles are thrust deeply in every direction until thorough infiltration has been made, paying particular attention to the points of exit of the intercostal nerves; about 400 cc. of novocaine is used in each stage. The incision is made through the wheal. More anesthetic may be used as the operation progresses. When the ribs are encountered the eleventh is quickly cleared of muscle and periosteum and resected close to the spine—the cut end of the rib is seized with a grasping forceps, drawn out as far as possible and a section 8 to 11 centimeters long is removed. After a rib has been resected the remainder of the sections can be removed much more quickly on account of the increased space in which to work.

It is quite important to avoid injuring the intercostal nerves and arteries but too much time need not be given to removing the periosteum. After the ribs from the eleventh to the sixth have been removed each intercostal nerve should be picked up and injected with a few drops of absolute alcohol. This prevents pain and makes further anesthetization much more easy if anterior section is contemplated. A long rubber twenty-four-hour drainage tube should be inserted and the wound closed in layers.

As a rule, since there is considerable sero-sanguinous drainage, a very large dressing should be applied and the patient should be asked to lie on the operated side as much as possible. Surprisingly little shock follows the operation but there may be rapid pulse and dyspnoea for two or three days. Occasionally a large amount of foamy, watery sputum is coughed up. No marked change may be noted in the patient's general condition following the first stage unless the disease be basal, but in three or four weeks the second stage may be under-

taken, using the same procedure. At this time it will be found necessary to have a retractor with a long, wide blade to elevate the scapula in order that the operator may work under it and some difficulty may be found in resecting the first rib on account of its position and shape. It is here that some operators use nitrous oxide and oxygen to supplement the novocaine.

The success of this operation depends largely upon two factors: First, a tractable patient, and second, the removal of as large a section of rib as possible. The test is said to be absence of palpable rib between the spinal column and scapula.

The improvement is rapid following the second stage and continues for a considerable time. It may be facilitated by various measures which tend to compress the operated side. The amount of sputum will be much lessened and in the tuberculous may become negative to tubercle bacilli. In any case, where amelioration of symptoms is not obtained by the two-stage operation, the remainder of the resected ribs may be removed through an anterior incision in as many stages as seems necessary, and complete collapse obtained in a horizontal plane.

The post-operative care differs considerably from that of a patient suffering from an acute surgical condition and is divided into two periods; that immediately following the operation and until the wound has healed, and that following the healing of the wound and until the patient is discharged. In the first period as little morphia as possible should be given since the action of the cilia of the epithelial cells should be preserved in order that mucus and pus may be carried up and expectorated. This may be materially assisted by a posture or position which the patient recognizes as giving him the greatest relief.

In the second post-operative period careful attention should be paid to the hygienic-dietetic treatment and the use of compression apparatus as before mentioned. A scoliosis is likely to occur with the convexity toward the operated side. It is rare that symptoms are produced by this condition but from the aesthetic point of view simple postural treatment may tend to prevent its becoming a source of worry to the patient.

The changes that occur in the collapsed lung are, of course, the approximation of cavity or abscess walls, collapse of air cells, a dilatation of the blood vessels and a passive congestion. The lymph flow is increased with better lymph drainage of the lung. The end result is a gross fibrosis.

The following case report is a typical one: Male, white, twenty-four years of age; family history negative to tuberculosis. He had the usual children's diseases. In 1914 left lobar pneumonia followed by empyema and a rib resection for drainage. He was in the service from April, 1918, to August, 1919, and was in the Walter Reed Hospital for acute bronchitis. In 1921, while attending the University of Wisconsin, he had lobar pneumonia again. About this time tubercle bacilli were found in his sputum and he returned to his home in Iowa. He later came to Monrovia and was in a sanatorium under treatment for some time. He suffered from very severe hemorrhages during March, 1922. His ex-

pectoration was heavy yellow and averaged about 100 cc. in twenty-four hours. His temperature gradually became normal but slight hemorrhages were frequent and weakness was marked. The patient seemed to be doomed to a life of invalidism with no prospect of being able to be about. Physical examination of the chest showed marked retraction of the whole left side, anteriorly and posteriorly, with a rib resection scar in the axillary line. There was a large cavity in the infra-clavicular region with bronchial breathing and there were numerous rales on both quiet breathing and cough. The apex beat was outside the nipple line in the fifth inter-space. The right side showed some pleural friction sounds and clicks but there were no evidences of activity. Pneumothorax was tried but no free space of any size could be found. On November 15, 1923, the first stage of a thoracoplasty was done and on May 15, 1924, the operation was completed.

His sputum now averages about 30 cc. in twenty-four hours; the cough is much less and he gets out and about with very little difficulty. He has worn a compression bandage for some time and has taken heliotherapy in his back-yard at home, both of which measures, I believe, are of great benefit.

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DISCUSSION

RALPH B. SCHEIER, M. D. (Flood Building, San Francisco)—The plea made by Doctor Gleeten for the more general use of extrapleural thoracoplasty is in accordance with the views expressed by the majority of physicians and surgeons who are interested in the diseases of the chest. Nowhere in the realm of medicine and surgery is the collaboration of the physician and surgeon so essential as in cases in which this operative procedure is indicated. Available statistics show the mortality following thoracoplasty varies from 15 per cent to 35 per cent. This high mortality will be materially reduced when greater care is exercised in the proper selection of cases suitable for operation. This can only be done by those especially qualified by years of experience in diseases of the lungs. Emphasis should be placed upon the statement of Doctor Gleeten that pneumothorax should be attempted in every case before resorting to the more heroic measure of thoracoplasty. The fact that artificial pneumothorax cannot be induced in 30 to 40 per cent of indicated cases on account of adhesions which obliterate the pleural space will contribute to a more universal application of thoracoplasty, as it is the only known procedure that offers any aid in certain cases of otherwise hopeless tuberculosis.

Case reports show that 50 per cent of those operated are either arrested or markedly benefited. The result following the operation depends not alone upon the skill of the surgeon but to a greater degree upon the skill of the diagnostician in selecting the type of case in which the operation is indicated, for no matter how skilfully the operation is performed, the final measure of success will vary with the diagnostic acumen exhibited by the specialist who advocates the operation. The choice of anaesthetic is of great importance. Ether is absolutely contraindicated on account of the liability of activating a latent tuberculous process in the opposite lung. Personally I have seen but few cases of tuberculosis requiring either artificial pneumothorax or thoracoplasty that did not show some involvement of the opposite side. I believe that Doctor Gleeten's method of local anaesthesia for resection of the lower ribs and the use of nitrous oxide and oxygen anaesthesia for the upper first and second ribs is the best plan of procedure.

While thoracoplasty is recognized as a wonderful advance measure in the treatment of tuberculosis and other lung affections, it still remains necessary for the patient to receive the benefit of proper medical treatment long after the healing of the wound.

HAROLD G. TRIMBLE, M. D. (Thayer Building, Oak-

land)—It is pertinent at this time to stimulate interest in a well-recognized surgical procedure in pulmonary tuberculosis. The question always arises, "When is the optimum time to advise an irrevocable procedure such as thoracoplasty?" Many times we wait too long, after the usual hygienic therapy, with bed rest, under satisfactory conditions, before advising lung collapse. Attempted pneumothorax is unsuccessful, and another long wait ensues, before thoracoplasty is seriously urged. Extension to the comparatively sound lung, in the meantime, results in an active bilateral lesion that does not warrant further active interference. On the other hand, the many comparatively extensive unilateral lesions that will respond to adequate hygienic care, do not warrant the too hasty use of an operative type of therapy.

There is a middle ground, however, that we, with increasing experience, will be able to tread more surely, and feel that in thoracoplasty we have made an invaluable addition to our armamentarium in the handling of a difficult type of unilateral lung lesion.

J. W. ROBINSON, M. D. (834 North Occidental Boulevard, Los Angeles)—There is no doubt that Doctor Gleeten has struck the keynote of treatment in certain classes. There has been too much pessimism and a tendency "to throw up the sponge" when a certain stage has been reached in certain of these cases. We owe it to the individual patient, and we owe it to the medical profession, to extend every aid possible to relieve symptoms and cure these cases. Trimble has well stated that there is a middle ground. There is no doubt but what the high mortality rate has discouraged many physicians from referring these cases to the surgeon. I believe this mortality rate can be materially reduced if cases are operated on earlier. It is not fair to an operation to wait until the patient is thoroughly exhausted, and organs, such as the heart and kidneys, show degenerative changes from long continued sepsis, before this operation is done. There is no doubt but what the cases should be carefully selected so that this operation, with its poor cosmetic effect, should not be done needlessly. The probabilities are, with more careful selection of cases, especially during earlier stages, and possibly through more refined technic, that the mortality rate will be materially reduced.

Doctor Scheier has well stated the necessity for co-operation between the physician and the surgeon. Probably all would benefit if there were more consultations between the two divisions in the scientific practice of medicine.

Dochez Scarlet Fever Antitoxin in Thirty-one Cases—R. H. Graham, Aurora, Ill. (Journal A. M. A.), has observed thirty-one cases treated with unconcentrated scarlet fever serum by the Dochez method. In the thirty-one patients treated, twenty-one developed serum disease. These reactions ranged in severity from slight urticarial eruptions to a generalized edema, and the temperature as high as 105 F. Six of the cases showed anaphylaxis in the first hour. Eighteen cases either occurred or recurred from the second to the seventh day. Nine patients had an elevation of temperature from 100 to 105 F. Serum disease occurred in twenty-one cases out of a possible thirty-one. The size of the dose apparently did not influence the reaction. Immunization was established in twenty-four cases, all of those treated the day of exposure. Serum injected the second day after exposure did not protect two patients out of three. Therapeutic injections gave little apparent relief. One advanced case showed no improvement with 40 c.c. of unconcentrated serum, and there was a serious serum disease.

Centric Puerperal Palsies—Centric puerperal palsies are of interest to the obstetrician, the neurologist and the internist. These palsies are usually hemiplegias, though commonly the face, arm and leg are unequally involved. Infrequently monoplegias occur. A primary partial aphasia may be the forerunner. James E. Talley and Dorothy L. Ashton, Philadelphia (Journal A. M. A.), analyze forty-two cases recorded in the literature.

ALLERGY AND ITS RELATION TO THE OTOLARYNGOLOGIST

By GEORGE PINESS, M. D. AND HYMAN MILLER, M. D.,
Los Angeles

Allergic diseases often limit their manifestations to the region of the ear, nose and throat.

Many of these manifestations are overlooked because of their true character remaining unrecognized.

This results in much unnecessary therapy, both topical and surgical, without relief to the patient or satisfaction to the physician.

Two hitherto undescribed types of allergic diseases of the nose and throat.

Importance of the nose and throat specialist interesting himself in proper methods of history notes and examination from the allergic viewpoint emphasized.

ACTIVE DISCUSSION—really a debate—by Hill Hastings, Los Angeles; Cullen F. Welty, San Francisco; Eugene R. Lewis, Los Angeles; Benjamin Katz, Los Angeles, and George Piness, Los Angeles.

THE close relationship between diseases of the nose and throat and allergy is no new story, nor is it our intention to again cover ground which has been the subject of innumerable investigations and discussions. Our purpose in again bringing the two subjects together is to attempt to present some new lines of thought with which we have been impressed in the last several years as we have observed the ever-widening field of conditions which are being so frequently brought into what was formerly thought to be the rather narrow province of allergy.

Allergy has been defined as a natural and often inherited state of human hyper-sensitiveness to proteins, more or less permanent in character, as opposed to anaphylaxis, which is an experimental condition of temporary character having much in common with it in symptomatology. Allergy, as commonly evidenced in humans, gives us the familiar pictures of hay-fever, asthma, eczema, urticaria and angio-neurotic edema, manifestations of cellular hyper-sensitiveness to proteins, be they derived from pollens, foods, animal danders or other less common sources. Emphasis is laid on the cellular nature of the hyper-sensitiveness in allergy, for on this fact rests the character of each of its manifestations. Thus it is that in hay-fever we have an essential sensitization of the mucous membranes involved, namely, those of the eyes and nose; in asthma, those of the lining of the bronchi; in angio-neurotic edema, of the sub-cutaneous tissues; in eczema, of the skin. However, it is rather a rarity than otherwise that a patient should show sensitization of but one of these localities and most commonly there is evidence of involvement either simultaneously or consecutively of several groups of cells. It is the simultaneous involvement in hyper-sensitivity of the skin that is the foundation of the extensive and successful work that has been done in the diagnosis of these conditions by means of the protein skin tests.

Perhaps the most easily recognized allergic manifestation which the nose and throat specialist meets is that of seasonal hay-fever. The patient's story of its seasonal character, the coryza, epiphora, itching of the eyes and nose and sneezing, make the diagnosis clear. Examination confirms it. The conjunctivae are red and swollen, the nasal mucous membrane is turgescient, edematous and exuding large amounts of aqueous material. So clear a pic-

ture does not require discussion. When, however, the same condition occurs as a perennial disease, or when, as we shall show, it occurs to a lesser degree, we find that the diagnosis is not only frequently overlooked, but unnecessary and sometimes harmful treatment, both topical and surgical, is indulged in in a vain attempt to give relief to the patient and satisfaction to the physician. After all, the duration of seasonal hay-fever is more or less temporary, and for the greater part of the year the patient enjoys good health. Moreover, its seasonal character makes it so easily recognized in many patients and the method of treatment by pre-seasonal immunization against pollens is so well known that it is becoming more and more rare to find patients being deprived of its benefits. On the other hand perennial types and types of minor degrees of severity are still frequently being treated with distressing lack of success. Being unrecognized as manifestations of allergy they are annoying in the persistency of their symptoms.

The picture of perennial hay-fever is similar to that of the seasonal type, yet with this distinction, that in the latter as a result of chronic turgescence we have more or less thickening of the mucous membranes involved. This results in interference with nasal breathing, and drainage of the sinuses, the presence of muco-purulent secretion, and even polypus formation. Sinusitis is present, but is the sinusitis the cause of the thickened mucous membrane, and polypi, or is it the result of their interference with proper drainage of the sinuses?

A case in point is that of a woman who had had repeated diagnoses of "sinusitis." Her antra had been repeatedly drained and polypi and tonsils had been removed without relief of symptoms which consisted of attacks of sneezing, epiphora, excessive nasal discharge and itching of the eyes, nose and throat, occurring only when indoors and at all times of the year. The patient revealed the fact that she disliked eggs, could wear no wool clothing and that cat odors would produce the above-mentioned train of symptoms. Study revealed the fact that the patient was sensitive to foods, cat hair and pollens. Elimination of the offending foods and and pollen, resulted in the patient being entirely relieved of her symptoms.

Similar stories are not infrequent. In 130 cases of perennial hay-fever which we have had under observation and found sensitive, operative procedures have been common in about 80 per cent. However, we do not intend to criticize the removal of polypi or the resection of septums when drainage is interfered with. These are common sense procedures when obstruction as the result of the chronic turgescence of the mucous membranes is marked. The point we do wish to make is that even when these things have been done the root of the evil often has not been removed, and the patient should be investigated from the allergic point of view. This means not only a thorough investigation into the patient's sensitiveness to pollens as in the seasonal type of hay-fever, but also a thorough investigation into the patient's sensitiveness to other sources of protein, this to include food proteins, the animal hairs and whatever other sources of protein the his-

tory of the patient may suggest, such as room dusts, and face powders. That all of these are prolific sources of protein sensitization in the production of perennial hay-fever a group of 136 patients shows. Of these only 58 or 23.4 per cent were due to pollens alone. Of the remaining 78 or 76 per cent, foods, animal hairs alone or in combination with each other or with pollens, were the cause. In this latter group we had examples of sensitization which required the exercise of much ingenuity to determine. Thus a woman presented herself with the complaint of constant sneezing, epiphora, rhinorrhea and itching of the eyes, nose and throat dating back a number of years. She had been tested to many of the proteins and pollens and pronounced to be non-sensitive, a diagnosis "vaso-motor rhinitis" being made. Local applications to the nose and throat gave no relief, septum resection and turbinectomy gave equally negative results. A careful history brought out the facts that the hay-fever was of a perennial type, not influenced by climate or altitude and that up to three years ago the patient had used a Java rice face powder, at which time she had changed to orris root powder. Our study was made with all the proteins at hand. Included were foods, pollens, epidermals, miscellaneous proteins and proteins extracted from the feathers of the patient's pillow and of the hair of her mattress. All proved negative with the exception of orris root which gave a skin reaction approximately 2.5 centimetres in diameter. The patient was told to change her face powder again to Java rice and no other treatment was advised. It is now six months since this was done and the patient has been completely relieved of her symptoms.

What has been said of perennial hay-fever applies in the same degree to another group of hitherto undescribed patients which we term "potential hay-fever" for want of a better name. These patients present a definite picture which is illustrated by the following typical case. A boy of 8 was said by his mother to persistently breathe through his mouth, use from six to a dozen handkerchiefs a day and to repeatedly catch cold in his head. An adeno-tonsillectomy had been done three years previously without relief and still no relief after a second adenoidectomy. One competent nose and throat specialist made the following observations: "Typical adenoid facies with mouth breathing, marked turgescence of the mucosa of the nose and throat and excessive lymphoid growth on the pillars." Similar pictures and stories have been observed frequently and in all age groups. All of these patients have been operated on, usually an adeno-tonsillectomy and frequently a sub-mucous resection and turbinectomy having been done. They may or may not have given a definite history of some easily recognizable allergic manifestation such as asthma, hives or eczema, yet on being examined by means of protein skin tests have, in a large proportion of cases, reacted positively to them. Interesting to note in the above case, after the patient had been found sensitive to certain perennial types of pollen and treatment by injection had been begun, the youngster for the first time had a mild attack of asthma, a constitutional reaction to his protein injection and confirmation of the fact that we were

here dealing with a definitely hyper-sensitive individual. In this group of cases the most important are those which in the history or physical examination show none of the usual manifestations of allergic disease.

C. H. Montgomery, in discussing the findings in such cases from the point of view of the otorhinolaryngologist, in a personal communication says: "In connection with the pharynx, a picture frequently seen in childhood is that where we have very marked redness of the pharynx with a hyperplasia of much of the lymph tissue of the pharynx which may be distributed both in the medial and lateral positions. This picture of redness and thickening with a swollen condition of many of the mucous glands situated here can frequently be seen without the presence of any pus being detected anywhere in the nose, sinuses or tonsils. There is also a considerable secretion of mucus and many of these cases have, in the past, unquestionably been associated with dietary or pollen conditions, but, until the recent work on allergy, the ideas concerning this condition were in extreme confusion and there was no way of arriving at any definite knowledge as to causation.

"In the epipharynx also the mucous membrane is seen frequently congested and weeping but without the presence of pus. In the nose again many of these children have swollen turbinates quite constantly, with difficulty in breathing and at times the mucous membrane may be of a dull red color and at other times pale and flabby in appearance. These are sometimes spoken of as intumescent. Such a condition naturally aggravates the obstruction produced by a deflected septum or a large bony overgrowth of the turbinates themselves. This same vaso-motor congestion extends at times up the eustachian tubes and invades the middle ears, giving here dusky drums which can not be differentiated from any tubal or middle ear congestion of a low grade bacterial type. This congested condition of the mucosa lining the nose, epipharynx and pharynx and extending frequently into the lower air tract produces a very favorable condition for the invasion of bacteria and I am quite sure that many a bacterial cold, so-called, is superimposed upon a congestion of the nose produced as a result of proteid irritation. In this connection a point of diagnosis is helpful, namely that where a patient comes complaining of frequent colds in the head absence of any chronic focus of infection in the head such as chronic pyorrhea, chronic tonsillitis, empyemata of the sinuses or a chronic suppuration of the middle ear, it is well to remember that this patient may primarily have a congestion of the upper air tract produced by protein irritation and followed in a day or two by a bacterial invasion. This complicates the picture from a diagnostic standpoint.

"It is my opinion that given a naso-pharynx free from a purulent infection—such as chronic pyorrhea, chronic sinusitis of any type or chronic tonsillitis—but where the patient complains of recurrent 'colds,' stuffiness in the nose, 'headaches' and so forth, that many a mistaken diagnosis has been made and septa have been straightened or turbinates crushed, amputated or removed without benefit to the patient."

Treatment with specific protein gives gratifying results. Here we have forty patients, mostly children, whom we have found sensitive to all types of protein, the sniffing, excessive discharge and mouth-breathing having disappeared along with the vacuous look of the adenoid facies and the frequent so-called colds in the head.

We have thus far three groups of cases frequently coming under the observation of the nose and throat specialist for relief of nasal symptoms; first, the frank seasonal hay-fever, second, the seasonal and perennial hay-fever with atypical symptoms and pathological picture suggestive of chronic sinusitis, which may or may not be accompanied by other allergic manifestations, and third, the sub-hay-fever group, the perennially stuffy-nosed mouth-breathers, subject to frequent colds in the head and potentially, hay-fever or asthma sufferers, but having as yet evidenced no frank manifestations of allergy. Many of these, and, in fact, the great majority of these patients come for first observation to the nose and throat specialist and it is to him we must look for the first recognition of their true character, making certain in each case before undertaking palliative or operative treatment that he has arrived at the correct etiology of the condition which is presented to him.

Much has been written in the past discussing the pros and cons of operative treatment on the nose and throat in bronchial asthma, an allergic condition of the bronchial mucous membrane, identical in all respects to that of the mucous membranes of the eyes and nose in hay-fever. We do not believe it to be necessary in this day of general recognition of the allergic character of bronchial asthma to discuss a question so evidently unrelated to nose and throat surgery. Suffice it to say that Kahn in a recent article on the analysis of ninety-four cases of bronchial asthma, that had been under his observation for a number of years, had the opportunity to notice the effects of nose and throat operations on thirty-three of them. In fifteen patients relief of nasal obstruction was obtained, in two of these atrophic rhinitis resulted as a serious sequel, in the other patients the operation was of no benefit. Kahn goes on to say further, "it would indeed be proof of the influence of nasal disease on asthma if surgical treatment could sometimes relieve the paroxysms, but in none of these cases has operation been so successful. In most cases the improvement that resulted, even as concerning the local condition, was only temporary and incomplete and in many cases the local condition for which the operation was performed recurred. Even in patients in whom there was definite relief of obstruction and in whom nasal breathing became free the asthma was not influenced. But in my opinion the nose and throat should be left alone in asthma except when the rhinological condition itself demands attention."

With the above we are in entire accord, our experience leading us to the same conclusions. In only one aspect of the subject do we look to the nose and throat specialist in this field, that is in those cases which are apparently bronchial asthmas of bacterial origin. Here we seek the aid of the nose and throat specialist in the removal of foci of infection.

Recognition of hitherto unrecognized forms of

allergy belongs as much in the province of the nose and throat specialist as in that of the man who confines all his attention to allergy. It is from such observations that the field of allergy is constantly being widened. Thus, to the well-known types as hay-fever, asthma, eczema and urticaria, have been added gastro-intestinal disturbances, bladder allergy and Meniere's syndrome by Duke. Recently, through the co-operation of the nose and throat specialist, we have been successful in adding a heretofore undescribed type of allergy producing a severe migraine headache.

A man of about 40 years of age came to us with the complaint that at frequent intervals for the last twenty or thirty years he had suffered from a very severe type of hemi-crania, limited to the left side, having found a free interval only while a student away from his home in California and living in Michigan. He had been to numerous nose and throat specialists, in addition to having undergone several very thorough general examinations without results. The patient was referred to us by Dr. C. H. Montgomery, who, on examination of the ear, nose and throat, found a picture which was to him highly suggestive of that found in many other cases of allergy with which he had experience. The patient was tested in the usual manner and found sensitive only to a few perennial grasses common to California. The skepticism of the patient induced us to perform an experiment on him to which he consented. The pollen of one of the grasses was blown about him into the air of the room in an attempt to see whether a typical attack of hemi-crania could be induced. Shortly after leaving the office the patient phoned that he was suffering from a typical attack. He was then given adrenalin hypodermically, with the result that the headache was almost entirely relieved. The patient, however, still remained skeptical and the experiment was repeated without his knowledge with exactly the same result. In addition to this case whose pollen etiology is rare, we have several cases, due to food sensitization which seems to be the more common etiological factor.

Our dependence on the nose and throat specialists in discovering such cases and in successfully relieving their annoying symptoms is quite evident.

What then should the nose and throat specialist look for in attempting to determine whether or not a case should go through the protein skin tests. Our experience leads us to place first emphasis on the careful history. Family history, which is of prime importance, should not be overlooked in that, as Adkinson has shown, 48 per cent of the sensitive cases give a positive family history of some allergic manifestation, be it asthma, hay-fever, eczema or hives. Personal history should include age of onset. This gives a clue as to the type of protein to which the individual is sensitive and our experience has shown that as the age of onset increases so does the frequency of sensitivity decrease. Whether the particular complaint of the patient is perennial or seasonal. A seasonal history is the clue to a sensitization due usually to pollens and occasionally to seasonal foods, while the perennial type may be due to one or a combination of groups of proteins. Place of onset and its relation to the continuity of the symptoms. Many patients are free in certain lo-

calities and not in others, be this locality ever so restricted—as for instance in the not infrequent cases where a patient finds relief away from a certain house or even room. Occupation is a factor since the etiology can often times be traced to this source. For example, hair-dressers sensitive to orris root, bakers sensitive to wheat, hostlers sensitive to horse-dander, etc. History of certain skin conditions, such as eczema, urticaria and angio-neurotic edema is important in that they are allergic conditions and bear definite relationship to the other allergies above mentioned.

A careful physical examination and in the case of the nose and throat specialist a careful examination of his particular field, for clues as to the actual character of the condition which the patient presents, and last, but not least, the protein skin tests.

SUMMARY AND CONCLUSIONS

Allergic diseases often limit their manifestations to the region of the ear, nose and throat.

Many of these manifestations are over-looked because of their true character remaining unrecognized.

This results in much unnecessary therapy, both topical and surgical, without relief to the patient or satisfaction to the physician.

Two hitherto undescribed types of allergic diseases of the nose and throat are described.

The importance of the nose and throat specialist interesting himself in the proper methods of history notes and examination from the allergic viewpoint are emphasized.

1136 W. Sixth Street.

DISCUSSION

HILL HASTINGS, M. D. (1136 West Sixth Street, Los Angeles)—I have had an opportunity to see the results in a number of patients that I have sent Doctor Piness. The results are good. In many cases there was an apparent cure; in others considerable improvement.

I am of the opinion that this work of Piness and Miller in treating hay fever and asthma patients, nearly all of which are of the allergic type, will stop a good deal of unnecessary nasal surgery. The rhinologist should be on the lookout for those patients.

Many of the so-called chronic catarrhal ethmoiditis cases, with or without polyps, should be studied by competent men doing this kind of work before any operative procedure is undertaken.

There is no question in my own mind that the pathological conditions found in the nose in such patients is secondary to the allergic hay-fever, rather than the cause of the hay-fever.

CULLEN F. WELTY, M. D. (210 Post Street, San Francisco)—In the study of disease of the ear, nose and throat, we have certain definite ways to begin an examination.

In a broad classification, we have to deal with: (a) malformation; (b) pathological conditions; (c) systemic manifestations in the nose and throat; (d) new growths.

With a more careful analysis of these particular groups, we can arrive at something definite along lines that are well recognized.

Malformations are usually of the septum that encroaches on some part of the turbinate or turbinates. Sometimes we have an "S" shaped deflection that encroaches on either side of the nose. Spines of the septum we include irrespective as to how they have been produced.

I wish to speak particularly on the high deflection of the septum, because I have seen so many high deflections of the septum that have not been corrected when the septum operation was performed. It seems to me that some surgeons do not carefully go into the subject

of "nasal contacts" and confine themselves to the proposition that the patient must have free respiration. So the septum operation is done and a contact is left high up that is responsible for a great many manifestations that the ear, nose and throat surgeons are quarreling about at the present time.

Now if we cannot agree as to a definite procedure and as to what we expect following a given operation, how can a physician not qualified as a specialist attempt to pass judgment in a given case? I do believe that contacts cause more trouble than any other condition alone. They may be responsible for headache, asthma, bronchitis, so-called hay-fever, as well as a persistent dropping in the nasopharynx, and eventually lead to real pathology in the formation of hypertrophies and sinus infection.

Regarding headache—I cannot say definitely that the individual case will be relieved by the removal of the contact. But bear in mind that nature did not intend to have it that way, and correct your malformation. In many instances the headache is gone forever.

Asthma in a patient with malformation—Now a malformation in the nose is not of itself a thing of any consequence, except when it does produce a contact and at such a time it requires the most careful consideration. This brings up another point as to when should a malformation be corrected. To make the proper examination for such a condition, your patient's nose must be well cocainized and an interval of fifteen minutes must elapse before the cocaine will have had its complete contracting power. At this time any contacts that may be found are acting in a detrimental way and should be corrected.

I have not cured so many cases of asthma, but I have benefited or made more comfortable every one that I have had to deal with. My reason as to why all these cases do not recover entirely is as follows:

Asthma is of necessity a chronic disease. It has existed for a long time prior to my seeing the patient and because of this long duration, real pathology has been produced in the lung. This lung pathology cannot be removed. The exciting cause whether from malformation or pathology in the nose or anywhere else in the body, is now cured (and I mean cured). The predisposing cause has been removed. So it naturally follows that for another attack of asthma, it takes a new exciting cause that may be found in most anything that will interfere with the mental attitude of the patient.

Bronchitis—A chronic hyperemia kept up by the secretions, mucous or purulent that drop into the lungs. I have seen many cases simulate tuberculosis, diagnosed tuberculosis, and treated for tuberculosis, only to be cured by the removal of the cause.

I believe such cases of asthma that have a recurrence by reason of food, drink or pollens, are so induced because of the chronic infection and pathological changes in the lungs that make them particularly susceptible to this particular stimulant. The same thing happens in so-called hay-fever. When I say that I am not familiar with hay-fever, you may be surprised. For I have not seen a case that I would call hay-fever from the descriptions that I have read from our teachers.

I have seen many patients who said they had hay-fever and that they suffer from this condition every season. I have seen patients with acute rhinitis from the poisonous effects of flowers and plants. In this whole group of cases I have found something that made that particular individual especially susceptible to this particular acute infection. However, it is not exactly an infection. It is an irritation or a poison, if you please, of the mucous membrane of the nose, entering by way of the contact, that part of the mucous membrane that is especially susceptible because of the contact. Accessory sinus disease, hypertrophies and polypi, will do the same.

So, in conclusion for hay-fever, I will say that I have never seen a case of hay-fever that did not have malformations, contacts, hypertrophies, accessory sinus disease or polypi.

Pathological Conditions—Before attempting to make a diagnosis every vestige of disease must be removed from the ear, nose and throat. I not only say removed, but I mean healed, well, free from discharge, and until such time, no one has the right to draw conclusions. This

applies to asthma, hay-fever, headache and various other clinical manifestations.

New Growths—Carcinoma, sarcoma, tuberculosis. They are so rare that we hardly need mention them, but they can produce asthma, hay-fever and headache in the same way that they are produced by contacts.

Systemic Disease—There is no doubt that organic disease will produce nasal obstruction by overfilling the turbinates with blood. There is no question that in some few given cases the mucous membrane of the nose becomes poisoned by food, flowers and plants.

In conclusion:

Allergy in its relation to otolaryngology depends upon certain definite conditions before you have the right to make a diagnosis.

First, that the patient's nose must be free from malformations and contacts.

Second, that the ear, nose and throat must be free from pathological lesions.

Third, that the ear, nose and throat must be free from new growths.

EUGENE R. LEWIS, M. D. (1920 Wilshire Boulevard, Los Angeles)—For over fifteen years I have been particularly interested in the phenomena which have been generally grouped under the two headings of "anaphylaxis" and "allergy." Unfortunately, my interest has always exceeded my ability to understand the essentials of the situation encountered in one of these patients. Certain findings seem to stand forth as characteristic in all patients, namely: (1) Sudden onset of acute irritation. (2) This condition always manifests itself on one of the body surfaces. (3) Absence of commensurate systemic effects indicative of toxicosis—fever, general malaise, prostration, anorexia, loss of weight, blood changes and the like. (4) Absence of local effects indicative of destructive agencies—surface or deep ulceration, abscess formation, indurative swelling, pus formation and the like. (5) Absence of after effects commonly following infections or traumatic processes—loss of normal tissues, fibrotic or cicatricial changes, adhesion formation and the like. (6) The termination of the acute irritation is typically as sudden and unexpected as its onset.

This briefly recounts certain outstanding characteristics of a typical non-infectious reaction. This may be complicated by pre-existent or by intercurrent infection, with or without purulence, clouding the picture very materially. I have seen a large number of patients who have been operated and reoperated upon with resulting unfortunate loss of functionally necessary nasal tissues, particularly turbinal and ethmoidal tissues, only to discover subsequently that their troubles were not abated as a result of the operations, but, on the contrary, were not infrequently increased. Careful differential diagnosis must precede any operative nasal procedures if we are to avoid such unfortunate results. *It would be as logical to amputate the skin sites of hives or of angioneurotic oedemas as it is to remove the nasal site of an allergic reaction.*

BENJAMIN KATZ, M. D. (520 West Seventh Street, Los Angeles)—I agree with the authors about the necessity of co-operation between the allergist and the rhinologist, because in neither field of these specialties is the symptom complex of hay-fever and asthma fully explained. In the fifteen years of my practice in nose and throat surgery, I have served many patients who were benefited by operative procedures in the nasal cavity. I admit that there have been instances in my experience, as in the experience of many other rhinologists, where operations have been of no avail. The authors mention instances of failure in patients treated surgically and state their successes by the allergic method of treatment in the same individuals. They do not, however, mention negative results of their methods, although to my knowledge such failures do occur. I wish to add that some recent researches in medicine show that in asthma, as well as in hay-fever, metabolic disturbance may be regarded as an etiological factor which may be successfully controlled by calcium therapy. Since neither of these methods can be recognized as a panacea in these affections, each patient should be treated according to the findings in the individual instance, by the co-operative efforts of all the physicians concerned.

DOCTOR PINESS (closing)—The statements made by Doctors Wely and Katz, relative to the results obtained in treating allergic conditions of the nose and throat by surgical procedures, have not been substantiated by other workers in the same field, namely Kahn, Lintz and ourselves, in that we have yet to see a single patient that has ever been cured by the procedures advocated by the discussers; neither can we subscribe to Katz's optimism relative to calcium therapy in asthma and hay-fever since, in a series of more than thirty-five cases, we have yet to see one patient benefited by this medication. However, we are willing to admit that cases of angioneurotic oedema and chronic urticaria have been given temporary relief by the administration of calcium chloride intravenously.

Our object in presenting this paper is merely to interest and obtain the co-operation of the otorhinolaryngologist in studying a group of patients who can be relieved of symptoms who have heretofore been unable to obtain relief by other measures.

Surgical Drainage in Infection of the Liver, Bile Ducts and Gallbladder—In all of these cases, before proceeding with the work on the gallbladder, Andrew S. Lobingier, Los Angeles (Journal A. M. A.), removes the appendix and any adhesions about the terminal ileum and hepatic flexure of the colon, and turns in the raw surface. The gallbladder is dissected free from the liver as in an ordinary cholecystectomy, but, instead of tying off the cystic duct, Lobingier clamps and cuts away the gallbladder 3 cm. from the choledochus. The cystic artery is located and tied separately. The funnel and the cystic and common ducts are explored for any stones that may be there. If the mucosa strips easily, a half-inch cuff is removed from the top of the funnel. A small, firm-walled rubber tube is now tied in place with two forty-day chromic catgut ligatures, with the end of the tube a centimeter proximal to the common duct. The rough edge of the gallbladder stump may be either turned in or covered with omentum. The denuded bed from which the gallbladder has been dissected is covered in by flaps in the usual way. The drainage is maintained for from twenty-five to thirty-five days, as repeated cultures may indicate. Care must be exercised to prevent dehydration from excessive drainage. As a precaution the tube is clamped at intervals, chiefly at night, if the drainage exceeds 8 or 10 ounces in twenty-four hours. As a further precaution against dehydration, an abundance of water is given by mouth and by hypodermoclysis. Lobingier says that this operation may be done rapidly and without danger of injury to the common duct. It is free from the objections that attend Kehr's drainage of the common hepatic duct, as there is no tube in the common duct to produce pressure-ulceration and subsequent stricture, a surgical tragedy always imminent after tubal drainage of this duct. It disposes of the tiresome controversy on cholecystostomy and cholecystectomy. It is a cholecystectomy, and accomplishes all and more than the usual cholecystostomy does in the drainage of the common and hepatic ducts. No infected gallbladder is left behind for future complications. Best of all, it drains and reduces the infection in the liver and pancreas, the *raison d'être* of practically 90 per cent. of gallbladder surgery.

Cavernous Sinus Thrombosis—The case by Sydney K. Beigler and Mark J. Bach, Madison, Wis. (Journal A. M. A.), gave very little evidence, either direct or presumptive, of an infectious etiology. It is quite apparent from the physical findings that the condition commenced with thrombosis of the right cavernous sinus. There was little if any evidence from the temperature, blood count, blood culture or history that this thrombosis was of infectious etiology. To the contrary, a severe diabetic condition, together with marked malnutrition and dehydration, pointed to a primary thrombosis of the sinus, with these factors as etiology. The progressive course of the involved areas indicated an extension of the thrombotic process to include first the left cavernous sinus and then probably through the inferior petrosal sinuses, the sigmoid and lateral sinuses.

OSTEOCHONDRITIS OF THE SECOND METATARSOPHALANGEAL JOINT (KOEHLER'S DISEASE)

By A. GOTTLIEB, M. D., *Los Angeles*

The etiology is still obscure, although chronic trauma of static incompetent feet is most likely to be the actual cause.

Adolescence and the female sex are predisposing factors and a constitutional weakness of the bone system may predispose to this disease as it does to the analogous conditions.

The diagnosis is simple in view of the characteristic changes occurring in the x-rays.

Correction of foot posture, partial immobilization of the affected joints and physical therapy will effect a symptomatic cure in about ten weeks. Operative interference is rarely indicated.

DISCUSSION by S. J. Hunkin, *San Francisco*; John C. Wilson, *Los Angeles*; George J. McChesney, *San Francisco*.

ADVOCATED by Lewin in preference to the misnomer "Koehler's Disease," metatarsophalangeal osteochondritis is a name applied to a condition of the second, infrequently the third, metatarsus and is characterized by definite changes in the metatarsal head, the distal half of the shaft and in the corresponding metatarsophalangeal joint. Previous to Koehler, Freiberg has observed and described the disease as an infraction of the metatarsal head; but only since Koehler's detailed presentation of five cases at the XI Roentgenological Congress of 1920 has it received consideration and been reported in literature. About ninety cases have been quoted by various writers up to February of 1924; to this number may be added the seven cases which came under my observation.

Etiology—In most instances the age of appearance has been the period of excessive growth of the epiphysis, 13 to 19 years. Although many cases have been observed in adults of various ages, adolescence seems to be a predisposing factor.

The most plausible of the disputed theories of development is the theory of chronic trauma which is based on the disproportion between the weight-bearing capacity of the second metatarsus and the exertion to which it is exposed. The theory is sustained by the anatomical fact that the second metatarsal head is projecting forward beyond the other heads and is receiving most of the superincumbent weight in walking. At the final act of each step, excessive burden is transmitted through the second metatarsal head, thus exposing it to direct pressure from above and to various insults from the unevenness of the ground below. The less frequent involvement of the third metatarsus can be explained on the same basis. The predominance of skin calluses under these heads, anterior foot swelling of soldiers, marching fracture of the second, rarely the third, metatarsal shaft, as well as traumatic periostitis of these shafts can all be attributed to the same cause, viz. constant weight-bearing pressure and chronic trauma. This theory is substantiated by the observation of most writers, including myself, that this affection is associated with pes transversoplanus, with flatfoot and frequently with halux valgus. Under these circumstances the metatarsal heads descend from their dorsal convex posi-

tion and receive the impact of the body weight with each step, whereby the second, the longest, head carries the greatest burden and suffers the most. Marching fractures or traumatic periostitis may result from stubbing this point of support when the shifting of weight is more or less acute; while osteochondritis, with the characteristic changes of Koehler, may develop when this static disturbance is constant.

As a contributing cause may serve the improperly fitting shoe with a high heel and a narrow box toe as worn by women who furnish over 75 per cent of the reported cases. But as an actual factor, the shoe can be blamed as little as direct trauma, which is denied in most cases. Both may only add insult to a pre-existing static incompetency of the feet.

Most writers suggest that a constitutional weakness of the osseous system serves as a predisposing element. It has, however, not been established of what nature this element is: Hormonic, toxic-infectious or diathetic, through which the body resistance is lowered and is manifested at a point of greatest strain.

Koehler, Baensch, Schreuder, Speed, Altschul and others sustain the theory of static disturbance and chronic trauma and contravene the opinion of Axhausen, who claims that the epiphyseal end arteries become obstructed by a mycotic embolism which may be of tuberculous or of mildly pyogenic nature. The weakly virulent infection of the embolus does not proceed to pus formation, but is overcome by the body resistance; only the mechanical influence of the arterial obstruction causes a deficiency of nutrition in the epiphysis and effects the development of the histopathological picture described below. In a latest contribution by Koenig and Rand, the theory of circulatory obstruction finds support; although they do not admit endarterial embolism, they derive to the same conclusions by presenting histological proof of occlusion of the periosteal blood vessels of the metaphysis.

Pathology—The gross lesion is seen in the radiograms which present definite characteristic shadows: 1. Changes in the proximal head of the third phalanx. 2. Considerable widening and irregularity of the joint space. 3. Flattening of the distal metatarsal head so that the circular outline is lost. The cap may be crushed in and give the appearance of the "egg shell" fracture of Skillern. 4. Calcareous deposits on the joint capsule. 5. Shortening and thickening of the distal end of the metatarsus, so that the normally dainty neck is obliterated. 6. The distal half of the metatarsal shaft is increased in circumference and the entire shaft may be shorter. 7. In the old cases the internal architecture of the head has reformed, although the shape of the head and shaft retain the characteristic stigmata of the condition.

Not all these cardinal changes may occur in every case, but a large number of them will be found in most cases.

The microscopic findings were obtained by Koehler, Axhausen, Fromme and others from operative specimens. In the epiphysis was found a wedge-shaped piece of necrosed bone which appeared grossly like a tuberculous sequestrum and presented microscopically an epiphyseal necrosis, or the spongy



portion contained necrotic foci and fibrous bone marrow which in places resembled granulation tissue. Young and old granulation tissue surrounded the necrotic bone separating it from the living spongy portion of the epiphysis. The granulation tissue was free of leucocytes, giant cells and bacteria. There was no trace of tuberculosis, rickets, lues or osteomyelitis; neither were there any findings of fracture. The cartilage was affected very little; it covered the necrotic tissue and the rest of the epiphysis. Some specimens presented villous hyperplasia of the sinovial membrane and lipping of the edges like in arthritis deformans. The distal half of the shaft had a thickening of the cortex and periostium which contained numerous blood vessels with thick walls and narrow lumina.

Baensch and Altschul explain these findings on the basis of chronic trauma: Through changes of static relations in pes planus and transversoplanus the second metatarsal head is exposed continually to greater pressure and is subject to contusions. This leads to pressure necrosis of the epiphysis which eventually breaks down in the direction of the shaft. While the spongiosa of the epiphysis undergoes necrosis and sequestration, the metaphysis of the bone is stimulated by the same, but lesser, pressure to proliferation of the periostium. New bone originates from the metaphyseal periostium; it penetrates into the epiphysis and spreads along the diaphysis. In course of time the proliferated bone rebuilds the epiphysis, giving it the characteristic shape, and alters the distal half of the metaphysis, causing it to thicken and widen. The joint cartilage and the cortex are preserved because they are capable of offering greater resistance than the delicate spongiosa.

SYMPTOMS

The patient complains of pain in the second metatarsophalangeal joint, or in the third if

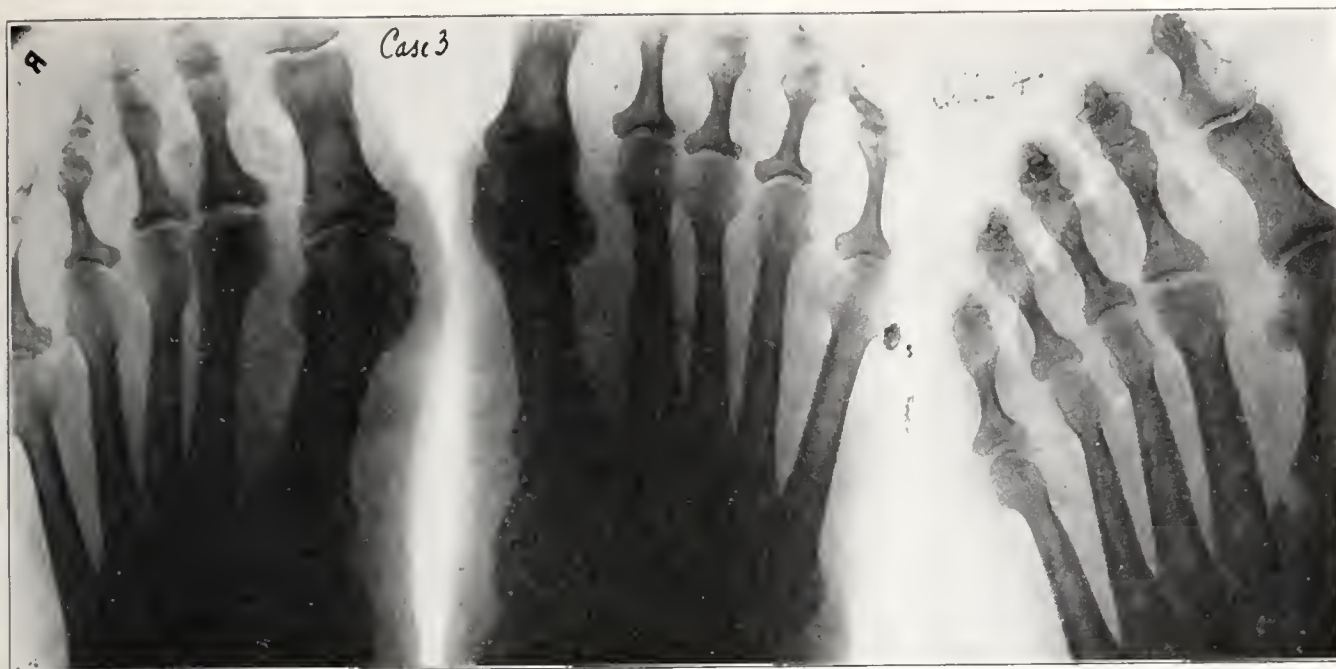
this one happens to be affected. Both joints have not been found to be involved in the same case; neither has the condition appeared bilateral. The pain is especially felt on weight-bearing. Dorsal flexion of the toe is painful and motion is limited on account of muscle spasm. There is usually poor foot posture: Pronation, abduction of the forefoot, depression of the anterior and the longitudinal arches, deviation of the big toe and halux valgus. Swelling, palpable enlargement and sensitiveness on pressure are present in the region of the involved head and joint. The toe may be shorter and the flattened metatarsal head may lie proximal to the line drawn between the first and third heads. The leg muscles are not atrophied. The radiogram will reveal the characteristic changes enumerated under gross pathology.

DIAGNOSIS

A number of conditions of the forefoot may have to be eliminated. Morton's toe pertains to the fourth only and offers no abnormal shadows in the x-ray. Metatarsalgia is always bilateral, although it may be more pronounced in the left foot; persistent metatarsalgia in adolescence should be roentgenographed as likely to be associated with this condition. Traumatic periostitis of the metatarsal shaft and the anterior foot swelling of soldiers will give a history of prolonged marching, will present tenderness over more than one shaft and will reveal periosteal thickening in the x-ray. Fracture of the shaft or of the sesamoids will offer a corresponding history of accident and be shown in the x-ray. Low grade osteomyelitis and spina ventosa will be associated with a thickening of the bone in its entirety and be revealed in the x-ray. Any doubt in the diagnosis will be dispelled by the specific changes of Koehler presented in the radiogram.

PROGNOSIS

My personal observations lead me to believe



that the outcome of the acute cases is very favorable under conservative treatment. Even untreated cases have not resulted in any permanent disability or deformity, and have only been discovered during the examination for other complaints, mainly halux valgus.

TREATMENT

Weight-bearing pressure must be relieved by supporting the metatarsal shaft by means of a cup-shaped piece of felt to fill the area behind the affected joint. The pad may have to be extended to raise the entire transverse arch off the ground. A plantar splint, reaching to the second phalangeal joint and placed below the felt pad, will effect immobilization of the metatarsophalangeal joint and relieve it from superimposed weight. Complete immobilization I have not found necessary, but the patient should use the foot, even with the pad and splint, only within the limit of pain. A laced shoe with a semi-flexible shank should be provided. It should fit snug enough to make the foot follow its movements and should have a front sufficiently wide and long to permit spreading the toes and lengthening the forefoot in weight-bearing. The abduction and pronation of the foot are overcome by means of the valgus wedge inserted in the inner side of the heel and sole in order to tilt the foot and throw the body weight outward. The anterior heel, which has been recommended by some authors, is not to be advocated because it does not prevent the sagging of the metatarsal heads, but it favors the sinking of the longitudinal arch, besides making walking unpleasant and the shoe unsightly.

Besides the mechanical measures, the foot is subjected to physiotherapy: Incandescent light and heat, followed by quartz light exposure or by diathermy and concluded with mild massage and movements. As soon as pain subsides, the patient is instructed to perform exercises in order to strengthen the supinators and the intrinsic foot muscles. A valuable active-resistive exercise for the supinators is executed as follows: The patient places the outer border of the lower third of the leg on the opposite knee. She actively supinates the foot and resists this

action with the palm of the hand against the first metatarsal. For the intrinsic foot muscles, the patient places the bared feet in a basin of hot water and grasps with the toes small pieces of rubber tubing that float on the surface. This active resistive toe-gripping is more effective than picking up marbles.

CASE 1. G. McC., age 14. Girl. Since about 3 months she has pain in the left foot in the region of the second metatarso-phalangeal joint. Pain is worse when walking with shoes on and causes her to limp. Trauma strictly denied. Negative family and personal histories.

Examination—Mild swelling and marked tenderness over the distal head of the second metatarsal. The head is larger on palpation than the normal. On weight-bearing the anterior and longitudinal arches are flattened. Right foot is normal in the corresponding area. **X-ray**—Head is flattened and broadened; neck is obliterated; joint space is increased; a wedge-shaped piece of bone is driven toward the shaft which is increased in circumference.

CASE 2. G. G., Girl, age 14. Complains of pain and swelling in the left forefoot, especially over the third metatarsophalangeal joint. Duration four months with slow onset and without known cause. Past and family histories negative.

Examination—Slight swelling in the region of the third metatarsophalangeal joint which is tender and thickened on palpation. Plantar flexion of third toe is painful and motion is limited. Feet are everted and pronated and metatarsal arches depressed.

X-ray—Wider joint space, egg-shell fracture of the capitulum without callous formation and enlarged distal third of the shaft.

CASE 3. Mrs. A. L., age 40. Complains of pain in the right big toe and second metatarsophalangeal joint since about 3 years. Onset was slow; acute injury denied, but patient has to be a great deal on her feet.

Examination—Tender and semi-rigid halux valgus of moderate degree; enlarged and tender second metatarsophalangeal joint. Anterior and longitudinal arches are depressed on weight-bearing. Wearing high heels and pointed shoes.

X-ray—Characteristic Koehler's findings are present.

Treatment—All three cases were conservatively and were symptomatically cured in ten to twelve weeks.

CASES 4 and 5.—Both are women, ages 29 and 34, who come to have their painful "bunions" operated. Both complain of painful big toe joints and of metatarsalgia of many years' standing. There has always been more pain on standing in the area of the second, left, metatarsophalangeal joints. No acute injury known. Pa-

tients always wore high-heeled and pointed shoes. Past and family histories unimportant.

Examination—Marked halux valgus and tenderness under metatarsal arches, worse on the left side under the second toe joints. Outspoken pes transversoplanus and static flatfeet.

X-rays—Besides presenting typical changes of Koehler, both show restored trabeculation of the inner structure of the heads. Possibly a healed state of the disease.

Treatment—Halux valgus operation and post-operative treatment to restore the arches and regain muscle function.

Case 6. Mrs. L. T., age 38, has pain under the left metatarsal arch and marked tenderness in the region of second metatarsophalangeal joints since many years. Sustained no injury and was always in good general health.

Examination—Slight swelling and tenderness over the second metatarsus; depression of anterior and longitudinal arches on weight-bearing. Wearing stylish, ill-fitting shoes.

X-ray—Wider joint space; enlarged and flattened metatarsal head and somewhat thickened shaft. The diagnosis is doubtful since the appearance is not very characteristic.

CASE 7. Miss G., age 18, complains of pain and swelling for right big toe and of metatarsal pain in the right foot since about 3 years.

Examination—On inner surface of terminal phalanx is found a tumor mass which is tender and hard. Slight swelling over the second metatarsophalangeal joint and tenderness on pressure over the joint. Bilateral pes planus. X-ray reveals a bone tumor at terminal phalanx and finding of Koehler's disease.

Treatment—Removal of bone mass and conservative treatment for the metatarsal defect.

CONCLUSION

1. The name is chosen in conformity with the histopathological and radiographic findings.

2. The etiology is still obscure, although chronic trauma of static incompetent feet is most likely to be the actual cause. Adolescence and the female sex are predisposing factors and a constitutional weakness of the bone system may predispose to this disease as it does to the analogous conditions: Legg-Perthes, Osgood-Schlatter, Koehler's tarsal scaphoid and other epiphyseal diseases.

3. The diagnosis is simple in view of the characteristic changes occurring in the x-rays.

4. Correction of foot posture, partial immobilization of the affected joints and physical therapy will effect a symptomatic cure in about ten weeks. Operative interference is rarely indicated.

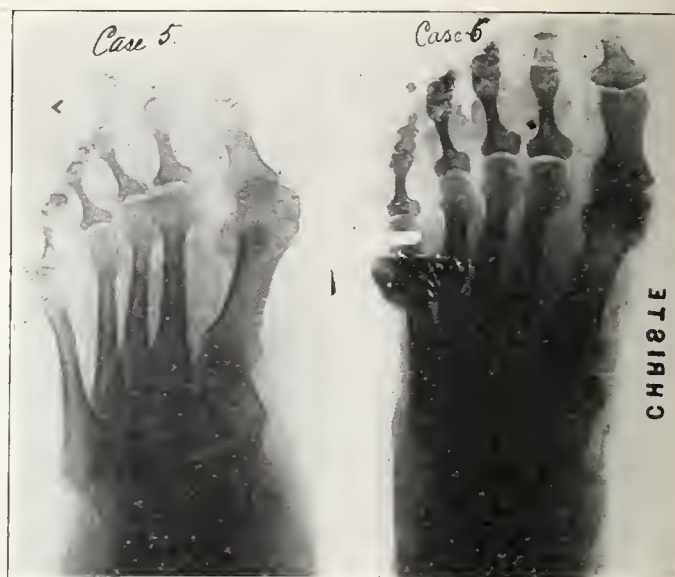
607 South Hill Street.

DISCUSSION

S. J. HUNKIN, M. D. (1155 Bush Street, San Francisco)—It is very opportune that Doctor Gottlieb has brought this new disease to our attention. It is unfortunate, perhaps, that two diseases even though somewhat similar in character should be called by the same name.

The disease which has been known as Kohler's disease for many years is of the foot scaphoid. This has been well known and readily recognized. This new disease is seen, as Gottlieb says, in chiefly the first and second metatarsals. Like the original disease, the etiology is unknown. Such pathological changes are seen in very many bones. It is akin, in my opinion, to what is known as Legge's or Perthes' disease in the femoral head and neck. We see corresponding diseases in the shoulder and in several of the carpals, especially in the scaphoid and semilunar. The character of the disease, as I have said earlier, is unknown, and up to the present we can only treat it tentatively; however, the treatment is a fairly satisfactory one.

The advantage of keeping it in mind is, of course,



to keep it distinct from tuberculosis and prevent radical operative procedure. These diseases have been known for many a long year, although without having definite names applied to them, in various parts of the body.

I am much pleased to read Gottlieb's paper, and personally I am obliged to have it brought so definitely and clearly to attention.

JOHN C. WILSON, M. D. (1136 West Sixth Street, Los Angeles)—Doctor Gottlieb is to be congratulated upon his exhaustive study and capable presentation of this subject. Fortunately, these cases recover with conservative treatment and this, in a way, limits our knowledge of the fundamental pathological process. It would seem that this condition is closely allied with the so-called Kohler's disease of the tarsal scaphoid and a condition commonly known as osteochondritis juvenilis deformans which involves the femoral head.

The study of the bacteriology of conditions of this type is just in its infancy. The oxygen content of bone is not definitely known. It is possible that bacteria grow in bone under anaerobic conditions, and that the failure to obtain cultures in cases that have been explored is due to the fact that attempts have not been made to cultivate these bacteria anaerobically.

GEORGE J. MCCHESENEY, M. D. (Fitzhugh Bldg., San Francisco)—Doctor Gottlieb is to be congratulated upon a rather unusual experience with this, as yet, little known condition. I am sure, however, that if orthopedists went over their case histories and x-rays of foot cases, they would find a fair number of unrecognized examples of this disease.

Two years ago I had a typical case in an overweight, adolescent girl. Removal of the second metatarsal head gave relief, but now I agree with the paper that conservative measures are usually preferable. In speculating upon the etiology, the frequency in the sex and age when narrow shoes are beginning to be worn is significant. The epiphyses are still ununited and vascular, and hence subject to injury. The occurrence of a congenitally long second metatarsal would render its head more vulnerable, just as a congenitally long first metatarsal, in my opinion, predisposes one to hallux valgus and bunions. These are only theories now, and time only will make them facts.

To the list of similar diseases elsewhere in the skeleton, as given in the paper and by the previous discussor, I would add Kummel's disease of the vertebral body. They all have change in bony texture and form associated with trauma and circulatory impairment, and absence of infection.

I would make one criticism of Gottlieb's outline of treatment where he recommends exercises for the foot muscles with the patient sitting. As in exercises for pes planus, the only ones really developing the foot muscles are those done with the weight of the body upon the feet, and sitting exercises are so easy for the foot muscles that flexibility is developed, perhaps, but not strength.

HEART PAIN

By T. HENSHAW KELLY, M. D., *San Francisco*

In order to intelligently prognosticate and treat heart pain, a knowledge of its probable mechanism and cause is a pre-requisite to success.

The heart muscle is not supplied with pain fibres and to have pain produced by the heart it becomes necessary to call into the equation the mechanism of referred pain production which was worked out chiefly by Henry Head.

In studying at autopsy about forty patients who died of angina, Mackenzie found, as many before him have done, that numbers of these patients had gross coronary sclerosis; others had marked constriction of the orifices of the coronaries, secondary to disease of the aorta, either syphilitic or atheromatous; the remainder had evidence of myocardial degeneration.

The attacks in primary heart pain are brought on by effort, by mental or emotional strain, by exposure to cold, sleeplessness, the taking of food and sometimes over-indulgence in coffee.

It is absolutely necessary that each patient's activities be restricted to a degree fully commensurate with his particular limitation of effort, but, undoubtedly, the wind must be tempered to the shorn lamb and patients with mild degrees of disability must not be chained to beds or chairs by thoughtless doctorial dicta based upon personal routines developed by physicians in order to conserve their valuable time and thought.

DISCUSSION by Harry Spiro, San Francisco; Roland Cummings, Los Angeles; Frank B. Reardan, Sacramento; J. Edward Harbinson, Woodland.

HEART pain is a symptom which causes a great amount of fear and apprehension to patients and is often the cause of great uncertainty on the part of physicians in so far as the prognosis in the individual is concerned. It occurs in both young and old, more particularly the latter, and may vary in intensity from a slight sensation of precordial uneasiness during effort to an agonizing pain involving the precordial area, the inner aspect of the left arm and little finger of the left hand, sometimes a similar area of the right arm and occasionally the neck or the ramus of the lower jaw. The severe attacks are often accompanied by a sense of constriction about the thorax and a fear of impending death and the patient may at the end of an attack pass large amounts of pale urine. It is these severe attacks to which the name angina pectoris was given and which were first systematically described by Heberden in 1768.

No disease produces more fear in the hearts of its victims and the numerous instances of death during an attack will justify these apprehensions, so that it becomes necessary for the physician to bring all of his skill and powers of observation to bear on each patient, that he may be assured of as long and as comfortable a life as may be his due. In order to intelligently prognosticate and treat heart pain, a knowledge of its probable mechanism and cause is a pre-requisite to success.

The cause of the pain is known to be dissimilar to that pain produced by injury to the skin or skeletal structures, for the heart is not supplied with pain fibres of the same type. There have been many theories advanced, but two have been held longer than others, the first of which, advanced by Lauder Brunton and others, suggests that the attack is due to over-distension of the ventricles, thus resulting in pain similar to that occurring when any of the other hollow viscera are over-distended:

Many patients, however, suffer from angina without showing any evidence of cardiac dilatation; many patients who have acute dilation of the heart have no pain and healthy hearts can be quite markedly distended by effort without pain until the effort has been continued long enough to approach a stage of cardiac muscle exhaustion.

The other theory, first suggested by Allan Burns in 1809, and today strongly championed and justified by Mackenzie, is that which says that heart pain is due to a heart muscle which is forced to contract in an insufficient blood supply. This insufficient blood supply may be the result of coronary disease or due to a diseased heart muscle which becomes exhausted in an attempt to maintain a sufficient peripheral circulation. The present basis for belief in this origin of heart pain may be briefly discussed.

The heart muscle is not supplied with pain fibers and to have pain produced by the heart it becomes necessary to call into the equation the mechanism of referred pain production which was worked out chiefly by Henry Head. He showed that the viscera do not possess tactile and pain sensibility, but are supplied by the vegetative nervous system with fibres which enter dorsal spinal roots belonging to definite cord segments. Within the cord these fibers are related to fibres, both motor and sensory, which go to the periphery and carry impulses regulating muscle tone, cutaneous sensibility and other less understood functions. These nervous system activities are carried on without any of the stimuli reaching the consciousness.

However when inflammation or disease of a viscus occurs, the number and intensity of these afferent stimuli from the organ to its cord segments increases and the peripheral motor and sensory elements in the segments which are in relation with the sympathetic supply to the diseased organ are so stimulated that muscular rigidity in skeletal muscles occurs and pain is felt in the corresponding peripheral skeletal areas supplied by their cord segments, often accompanied by hyperalgesia of the skin. The pain and hyperalgesia are always distributed according to segmental supply and not according to the distribution of peripheral sensory nerves. This is similar to the distribution of the eruption in herpes zoster.

Mackenzie, with this work as a basis, found that the areas over which pain is felt and over which hyperalgesia occurs following heart pain, correspond to the segmental skin areas supplied from the first, second, third and fourth dorsal segments of the cord. More rarely the pain may be felt higher in the neck or lower in the epigastric region, showing spilling over of stimuli into adjacent cord segments, the heart being supplied by sympathetic fibres arising from the first, second, third and fourth dorsal segments also. Thus the distribution of pain in angina pectoris is that of referred pain. The motor effects are not so clear to observation, but Mackenzie feels that the sense of constriction complained of by many patients is due to spasm of the intercostal muscles.

In studying at autopsy about forty patients who died of angina, he found, as many before him have done, that numbers of these patients had gross coronary sclerosis; others had marked constriction of

the orifices of the coronaries, secondary to disease of the aorta, either syphilitic or atheromatous; the remainder had evidence of myocardial degeneration. This fact inclines him to the belief that the pain arising from heart disease is due to a muscle which is contracting without a sufficient blood supply, or a diseased muscle which is exhausted attempting to maintain sufficient circulation. In both cases the effect on the muscle is similar to that of exhaustion and pain arising in the muscles of the legs in intermittent claudication and in normal muscles which are made to contract while rendered experimentally ischemic.

The abnormal impulses resulting from the contraction of the exhausted heart muscle then pass in to the cord over the sympathetic fibres from the heart, entering the first to fourth dorsal segments and resulting in referred pain felt in the skeletal areas supplied by these segments, and the amount of cardiac damage necessary to produce pain depends, therefore, upon the irritability of the cord in the individual patient.

Mackenzie feels that there is a group of women under fifty, and often at or near the menopause, whose nervous systems are so hypersensitive that stimuli arising in an almost normal heart during excitement or effort will result in heart pain and it is known that after continued attacks of angina pectoris the nervous system sometimes becomes so irritable that the pain is constant and may be aggravated by the touch of the bedclothes in the hyperalgesic areas. This state is known as the status anginosus. The group of women referred to above he designates as patients with secondary angina, distinguishing them from patients with definite cardiac disease and pain—the group with primary angina pectoris.

If we accept as fact that heart pain is produced by a heart muscle which is exhausted in an attempt to maintain circulation, we see that in heart pain we have the cause of symptoms in the heart muscle itself while in heart failure the symptoms are respiratory and are due to an insufficient cardiac output. We are in a position also to predict the causes of attacks of heart pain.

The attacks in primary heart pain are brought on by effort, by mental or emotional strain, by exposure to cold, sleeplessness, the taking of food and sometimes over-indulgence in coffee. The attack does not always immediately succeed the cause but may come on some minutes or hours later. This must be remembered.

In the second group the causation of attacks is not so clear, but they often occur from causes similar to those in the first group, but occur as a result of less cardiac disease and a more irritable nervous system. In these patients there is usually a sense of exhaustion present between attacks and the attack is often accompanied by marked exaggeration of the symptoms with widespread pain and persisting hyperalgesia.

The diagnosis of heart pain must be made in order that treatment may be instituted and a damaged heart protected from further strain. The typical attack of angina does not present much difficulty, the agonizing pain, the sense of thoracic constriction, the feeling of impending death all go

to make a definite picture. It is those patients who have epigastric pain, or pain appearing in the neck or arm that present the difficulty. It is necessary to remember that the pain is usually brought on by some factor which puts strain upon the heart and the relief by the nitrites is often of aid in clinching the diagnosis. It is needless to say that a careful examination must be made to rule out all other possible causes of pain, recalling that no other visceral lesions except rupture of the lung and some mediastinal disease produce arm pain. These two latter lesions may do so, but rarely, and others signs are present to point to the nature of the trouble.

It is also necessary to be on the alert to recognize pain not precordial in location as pain originating in the heart. It occasionally happens that the pain is referred down the cord and appears in the epigastrium, as in one patient, a man of 50, who for months had had shortness of breath and epigastric pain on effort, the pain accompanying an enlarged, passively congested liver. The pain was, for a long time, interpreted as liver pain, until one day, after getting into bed he had a similar attack of pain in the epigastrium, accompanied by pain down the left arm. His succeeding attacks were all characterized by pain in both locations.

The prognosis of heart pain of primary type is grave, but not without hope of some years of life in many instances. It is necessarily uncertain, because the exact extent of cardiac disease underlying it cannot be definitely ascertained, and the intensity of the pain is notoriously a poor index of the severity of the disease. Broadly speaking, the cardiac changes underlying the symptoms are, in most instances, those of advancing years and as might be expected, the greatest number of deaths from angina occurred between 50 and 60 years of age in a series reported by Osler and between 60 and 65 years in Mackenzie's series. The majority of patients die within five years of the onset of their symptoms, according to Mackenzie's experience.

This being true, the best method at hand of estimating the probable outcome of recurring attacks of heart pain depends upon the degree of limitation of effort and the rate at which this limitation increases. It is usually justifiable to assume that a patient who can perform considerable effort before symptoms appear and who has had this symptom on effort for some period of time is not in immediate danger. Contrariwise, a patient who is stopped by pain upon slight effort and whose disability has rapidly increased in extent is liable to an early death. Herein lies our most reliable information upon which to base a prognosis, but it likewise is not infallible.

Luetic disease of the heart may, in some instances, be ameliorated by treatment, but in others treatment is without avail and in these patients the prognosis must often be based upon the successful or unsuccessful outcome of treatment.

In the group of secondary angina in women, the prognosis as to life and improvement is more favorable after all possible causes of the general ill health have been found and eliminated, but constitutionally many of these patients are unfavorable subjects for complete recovery. The danger in them is not so

important, however, the discomfort holding first place.

The treatment of the attack is almost universally understood. The use of whiskey, the nitrites or morphine, depending upon the severity of the particular attack, is almost household knowledge. The patient puts himself at rest in most instances, but it is our duty to insist upon it if he has not done so. In the severe attacks a quarter of a grain of morphine sulphate may be used hypodermatically every fifteen or twenty minutes until relief is obtained and occasionally it may be necessary to use chloroform by inhalation.

Knowing that it is cardiac effort which produces the attack, it is the duty of the physician to arrange the patient's life so that he can lead an endurable existence with a minimum of effort and it is in this province of therapeutics that so much injustice is done.

First, it becomes necessary for us to do all in our power to allay the great amount of fear usually suffered by these patients and this is best done by taking enough of our more or less valuable time to explain to the patient, in language that he can understand, the nature of his trouble, stressing the hopeful factors and minimizing the hopeless ones. The latter can be discussed with a responsible member of the patient's family. Having done this, the rationale of his treatment can be explained to him and he will pursue his daily routine minus the terrible burden of fear frequently put upon a patient by the curt and courageous physician who more or less theatrically states simply that he has angina pectoris, puts a heavy band of restrictions about him and leaves him to investigate among his friends and acquaintances, the number of their friends and acquaintances who have died suddenly from the same disease.

Thus the patient is taught that hill-climbing, running and out-door sports are not alone added burdens upon his heart, but that worry, anger, fear, intense mental activity and over-eating and drinking also bring their share of strain upon it. He should be encouraged and perhaps aided to adjust business and domestic worries if these exist.

He should be taught further that the slightest sensation of heart pain is the best indication of the limitation of effort of his heart, and that this limit should never be exceeded. If an exceptionally great effort induced the first attack and the patient is seen then, a period of bed may materially reduce his limitation of effort.

A proper amount of rest must be enjoined upon the patient and if sleeplessness interferes it must be controlled by bromide or some efficient hypnotic. Excessively nervous patients may be given sufficient bromide or other sedative during their waking hours. A rest in the middle of the day or after each meal may be required in certain patients.

The sleeping rooms must be kept warm for the patient's dressing and undressing, to guard against exposure to cold. He should be warned against walking in cold winds or doing his usual level walking against a strong wind which materially adds to his effort.

The diet should be regulated so that no great

weight is gained as a result of the enjoined rest and it is sometimes advantageous to remove some weight by suitable measures. The food should be easily digestible and the bowels should be well regulated.

A thorough search should be made for any possible disease which might be contributing to the cardiac damage. Lues, focal infections in the tonsils, teeth, sinuses and other parts of the body should be searched for and removed as far as possible. Gastro-intestinal disease must be controlled so as to eliminate irritating and disturbing symptoms and all factors which tend to disturb the patient should receive attention.

In the group of secondary anginas all disease processes should be sought for and removed and the general health looked after very carefully. Menopause symptoms should be eliminated by all possible methods and sedatives should be used whenever necessary to hold down a hyper-sensitive nervous system. Reassurance should be offered these patients in considerable quantity.

In the severest cases where bed rest and other measures have not sufficed to prevent frequent and severe attacks it may be decided to try excision of the cervical sympathetic, as advocated by Jonnesco and as has been done by Coffey and Brown and others. This surgical measure provides relief of pain, but of course does not alter the ultimate end to any great degree.

It is absolutely necessary that each patient's activities be restricted to a degree fully commensurate with his particular limitation of effort but, undoubtedly, the wind must be tempered to the shorn lamb, and patients with mild degrees of disability must not be chained to beds or chairs by thoughtless doctorial dicta based upon personal routines developed by physicians in order to conserve their valuable time and thought. These patients have their lives to live until their hearts finally give up the struggle and it is our duty to give each patient the time and study necessary to add to the latter chapters of his life as much pleasure and enjoyment as his damaged heart is able to carry under our sympathetically careful guidance.

240 Stockton Street.

DISCUSSION

HARRY SPIRO, M. D. (Flood Bldg., San Francisco)—Doctor Kelly has not attempted to state all the facts and theories involved in this intense subject of Heart Pain—time forbade him. He, no doubt, could talk all night and not exhaust the subject.

This question of cardiac fatigue as a cause of cardiac pain gives plenty of room for argument. The heart is an extraordinary organ. It is almost impossible to fatigue it in the sense of skeletal muscle fatigue. The more you stimulate the heart the speedier it contracts, and the weaker it gets as a rule the faster it works. One of the principal signs of heart fatigue is rapidity of action. If pain were a sign of heart fatigue we would have pain oftener. Then, plainly, something else is needed besides ordinary fatigue as a cause of cardiac pain. "A deficient blood supply in the face of sudden demand," is a very frequent cause. The healthy heart with healthy vascular supply always has enough blood to meet its requirements, this supply being automatically regulated to the demand. But a nearly healthy heart with a defect in its vascular system, is not ready for an unexpected demand, as the heart continues to contract, sufficient blood supply or not, but it cries in anguish; it

answers the unfair demand by calling forth pain. This, as a cause of cardiac pain, has been shown to be probably correct by hundreds of autopsies.

I am in particular interested in aortitis as a cause of cardiac pain, or rather as a cause of angina pectoris. Patient after patient complains of pain exactly as described by Doctor Kelly. Careful physical examination reveals nothing unusual. Frequently an x-ray picture will show the heart normal in size and shape and one is almost tempted to say that the patient has false angina, particularly so if he has a normal blood pressure. But if you would carefully measure the aorta you would find that either the ascending or descending aorta has increased in width.

Or, if radiograms are taken after first placing the patient in various angles, you may see a slight bulge at the root of the aorta. You then are in a position to make an exact diagnosis of angina pectoris of aortic origin.

I beg of you not to forget that these are the types with normal blood pressure when you are examining them, but take the blood pressure during an attack of pain and you may see a rise of 100 points in the systolic, and even 50 or 60 points in the diastolic. Here is sufficient cause for agonizing pain—a sick aorta suddenly subjected to great pressure. This type, I believe, is the only type favorable for surgical interference, and frequently the only type which will yield to any treatment.

ROLAND CUMMINGS, M. D. (Pacific Mutual Bldg., Los Angeles)—From my observation I believe Sir Clifford Albutt's contention is well taken that the pain in angina pectoris is not precordial but post-sternal. As the impulses spill over into other cord segments, it may be most any place, but usually when patients are asked to point to the area of pain they will indicate an area over and just to the left of the sternum. This is of not great consequence, however, other than the endeavor to state things correctly tends to keep one from being so fuzzy-minded.

The discussions as to the cause of the pain are interesting, but all are still unproven. It occurs to me that in one case the cause might be the distention of the presigmoid portion of the aorta, and in another case due to a cardiac ischemia from coronary sclerosis.

I believe Doctor Kelly's consideration of the group of patients having anginal pain at about the time of menopause very important. May I add to this the great group which one might class under the head of the fatigue states. These patients have pain typically located, but much milder and more persistent than in primary angina pectoris. These pains do not come on suddenly in the form of attacks, but will develop insidiously following exercise or excitement. I have repeatedly seen patients with a deep aching in and slightly to the left of the mid-sternal region, radiating up to the left side of the neck and down the left arm, in whom their was no sign of sclerotic changes, neither history suggesting heart disease. The blood pressure may be lower than normal. These pains may persist for hours or even days.

I have a patient now whose blood pressure when she has this trouble will be as low as 85. Adrenalin hypodermically always helps her, and at times gives complete relief.

These pains are not due to organic changes of the heart or aorta, but must in some way be due to vascular fluctuations coming from an unstable nerve supply.

FRANK B. REARDAN, M. D. (Physicians' Building, Sacramento)—From the patient's point of view heart pain is an extremely important affair. His attitude toward it is not only, what is it? why is it? but what can be done for it and its cure? Clinically, the symptom is not common to any one pathological condition. As Dr. Kelly has reminded us, this is extremely important as regards prognosis and treatment. Obviously, aortic conditions, atheromatous coronaries, coronary occlusion, acute exhaustion of the heart muscle, cardiac pain occurring in psychoneurotic individuals or in women at the menopause without other pathology discernible, vary widely as regards prognosis and treatment. I would feel that the most important feature in discussing this paper is to simply reiterate its fundamental facts, namely that cardiac pain, irrespective of its productive mechanism, must

be the signal for searching and finding the pathological condition responsible for it in that individual.

J. EDWARD HARBINSON, M. D. (Department of Medicine, Woodland Clinic, Woodland)—In all cases of precordial pain, it is vital that we have a clear picture of the pathological conditions present, as these etiological factors determine our outline of therapy and prognosis.

In addition to the types of cases cited, we sometimes see patients complaining of heart pain whom we suspect of having some type of aortic disease. At autopsy, especially in cases of simple dilation of the aorta, the coronaries may show no evidence of disease and the heart muscle may not be materially damaged. The deficient cardiac blood supply is probably due to incomplete filling of the coronaries. Normally, the openings of the coronary arteries are so situated in the sinuses of Valsalva, that they have an adequate reservoir of blood to draw upon during the period when the aortic valves are closed. In cases of aortic insufficiency, due either to dilation of the aortic ring or to aortic stenosis, conditions are changed. The coronaries not only have an inadequate reservoir of blood to draw upon, but, in addition, the blood leaking back into the left ventricle produces definite eddy currents and probably some suction and, in non-diseased valves, the regurgitant blood may produce some deflection of the leaflets toward the walls of the aorta. Any of these conditions serve to decrease the volume of blood entering the coronaries.

When, in addition to these conditions, we have pathological constriction of the coronary, coronary sclerosis, myomalacia, or other heart muscle changes, the situation becomes very grave.

Patients often come to us complaining of precordial pain and, on examination, show negative findings, except for occasional ventricular extra systole. They insist that their complaint is pain and not a sense of irregularity or other discomfort. They do not definitely belong to any of the classes enumerated and we cannot dismiss them with a diagnosis of psychoneurosis, as the pain disappears if we are fortunate enough to be able to restore a normal rhythm with quinidine.

As emphasized by Doctor Kelly, patients suffering from heart pain cannot be given any routine type of treatment. Each case demands careful study and individual treatment compatible with the pathological changes present. The general measures cited are very important. Amyl nitrite pearls or tablets of nitroglycerine, grains 1/100 (dissolved under the tongue) may be carried by the patient at all times giving him a relative sense of security as well as being very serviceable during acute attacks in most cases.

DOCTOR KELLY (closing)—Doctor Spiro justly says that I have not considered all of the theories of the causation of angina pectoris. Albutt's belief that the aorta is the seat of the disease has never seemed to explain it to me, perhaps chiefly because in my own experience, a minority of my patients with primary angina have had aortic changes which have been demonstrable, while there has usually been definite evidence of valvular or myocardial change. Contrarywise, I have seen large numbers of patients with enormously extensive aortic disease and no history of painful attacks—sometimes a slight or severe constant aching substernal in location.

I also feel that a slight change in the diameter of a part of the aorta, or a slight bulge of its root, is a very insufficient base upon which to erect a diagnosis of angina pectoris of aortic origin.

A frequently used example of anginal pain not caused by "heart strain" is that occurring at night and wakening the patient into an attack. It is argued that this must be due to aortic disturbance because the heart muscle is certainly at maximum rest.

Is it?

I hesitate to drag in the "Dream Books" so dear to the Freudians, but I have at present two patients who have nocturnal attacks and who, on more than one occasion, have been able to remember the dream from which they awakened in an attack. Once, a street car wreck and again a fist fight, either of which indulged in by day time would unfailingly bring on an attack. We do not remember all of our dreams, but we do know that many of them induce considerable circulatory changes of such nature that the heart can in no wise be said to be at

rest. I put this forth as a tentative explanation for many nocturnal attacks—an explanation which I have not seen in the literature.

I agree fully with Doctor Cummings that we should avoid "fuzzy-mindedness," but the fact remains that patients complain of pain located in a definite place, often far from sub-sternal, and who are we, in the present state of our knowledge, to say that the impulse has spilled over in every case. I won't deny that it may have originated outside of the heart muscle in the beginning, as I feel that as yet enough certainly does not attend our knowledge of the exact nature of the disease.

I appreciate the careful discussion of this paper, which only attempted to place angina pectoris before us with a possible working hypothesis upon which to conduct treatment.

QUESTIONABLE DIAGNOSTIC METHODS

By JOHN W. SHUMAN, M. D., Los Angeles

There are more than two sides to any controversial subject, and the subject Shuman discusses is admittedly a many-faced one. This is indicated in some of the discussions on his paper.

It is logical to expect that some of Shuman's statements will produce some strong reactions. This he expects. Some may even censure the editor for permitting the frank discussion. My reply is that discussion, however frank, is welcome, so long as it maintains an impersonal character and does not endanger the cause of better medicine by washing dirty linen in public places. All writers must bear in mind the fact that California and Western Medicine is a public medium and that each issue is probably examined by several thousand non-medical people, including those who are looking for weapons to use against physicians.

Comment on the question raised by Shuman or any other will be published if it complies with the policies established for the guidance of the editor.

—EDITOR.

Medicine being made uselessly complicated and expensive.

Over-specialization not an asset to the cause of better medicine.

Good clinical judgment still the mainstay of the physician.

Standardization of laboratory and other diagnostic methods recommended.

Too many consultants more harmful than none.

DISCUSSION by T. C. Edwards, Salinas; Rene Bine, San Francisco; Dudley Fulton, Los Angeles; W. C. Shipley, Cloverdale.

FOLLOWING the World War many diagnostic clinics were formed. Fads for surveying the health of communities became prominent. It is an axiom that anything, "too prematurely born, soon withers away and dies." I believe this to be true of the activities just mentioned. We, as physicians, must not lose sight of the best interests of our patients. It is not to the best interest of the average sick individual to be examined by too many physicians. In pneumonia this is very true for too much examining disturbs the patient's rest both physically and mentally; and it is one reason why the wealthy man, suffering from pneumonia, who can afford many physicians, and thus too many examinations, has less chance for recovery than the poor patient who has only nature, assisted by his personal physician, to depend upon.

My students have had difficulty in understand-

ing my attitude in not letting them "thoroughly and painstakingly examine the pneumonia patient two and three times a day," until they have realized and appreciated the value of rest as a therapeutic agent, and have learned that inspection is more valuable than extensive percussion and auscultation in the successful management of the pneumonia patient.

The psychic effect upon the patient who is passed from one consultant to another is not for lasting good. The patient sooner or later realizes that he is no better off physically by having too many doctors. Mistakes like the following are more frequent than they should be or than they would be if direction in diagnosis and treatment were more completely centralized in one directing physician.

A man of 45 years, while paying a last visit to his daughter, was referred to a most competent radiologist 350 miles away for a series of x-ray treatments of the abdomen, for "an intestinal carcinosis springing from carcinoma of the rectum, diagnosed after surgical exploration and pronounced inoperable." The dosage was already mapped out so my technician had only to deliver the directed treatment dosage. A year or so later a doctor recalled the case to my mind, and said, "that man came back to his home town and to me, given up by all you specialists; but I gave him potassium iodid and his 'tumor masses' are all gone. I had treated his early syphilis fifteen years before."

The young doctor of today, following his year of hospital internship with its two months' laboratory service, during which time he sees "The Chief" making diagnoses from "specimen reports," enters his practice with the impression that pipettes, tubes, slides, scopes, blood chemistry apparatus and what not are essential in diagnosing disease. There is no doubt that the clinical laboratory is a most valuable aid in diagnosis, but blind credence in a test or group of tests alone leads too easily to the examiner's conviction of the correctness (?) of his diagnosis and to the selling of his opinion as a fact to the patient.

There are three classes of individuals interested in diagnostic methods. First, the honest physicians with personal interest, critical minds and dispassionate judgment. Some call these men scientific. They are intelligent, common sense observers. Hippocrates, Sydenham, and Osler were striking examples of this class which is not large enough.

The second class are physicians and persons engaged in caring for the sick, who are especially moved by sentiment; they lack proper critical sense; they seek for diagnosis to be made easy. This class is large.

The third class are those engaged in the manufacture of diagnostic instruments and their accessories. Too many of this and some of the second class not only realize, but make use of the greatest of all human weaknesses, viz., "the willingness of people to believe." The innumerable followers of cults, pathics and actics, who have little training and conceptions of diagnosis, treat only for the fee's sake, and merit no consideration here.

If we physicians cease to be such easy prey to the get-rich-quick schemes of promoters and manu-

facturers of alleged diagnostic instruments of precision and their accessories, and lose the willingness to believe that pathognomonic symptoms frequently exist, the world will be better off.

Ten years ago sero diagnosis was at its height. Pernicious anemia was "easily diagnosed" by a color index, greater than one. Syphilis was unmistakably recognized by enlarged bilateral postauricular and epitrochlear glands; and a too high blood-pressure was a cause for prognosing early death. Now Abderhalden's test is defunct; a primary anemia does not exist; it takes more than adenopathy to make the diagnosis of syphilis; and we are learning that we did not know so much about blood pressure at that time. The Wassermann test is now standardized and its limitations realized. It is a recognized fact at present that a "frank, reliable Wassermann reaction is evidence of syphilis; and that, in the absence of a syphilitic history, the diagnosis of syphilis should be made with great care; that the test should be verified by repeated tests, and that a negative Wassermann is of little value."

All new and elaborate diagnostic procedures should be standardized and given a first, second, third, fourth or no place rating in diagnostic value, depending upon their practicability and dependability. If diagnostic procedures had to undergo an evaluation similar to that of medical remedies before gaining recognition, it would be a step in the right direction. Individual physicians have their favorite diagnostic methods, but the average diagnostician, however, uses the average diagnostic methods in an average manner, and thereby his average diagnostic deductions, roughly speaking, are about 80 per cent correct. Some of the procedures in vogue that should be standardized are gastric, renal, spinal fluid and metabolic tests.

In my work gastric analyses have been superseded by radiological studies. I find the roentgen ray more dependable and less costly to the patient. Renal function tests are of no value in distinguishing uremia from other conditions, or in prognosis. Basal metabolism studies, if properly used, may give a certain amount of valuable information, but as no two men can use the same machine on the same patient and get the same deductions, I feel it is still too embryonic and too costly a procedure for practical clinical medicine. Spinal puncture is too common a procedure and is not as simple as venous puncture. The diagnosis of cerebro-spinal meningitis should be made before a puncture is thought of, and then instituted more as a therapeutic rather than a diagnostic procedure. I never make a spinal puncture unless I expect to find increased pressure or micro-organisms.

Other procedures which may be viewed along these lines are Lyon's A, B, and C bile tests, pneumoperitoneum technic, catheterization of ureters and blood chemistry. Some diagnostic procedures may be harmful because they are oftentimes performed by eager and untrained hands.

If the clinician does all the work on the patient himself, using the laboratories, the technique of which he supervises, for "findings," and then interprets the findings himself with a definite notion of their practical application, all will be well. Just

what should and should not be a routine is a matter of choice and habit. I secure history and physical examination findings and have them typewritten on a history card. Blood pressure reading and fluoroscopic examination are a part of my general physical examination, just as is testing the "station, gait, and reflexes." But I do not bismuthize and fluoroscope the gastro-intestinal tract when there are no subjective or objective symptoms of disease indicating such procedure. A record of temperature, pulse, respiration, weight, urine and blood is made for each patient. No one of these will make the correct diagnosis, and none of these is observed and entered simply to elaborate a record.

A certain diagnostic procedure which is too often used is "exploratory operation." It is the coward's flag under which he marches to make a diagnosis. By this is not meant that an "acute abdominal crisis," for example, intestinal obstruction, is not a diagnosis sufficient to call for abdominal section. But I do mean that those abdominal explorations which are meddlesome surgery may be a menace and a crime too often committed in the name of MEDICINE.

Westlake Professional Building.

DISCUSSION

T. C. EDWARDS, M. D. (Salinas, California) — Doctor Shuman's paper has more real meat in it than any I have read for a long time. What he says about frequent examination of patients is a fact.

After a definite diagnosis of pneumonia has been made, what possible benefit is it to the patient for you to "go over" his chest daily? What information can one gather from these daily percussions front and back that cannot be more satisfactorily had by referring to the clinical chart, aided by the power of observation? Vastly more good may be accomplished by making a friendly visit. Feel the patient's pulse, and as you do so, give his hand a caressing little pat, and thus let him know, as Oliver Wendell Holmes suggests, that "you are all his own." Make your mere presence in the sick chamber of more value to the patient than your medicine.

The suggestion by Shuman of having diagnostic procedures standardized is a good one. This would give the stamp of reliability where now there is frequently definite uncertainty in relation to some of these so-called aids.

Ray Lyman Wilbur has expressed the opinion that the physician of the future must stand upon a broad foundation; must be fully qualified to diagnose and treat the ills of the sick; and, above all, he will remember that the individual is a very complex entity requiring very careful PERSONAL attention.

Shuman's idea of having the physician do all the work of supervising, collating and interpreting laboratory and other findings (not delegating it to others) is in accord with Wilbur's judgment and good common sense. When this is done there will be less use for specialists.

I wish to emphasize Shuman's views about spinal puncture, exploratory operations and the like. If we take a little more time in the study of our patients, tomorrow or next day there may be such change in conditions that the "interesting" case may look altogether different; in fact may be on the road to recovery. Remember what Holmes says:

"Of all the ills that suffering man endures,
The largest fraction liberal NATURE cures!"

I wish to commend the doctor on the excellence and timeliness of this paper.

RENE BINE, M. D. (380 Post Street, San Francisco) — Some thirty years or more ago, so I was told, two recent graduates of a European medical college settled in a community where there was but one doctor, an old-timer, an old fogey, they considered him, untrained in the use

of high-power microscopes, culture media, bacterial stains, and the like. It was a question of but a short time before the community would make its comparisons, and then the old fogey's patients, and others from the surrounding parts, would crowd the waiting rooms of the two scientifically trained men.

But alas! The stupid community must have been blind. The old doctor held his patients, and the young men had plenty of time for reflection. But just as they were despairing, influenza appeared, and in a short time there was such an epidemic as to make it impossible for even three men to properly handle the situation. The young men were in such demand, day and night, that for weeks they hardly met.

Then late one afternoon, one of them came back to his room, sent for the landlady, told her he was sick, all in, possibly going to die, and please send for the old doctor, but please not to tell his chum about this, as he did not wish to hurt his feelings. Upon which the landlady replied not to worry, she would not say a word, the old doctor would be there shortly, she had just sent for him to come and take care of his friend!

Shuman evidently agrees with those of us, who, when sick, prefer to have the old doctor, or possibly a man trained by so-called "old doctors." For the good old doctors are primarily clinicians, men who question their patients, who examined them thoroughly and intelligently, whose judgment is sound, and who never lose sight of the fact that they are not treating a disease, but a patient, an individual whose mental and moral state must be taken into consideration—always.

And Shuman, no doubt, would prefer to be in the hands of the man who keeps proper case records, and who does not trust to his memory, plus a few "laboratory reports," for all of his data.

There is no doubt that in many American medical schools too much emphasis has been placed upon the newer laboratory methods. We often hear of patients being sent for Wassermann tests before histories are taken or physical examinations made. Frank Billings told me about a year ago that he had referred a patient to a hospital some time before because of symptoms suggesting an enlarged prostate. A couple of days later, visiting the hospital, he looked for his friend and found him in the chemical laboratory where every possible functional renal test was being carried out, blood tests galore, x-rays had been taken of most of his bones to rule out metastases, but no physical examination had been even started!

Repeated clinical examinations often enable one to reach conclusions in a given case; occasionally even the simple review of a history will do the trick.

I agree with Shuman that blood-pressure readings should be a routine procedure. It is a great satisfaction to be able to tell a patient, year in, year out, that his physical status has shown but little change. A routine urine examination is essential. No physician can be criticized who omits fluoroscopic examinations as a routine procedure, not to mention the fact that many patients are seen often at their homes only.

Nor can too much reliance be placed upon the "findings" of the radiologist, aye, of the best. How often does a negative report really exclude gall-stones? How often does a positive report prove duodenal ulcer, chronic appendicitis, abdominal adhesions, or even cancer? How many teeth have been unnecessarily extracted because of tiny shadows?

Doctor Shuman's suggestion that new and elaborate diagnostic procedures be standardized is a good one. It is also quite important, I believe, that the medical teachers of this country, by precept and by example, try to turn out good *clinicians*, and that at our medical meetings, and more especially in our county societies, more attention be paid to the presentation of well-studied clinical material than to the highly specialized report of a pathological rarity.

DUDLEY FULTON, M. D. (Pacific Mutual Bldg., Los Angeles)—In my opinion Shuman's very interesting paper offers no constructive criticism other than making a plea for more thoughtful analysis of clinical and laboratory findings.

Every experienced clinician agrees with the author that

there is too much test-tube, x-ray and serological influence in modern medicine. Yet who would attempt diagnostic work without utilizing the aid these diagnostic methods give when properly valued?

I believe Shuman could write a better paper covering the neglect of these diagnostic methods, as it is undoubtedly true that they are more frequently neglected than abused and improperly interpreted. A case in point: The confusion in diagnosis and treatment of the case of "Intestinal Carcinosis" he reports in this paper would probably have been avoided had a competent Wassermann test been performed.

In regard to the suggestion that diagnostic methods be standardized similarly to medical remedies and published weekly in the Journal of the American Medical Association, it should be pointed out that proper valuation of either can be demonstrated only by their application to general practice. This is the contribution of the clinician to progressive medicine and which the research worker has always solicited.

While we are willing to admit, for the sake of argument, that the art of medicine may possibly not measure up to the standards established by such famous clinicians as Hippocrates, Sydenham and Osler, yet it must be conceded that the science of medicine, as displayed by the general practitioner, manifests greater accuracy in diagnosis and, therefore, therapeutics, than ever before. We are inclined to believe that this is the result not only of more advanced knowledge of biological laws, but of the application of the latter, to everyday practice, by the diagnostic methods under discussion.

W. C. SHIPLEY, M. D. (Cloverdale, California)—Doctor Shuman has presented some very appropriate facts in his paper. There can be no doubt as to the ill effects of excessive and too frequently repeated examinations of the gravely ill, especially in pneumonias.

To my mind one good consultant, when a case demands it, is as good for all parties concerned as a far greater number.

With the average high-class medical man, a consultant is only necessary to confirm the attending physician's findings, help him in making a diagnosis and sharing in the moral responsibility.

The diagnostic clinics, while beautiful in theory, are not always perfectly satisfactory in practice.

There can be no question but that the accessory diagnostic means of x-ray and laboratory should be standardized and the simplest and most satisfactory selected for general use for no medical practitioner, no matter how keen his powers of observation and his ability to analyze the findings of his special senses, can depend entirely upon case history and clinical evidence; neither should these fundamentally important elements in the practice of scientific medicine be neglected in favor of laboratory methods.

Intelligent use of all diagnostic measures should be employed in arriving at a definite conclusion as to the cause of a patient's deviation from a normal standard of health.

SHUMAN (in closing)—Discussion greatly appreciated.

Surgical Procedures in Jaundiced Patients—A practical application is made by E. Starr Judd, Rochester, Minn. (Journal A. M. A.), of the work of McNee, van den Bergh, Aschoff and Mann to the surgical treatment of jaundiced patients. The most valuable aid in the handling of jaundiced patients is the van den Bergh test for the quantity and quality of bile in the serum. Much has been accomplished in the preoperative treatment of jaundiced patients, which means more than just the intravenous administration of calcium. Judd believes that in deeply jaundiced patients the common ducts should usually be drained with a tube, and the gallbladder should be drained if necessary, but not removed. Hepaticoduodenostomy is the procedure of choice in cases of postoperative stricture. Cholecystogastrostomy offers considerable relief in certain types of inoperable malignant diseases, and also seems helpful in cases of hepatic infectious jaundice. Multiple needle punctures in cases in which the liver is badly damaged allow a certain amount of blood and fluid to drain out, and may tend to restore the function of the liver.

Clinical Notes and Case Reports

FECAL VOMITING OF RARE ORIGIN

By C. C. ALLISON, M. B. (Toronto)

(From the National Soldiers' Home Hospital, Los Angeles)

Vomiting is a most important symptom. Persistent vomiting, though periodic in type, calls for a most thorough investigation. Fecal vomiting usually, but not always, bespeaks obstructive symptoms. For example, this patient exhibited fecal vomiting as his chief symptom, but he did not have complete obstruction. His was a vicious circle of stomach and jejunum with a fistula leading up from the colon into the latter.

CASE REPORT

No. 4986: Male, age 29. Admitted November 20, 1923, complaining of "vomiting at weekly intervals, frequent diarrhea and eructations of gas without colic."

History in Brief—Following a truck accident in January, 1919, while in the A. E. F. service, he was sent to the hospital for minor injuries, and while there a thyroidectomy was performed and he was then invalided to the U. S. A. and discharged in July, 1919, on a "SCD" (Surgeon's Certificate of Disability). One week after his discharge from the army he developed "stomach symptoms." A gastro-enterostomy was performed for "peptic ulcer," followed by symptomatic relief until July, 1923.

Physical examination revealed a tall undernourished weak man with pale skin and cyanotic lips and fingertips, and edema under the eyes; pyorrhoëa-alveolaris and multiple dental abscesses. Chest expansion was poor, the diaphragm high; the abdomen prominent with a small amount of ascitic fluid present; an incisional scar five inches long in upper right rectus with hernial protrusion.

An x-ray gastro-intestinal series showed an outline of the transverse and descending colon in the "immediate" plate. The roentgenologist, R. C. Shawhan, M. D., considered this was due to previous medication and returned the patient to the ward, advising him to return later. The ward record showed, however, that this patient had not received any medication which would cause an "opaque shadow."

The laboratory reported "occult blood" present in the stools on three examinations: A basal metabolic rate of 35; RBC 4,500,000; haemoglobin 74 per cent.

Patient was examined on May 8, 1924, by Medical Consultant John W. Shuman of Los Angeles, who reported as follows: "The gastro-enterostomy has not only served its purpose, but has become a menace. Advise that it should be taken down for this will return the food to its usual route, eradicate the ventral hernia, and give the surgeon an opportunity to clear up any pathological condition that may exist."

His progress record showed, in spite of medical management, a continuous loss of weight, frequent night sweats, frequent attacks of diarrhea, and vomiting and neuritic pains with paraesthesia all over the body. On July 10, without complaint of previous nausea, he vomited a quart and a half of feces containing hard scybalous masses.

Patient was referred to Colonel James A. Mattison, Chief Surgeon, for further consideration from the standpoint of surgical intervention. After reviewing the findings thoroughly, he decided, in view of the fact that the patient had myocardial degeneration with considerable resulting ascites, that the patient was too poor a risk for surgical intervention. He advised that it would be necessary to cut off the old gastro-enterostomy and probably do a partial resection of the stomach and do a Polya operation. Fecal vomiting again occurred on July 20, and thereafter at frequent intervals up to the time of death, August 8, 1924.

Autopsy was performed August 10, and showed the celiotomy scar attached to the side of the gastro-enterostomy by a thin strand of adhesions. The stomach was

greatly dilated, the pylorus infiltrated. The transverse colon was firmly attached to tissues involved in the gastro-enterostomy. The pylorus would barely admit a pencil, and, upon opening it, a depressed puckered scar of a healed posterior pyloric ulcer was noted. The first portion of the jejunum was attached to the posterior surface of the stomach. The gastro-enterostomy orifice was sufficiently large and showed absence of ulceration. The jejunum below the orifice was convoluted and attached to the transverse colon anteriorly. The colon lay between it and the stomach and a fistula wide enough to admit the finger was found between the jejunum and the colon at a point 1 c. m. below the gastro-enterostomy. The portion of the transverse colon immediately proximal to the gastro-enterostomy was infiltrated and stenosed so it would admit a finger with difficulty (See Figure 1 and 2.)

Other findings were: Chronic cholecystitis with adhesions to the transverse colon; chronic appendicitis; 500 cc. of amber colored ascitic fluid; high diaphragm; partial atelectasis of the lower lobe of the lung.

Points of Interest—The cause of fistula between colon and jejunum is problematical. It was definitely apparent that nothing short of cutting off the old gastro-enterostomy, re-establishing the continuity of the colon and doing a Polya or some similar operation, would have been necessary to have saved this patient. It is very evident, however, that patient was too poor a surgical risk to even consider such a procedure.

ULCERS OF THE BLADDER

By E. HAROLD KING, M. D., Los Angeles

Ulcers of the bladder may be due to injury, tuberculosis, gonorrhea, cystitis, lues, or malignant tumor. A solitary punched-out ulcer is a common type in anemic women. The ulcers may be single or multiple and perforation may occur into the prevesical space or the peritoneal cavity. The types of bladder ulcer I have seen mostly have been gonorrheal in origin. These ulcers have presented symptoms of severe pain, with bloody, turbid urine and have been slow to respond to treatment except when fulgurated. Most of the patients have refused fulguration.

It is a known fact that astounding results have been obtained from the administration of parathyroid substance in varicose ulcers of the leg and ulcers of the rectum. How this endocrine substance acts has not as yet been fully determined. It is claimed that not only does parathyroid substance regulate calcium metabolism, but also stimulates general cellular nutrition. I have used parathyroid substance, combined with calcium lactate in three cases of ulcer of the bladder and cite these cases to show the gratifying results obtained.

CASE REPORT

CASE 1. Adult male, age 34, complained of vesical tenesmus, blood in the urine, and pain during the act of urination. Cystoscopic examination revealed a large ulcer of the bladder. Ureteral catheterization showed negative urines from the kidneys. Patient had gonorrhea eighteen months ago. Treated at office with vesical irrigation of sterile distilled water until the water came away clear. This was followed by the instillation of one ounce of emulsion of silver iodide which was retained in the bladder for several hours. The accompanying cystitis was relieved, but the patient still complained of pain at the end of urination after ten days' treatment. He was admitted to hospital, put to bed, fed on green vegetables, large quantities of water and orange juice. The medical treatment consisted of soda bicarbonate grains 30, along with parathyroid substance gr. 1/20th and calcium lactate, grains 5, every three hours. At the end of six days all urinary symptoms had disappeared. A cystoscopic examination made one month later showed the ulcer had cleared up.

CASE 2. Adult female, age 26, complained of pain over right kidney and bladder. Fever ranging from 100 to 104 for over one week. Gonococcal infection three months previously. Examination showed a profuse vaginal discharge and smear confirmed the diagnosis of gonorrhea. This patient was admitted to hospital and given the same line of treatment as outlined in Case 1. Within five days the temperature was down to normal and all bladder symptoms had cleared up. This patient remained in hospital seven days. A few days later she was put

under ether anesthesia, a cystoscopic examination showed the ulcer of the bladder had healed and to clear up the specific endometritis the uterine cervix was dilated, the endometrium and cervical canal were swabbed with equal parts of carbolic acid and iodine and the vaginal walls treated in the same manner. An iodoform gauze pack (5 per cent) was introduced into the vagina and removed after twenty-four hours. This patient is now free from all bladder symptoms and has no vaginal discharge.

CASE 3. Adult male, aged 54. Complained of vesical pain and painful micturition for two months. Wassermann four plus. Given course of Salvarsan and mercury, but the bladder symptoms were not relieved. The cystoscope revealed an ulcer of the bladder just outside the trigone. This patient would not consent to fulguration of the ulcer, but did go to bed and followed the dietetic and medical treatment outlined. He is now free from all pain after three weeks' of treatment.

308 Consolidated Building.

SIGNIFICANCE OF THE COLLOIDAL PROPERTIES OF GELATIN IN SPECIAL DIETARIES

By THOMAS B. DOWNEY, Ph. D.

(Of the Mellon Institute of Industrial Research,
University of Pittsburgh)

An examination of the dietetic possibilities of gelatin from a chemico-physiological standpoint reveals a number of properties which would make this unique food product a valuable addition to special dietaries, particularly those in which milk forms the sole or major portion. In such dietaries gelatin functions as a protein food to the extent of the utilization of its amino acids by the body, and in addition possesses marked activity as a protective colloid and emulsifying agent. Practical observations in clinics and hospitals, as well as experimental work in laboratories, indicate that these characteristic properties of gelatin as a colloidal substance exert a most significant influence in promoting digestion and absorption of certain types of foods.

The importance of this colloidal activity of gelatin, where fed in conjunction with dairy products, has been demonstrated by the writer in feeding tests with the albino rat. Shortly after weaning, the young from several litters were divided into two groups; one group received pasteurized whole milk as its sole diet, the other pasteurized whole milk containing 1 per cent of gelatin. Observations, extending over a period of six months, showed that the growth and physical well-being of the group fed on gelatinated milk was markedly superior to animals fed on the plain milk diet. The increased growth was accomplished on smaller food consumptions. In fact, during the early growth period for equivalent gains in body weight the animals on gelatinated milk consumed about 23 per cent less food than the group on plain milk.

Another striking illustration is found in the writer's experiments with ice cream. Over a period of seven weeks it was observed that a group of rats fed on an exclusive diet of ice cream, containing 1 per cent of gelatin, gained no less than 25 per cent more in body weight than was the case with their brothers and sisters whose diet was plain ice cream. For equivalent gains in body weight, the food consumptions of the group fed on the gelatin-containing ice cream were much less. Smaller percentages of gelatin resulted in proportionate improvements. It is important to note in this connection that the better nutritional status of the gelatin ice cream group after a number of months on the diet was reflected in continued health and growth, and in increased bone development and reproduction in several cases.

It should not be presumed that the observed improvements of the dairy products are due entirely to the added protein value of the gelatin, but possibly more to the protective colloidal and emulsifying effects that it confers. The digestive processes are essentially colloidal phenomena, whereby fats, carbohydrates, and proteins are ingested in the colloidal conditions and changed by the various enzymes to degradation products capable of absorption by the body. To accomplish the

formation of these simpler substances, the enzymes must come into intimate contact with the food particles. If, perchance, the food particles are present as large tough masses, as is the case with cow's milk coagulating under the influence of the hydrochloric acid and rennin in the human stomach, the contact surface of the enzymes with the food is limited and gastric digestion is delayed or impaired. Various specialists have described experiments in vitro as well as with humans which show that the coagulation of cow's milk by acid and rennin is prevented or modified in character in the presence of relatively small amounts of gelatin. This effect is spoken of as protective colloidal action, and it is interesting to note that gelatin is one of the most efficient of all human protective agents. Gelatin is also a good emulsifying agent and it is quite probable that it aids the secretions of the alimentary apparatus in the emulsification of fats.

In discussing the digestibility of milks, Chapin says that those animals whose stomachs form the larger percentage of the digestive tract and their digestion is largely gastric produce milks that form tough curds, as for example, the cow. In contrast is the human, whose stomach forms only about 20 per cent of the digestive tract. Human milk curdles in light flocculent masses. It has been pointed out by Alexander that human milk contains a natural protective protein in large amount, which is present in small amount in cow's milk. It would seem, that the addition of such a protective agent as gelatin to cow's milk would make it particularly suitable for infants, and such has been found to be the case, as is testified to in pediatric literature.

In like manner, gelatin has been shown to be of value in other dietaries composed largely of dairy products. For example, Hawk reports that the addition of gelatin to the milk-egg diets of tuberculosis patients resulted in decided nutritional improvements with the majority of the cases tried.

The experiments described suggest the advantages that are to be derived by the utilization of gelatin in other dietaries. The protective colloidal and emulsifying action of gelatin promotes the digestion and absorption of various types of foods. It is also misleading to assume that gelatin as a protein is of insignificant food value.

Feeding tests by McCollum and by Osborne and Mendel have shown that, with certain cereal grains, gelatin is exceptionally well utilized, presumably through its high content of the amino acid lysine. Also, with milk proteins gelatin is of value, as has been found by Sure. In combination with milk in the liquid form, it is believed, however, that the colloidal properties are of greater significance.

[EDITOR'S NOTE: Announcements regarding a well-known brand of gelatin are found monthly in our advertising pages.]

Shoe Dye Poisoning—C. W. Muehlberger, Madison, Wis. (Journal A. M. A., June 27, 1925), has found a total of forty-seven cases of poisoning from shoe dyes reported in the literature. Of these, twenty-five resulted from dyes containing nitrobenzene, and twenty-one from dyes containing anilin. The toxic substance responsible for one case was not stated. One of the cases of nitrobenzene poisoning resulted fatally. All the reported cases of anilin poisoning from shoe dyes are from European sources, while all those of nitrobenzene poisoning are from the United States. The nine cases reported by Muehlberger are the first of anilin poisoning from shoe dyes to be reported in the United States. The outstanding symptoms of poisoning exhibited in these cases are: marked cyanosis, weakness and vertigo followed by rapid pulse, headache, vomiting, somnolence and chills. The only treatment required is the removal of the shoes and rest in bed until the cyanosis disappears. Oxygen inhalation is without effect on the cyanosis. Digitalis medication is without avail and is not indicated. The chemical analyses of four commercial preparations of black shoe dye are given. All these were found to contain either nitrobenzene or anilin. The only way that this type of poisoning can be adequately prevented is by state or national health regulations prohibiting the manufacture and sale of toxic shoe dyes. It is recommended that nitrobenzene and anilin be replaced by nontoxic solvents in order to eliminate the danger of poisoning.

EDITORIALS

THE LANE MEDICAL LECTURES

The 1925 Lane Medical Lectures will be given on October 5, 6, 7, 8, 9. They are by Doctor Vittorio Putti of the Rizzoli Institute, Bologna, Italy. They all have to do with problems of orthopedic surgery. They are by a remarkable man with a remarkable background—one of the great leaders in this specialty of medicine.

Every physician in Western America ought to hear these lectures and meet Doctor Putti. We talk a great deal about post-graduate review work. Here is an opportunity provided by the foresight of a California physician, and President Wilbur of Stanford University issues an invitation to doctors to avail themselves of this privilege.

The full program, with a brief illustrated biographical sketch of the lecturer and a brief description of the wonderful institute in which he works, will occupy this space in the September issue of CALIFORNIA AND WESTERN MEDICINE. This preliminary note is only a suggestion so that physicians desiring to attend these lectures may have ample notice of the time, and plan their work accordingly.

DIGNIFYING LEGAL MEDICINE AND ETHICS IN MEDICAL EDUCATION AND PRACTICE

Since early in its existence the College of Medicine and Surgery of the University of the Philippines has had a Department of Legal Medicine, at first with a part-time professor and executive head and later with a full-salaried professor and several assistants. As in all other departments of that splendidly organized medical education, hospital and health service center, the head of the department in the school is not only ex-officio head of the corresponding department in the hospital, research laboratories and elsewhere, but wherever such departments can be extended to be of use in the practical work of the city and insular governments, that extension has been made.

The most recent report of Professor Sixto de los Angeles outlines an illuminating expansion and a satisfactory service in both teaching and practice of the great problems involved in legal and ethical medicine, which we have not seen exemplified elsewhere.

The department is now more than ten years old, and it not only teaches the problems connected with legal medicine and ethics to undergraduate students and graduate students of medicine, but the department serves every probable medico-legal patient admitted to the Philippine General Hospital or any of its services from the time of admission until the case is disposed of finally in the courts. All cases of medico-legal jurisprudence that arise through the police departments, courts or any other departments of the city or insular government at Manila, are, by affiliation, promptly referred to this department of the medical school, and the officers of the depart-

ment take an active interest in assisting the courts and officers in a fair adjudication of the matter.

For this purpose the department maintains its own specially equipped laboratories, laboratory workers and technicians of other kinds necessary to carry forward this enormously important and growing branch of medicine.

By action of the Regents of the University of the Philippines, this department of legal medicine also constitutes the same department for the College of Law of the same university. Its faculty is made up with a full-time professor at the head and with a number of specialists, including attorneys, doctors, chemists, toxicologists and similar part-time instructors and a number of technicians.

Every other department in this school is organized along the same broad lines, but it is unusual to see such consideration given to legal medicine, and it is interesting to note that after ten years of experience the practical service of such a department to hospitals, courts, police bodies and government in general, as well as to the public, more than compensates, even in money value, for the cost of operating the department.

Persons interested in co-ordinating educational and practical ideals in organization and management of medical and health institutions can learn something from the organization in our far distant possessions.

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS OF THE AMERICAN MEDICAL ASSOCIATION REVISES AND EXTENDS ITS PROGRAM.

No more important or far-reaching movement in the progress of better health has been announced in recent years than that shown in the recent report of the Council on Medical Education and Hospitals of the American Medical Association. Heretofore the Council has concerned itself chiefly with the regulation of instruction of undergraduate medical students; the listing of schools in which satisfactory instruction is given and the accrediting or approving of hospitals acceptable for fifth year (intern year) instruction of medical students. More recently, the Council has wisely extended its field to include the supervision and approval of schools and institutions preparing to teach graduate medicine in general, including those teaching the specialties, and hospitals and other health agencies that desire to supply acceptable residencies and instruction in the various specialties to graduate students in medicine. All of these movements have been carefully matured, and if wisely promulgated, as they undoubtedly will be, will mean much to the cause of better health for the citizens of the United States.

HOSPITALS APPROVED FOR INTERNS

The essentials in a hospital that desires to be approved for interns have been modified and extended. Hereafter only the general hospitals will be so approved, and the conditions of approval have been strengthened and made more definite. It would take too much space to reproduce or analyze these new essentials here, but all physicians, hospitals, and other health agencies interested in the problem should write to the Council at 535 North Dear-

born street, Chicago, for a copy of the new recent publication.

HOSPITALS APPROVED FOR RESIDENCIES

The Council has made a clear distinction between the fifth year medical student or intern, as he is most commonly called, and the more advanced graduate student or hospital resident, as he is now officially termed. Special hospitals and others not eligible because of lack of variety of material for approved standing for interns are now approved by the Council for second and later year graduate students of medicine. This is an important move and one that is going to take considerable time to be widely and fully appreciated. Hospitals not eligible for approval for interns, but which are prepared and desire to give special graduate instruction to still more advanced students, should make their applications for accredited standing for this purpose. Applications may be sent directly to the Council in Chicago, or they may be sent, as before, to the Hospital Betterment Service of the League and California Medical Association at 593 Market street, San Francisco.

GRADUATE MEDICAL SCHOOLS AND TEACHING INSTITUTIONS

The Council has already prepared a list of approved graduate schools of medicine, and of hospitals which have made satisfactory provision for hospital residents in certain specialties in which the hospital is giving high-grade work. Stanford University School of Medicine and the University of California graduate division are the only two institutions so far accredited this way for California. There are two different kinds of graduate instruction above the intern year: One kind is given by a recognized teaching institution with adequate approved hospital evaluations, and the other kind is given by a hospital accredited for graduate instruction or residencies. Most of the students who will continue their studies beyond the required fifth or intern year are naturally those preparing themselves to practice a specialty. The approval of either a graduate school or a hospital for this purpose, therefore, is determined largely upon its ability to give real instruction in a satisfactory manner in one or more of the recognized specialties of medicine. The whole movement is one in the right direction. It fixes once and for all the essential fact that the fifth year medical student is still an undergraduate student. It provides opportunities—approved opportunities, whereby students of medicine who wish to continue their studies with a view, either to becoming specialists or to otherwise advancing their knowledge of medicine, may have the same safeguards that have proved themselves so effective for the younger undergraduate in medicine.

None of these propositions, excellent as they are, takes care of the biggest and most vital problem confronting medicine, namely: the preparation of a better general practitioner. This, in the opinion of this editor, must be provided for, and I believe could be done in a most practical manner by accrediting or approving small hospitals of less than 100 beds for residents in the second and later years of graduate medical study. It is these smaller hospitals that

are on the firing line and whose staffs and attending physicians in general are in immediate contact with the rural populations of our country. It is to them, and through them, and in no other way that the young physician may fit himself for the general practice of medicine. Such accredited standing for these hospitals may require either residence in the hospital or an apprenticeship in the office of one of the physicians practicing in that hospital and in the surrounding rural community. When the Council on Medical Education and Hospitals have added this additional step to what they have already so well done, the scheme of medical education will become more rounded, practical, and as complete as can be expected. That such a step will come is as inevitable as is the progress of medicine. There are a considerable number of hospitals of from twenty to seventy-five beds in California, for example, in which just as good medicine is being practiced by men just as able as is being practiced anywhere else in any community, and, furthermore, the staffs and attending physicians of all of these hospitals are the burden-bearers on the outer edges of medicine among our more or less rural citizens where our great advance in the future must be expected.

Congenital Hypertrophic Pyloric Stenosis—Four hundred and fifty-four cases of congenital hypertrophic pyloric stenosis in which the Fredet-Rammstedt operation was performed are reviewed by R. W. Bolling, New York (Journal A. M. A.). During the last ten years, there has been a gradual reduction in mortality, which is attributed not only to an increase in the proportion of favorable cases, but also to certain changes in the care of patients before and after operation. Of this entire series, sixty-seven died, a mortality of almost 15 per cent. The general mortality for the first 175 cases of this series was 17.1 per cent, and there was very little difference in the results in private and in ward patients. The contrast, however, is striking in the 279 patients operated on since January, 1920. Forty private patients were operated on with one death, and 239 ward patients with thirty-six deaths. All deaths in the hospital following operation are classed as operative deaths. Thirty-three patients died in collapse in from two to seventy-two hours after operation. Twenty-two patients died in from five to twenty-six days. In two instances necropsy disclosed acute gastro-enteritis. In two patients, bronchopneumonia was found. In another dying on the twenty-first day, a small hematoma was found at the site of the pyloric wound. Severe infection of the wound from a pre-existing omphalitis was the cause of death in two cases. Other necropsies were negative. Hemorrhage was responsible for the death of five patients: Two of these died from bleeding from the abdominal wound and two from bleeding in the wound in the pylorus. One, apparently a true hemophiliac, died on the third day from continuous oozing from the pylorus and the abdominal wall. Six deaths occurred from peritonitis. Two were in cases in which the duodenum had been accidentally opened. Two occurred early in the series, when the operation was modified by passing a bougie through the pylorus by means of a small opening in the stomach. One patient died twelve hours after an operation for an acute intussusception, which developed on the second day after operation. Bolling concludes that the Fredet-Rammstedt operation is simple, curative and permanent in its result. Convalescence is rapid, and the infant returns almost at once to normal development. In view of the results obtained by surgery in this series during a period of more than ten years, there appears to Bolling to be little justification for a delay which turns a good operative risk into a bad one, substitutes a long accidental convalescence for a brief, uneventful one, and fails to restore promptly a growing infant to a satisfactory state of nutrition at an important period in its development.

The Month With The Editor

Notes, reflections, extracts from correspondence, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

I See By the Papers That—

Another doctor has a \$20,000 judgment against him for "malpractice." The plaintiff had charged that his wife died as a result of an operation claimed to have been "unskillfully and erroneously performed."

Some doctors insure their homes against fire and their motor cars against everything, but are still too shortsighted to protect themselves against the increasing and unavoidable legal hazards of their profession.

—A San Francisco doctor "announces" that after "a year's experimentation at San Quentin penitentiary and a year's study in Europe," he has "learned an operation that corrects deviating eyes." The newspaper articles carries the pictures to prove it.

—Doctor Sir Arbuthnot Lane again occupies the headlines. This time he is helping the cancer quacks.

During recent years he has managed so as to be quoted as a sort of endorser by more than one species of cultist, but this cancer stuff he is feeding to the press will do untold harm.—See Mr. Ford's Dearborn Independent of June 20 for some of the details.

—The doctors of San Mateo, Burlingame and Hillsborough refused to give free treatment to the children of the well-to-do residents of these exclusive residential districts.

It appears that a school nurse had rounded up some 150 of these "poor little rich children" and called upon the doctors to render them "free" service, which the doctors quite properly refused to do.

—Some surgeons are adding to their notoriety by tattooing their initials on the patient's body. Let us hope that the tattooing is not always placed too close to the scar.

—A doctor's name was "posted" in his club for non-payment of his account. The doctor fastened to this posting a neatly typed sheet, headed "What's sauce for the doc is sauce for all the following" (here he listed the club members who owed him for services).

Whether "doc" got his money or not is not stated.

Doctor, Have You Noticed that practically all welfare movements requiring the services of physicians are promoted and administered by lay organizations that dictate medical policies?

It is quite possible, believes the editor of Ind. Med. Jour. that some of the paid employes of these organizations, who are basking in the limelight, would not be so enthusiastic if they lost some of their powers to dictate to doctors.

Will They Take the Hint?—"The child is not the mere creature of the state," declares the U. S. Supreme Court in declaring unconstitutional the Oregon School law.

This ought to be a blow to those uplifters who are meddling into the private, personal and sacred affairs of that fundamental unit of civilization—the home.

But will it? It will not. These meddlers will go on trying to formulate laws, rules and what not calculated to give them control over mating and the desirable and natural consequences of mating even to the extent of blazoning the most sacred of connubial matters upon official and other incorrectly called "confidential records."

One paragraph of the *unanimous* decision of the Supreme Court which should be engrossed and kept constantly before educational authorities, public health doctors and "welfare" organizations, reads:

"The fundamental theory of liberty upon which all

governments in this union repose, excludes any general power of the state to standardize its children by forcing them to accept instruction from public teachers only. The child is not the mere creature of the state; those who nurture him and direct his destiny have the right, coupled with the high duty, to recognize and prepare him for additional obligations."

That Effective Apple—"Didn't I see you going down the street the other day with an apple in your hand?"

"Quite so, old chap. I was going to call on the doctor's wife.

DISEASE IS AN IMPEDIMENT TO THE BODY, but not to the will, unless the will itself chooses. Lameness is an impediment to the leg, but not to the will. And add this reflection on the occasion of everything that happens; for you will find it an impediment to something else, but not to yourself.—Epictetus.

—This fundamental fact, like many others, is called obsolete by some of our modern faddist teachers and philosophers (?).

COMMENTS BY AUTHORS AND READERS—

—"If my paper should be published, I suggest discussion by Dr.——, Dr.—— and Dr.——. I am not at all sure that these gentlemen will agree with my opinions; nevertheless their decisions will be honest and of value."

—"I am sorry indeed that my overworked condition has made me so tardy in returning my manuscript and that you have had to write me so many times. Assuring you of my appreciation of your forbearance and considering myself constructively admonished, I am,"

—"When I returned the other day from a vacation to my office I found the May number of the CALIFORNIA AND WESTERN MEDICINE awaiting me. I have always been interested in medical history and I want to tell you and your co-workers how much I enjoyed the historical number. I would like to have one more copy for filing in my library."

"You surely publish one of the best journals in the U. S.—none better and sound editorials."—M. D., Indianapolis.

After Over 300 Years of Effort vital statistics of sorts are available for only about 80 per cent of our people.

If we show such speed in making progress where there is no controversy, how long will it take us to secure some of the "uniform laws" some are advocating about controversial subjects?

Suppose we should secure a uniform vaccination law, for example, would it be better enforced for that reason? Assuredly not.

Most health laws, "uniform" or otherwise, are largely disregarded. From 40 to 60 per cent of tuberculosis reported, for example, is reported from morgues. This in spite of long standing drastic laws on the subject.

The laws requiring the reporting of syphilis and gonorrhea are the jokes of the age.

What School Children Are Taught—An official government pamphlet based upon a study of what is being taught our school children about health, quotes, among others, the following extracts from the teachings in various states:

"Blood is of no use except as it is kept in circulation."

"The purpose of adenoids is to protect the child against disease."

"When the nose and throat are healthy, they produce a germicidal secretion which rids the incoming air of nearly all its bacteria."

But, why quote more?

Bunking the Public by dishonorable exploitation of false value is the keystone of a substantial share of current publicity.

Unfortunately this method is being employed by some who claim to be leading medical thought.

—“Hubby—‘What are you taking that patent medicine for—you’re well, aren’t you?’
“Wife—‘Of course I am; but the advertisements of this dope are too attractive not to give it a trial.’”

Indiana Has a New Law which permits insurance companies to write policies of \$2500 or less *without medical examination*.

Doctors would do well to digest this fact in connection with the editorial in the February, 1925, issue of this magazine.

There is more to this movement than is visible to the nearsighted.

—But to go back to apples a moment, “Abe Martin says it’s jest about got so a doctor a day is cheaper’n apples.”

“Corns” was the Subject of a Hunterian lecture before the Royal College of Surgeons some time ago.

Dyspepsias, hemorrhoids, flatulence and a lot more so-called trivial illnesses should be similarly dignified and restored to the attention of physicians.

—In the aggregate these “minor ailments” constitute over 90 per cent of the limiting and partially disqualifying infirmities of man.

They supply the “fodder” for the “faddists.”

Recent References to Chiropractors as the “I knead you doctors” seems to us as particularly fitting.

It May Be Significant that the A. M. A. House of Delegates passed unanimously a resolution calling upon the government to remove the restriction upon the amount of alcohol a doctor may prescribe for a patient within a given time limit.

In the same connection it is of more than passing interest that the new forthcoming edition of the U. S. Pharmacopeia again admits both whisky and brandy among the approved drugs.

Many Thoughtful People are beginning to wonder if mass intellect has sunk to such a level that it will interest itself in nothing but exploited sensation and salaciousness and will accept no expression of opinion that does not flatter the prejudices and complacencies of the thoughtless and subliterate.

—Perhaps it is only a “dark of the moon” phase of a social cycle we are going through. Let us hope so. In the health field in any event, the “health fairy” has grown up into the Chamber of Commerce bathing beauty.

“The Jealous Doctor and the hungry lawyer are the two main causes of malpractice suits,” concludes the very active medico-legal committee of the Wayne County (Mich.) Medical Society after fourteen years of experience.

—The committee’s figures show the significant fact of an annual average of more than one threat to sue for each 100 doctors.

Nothing Will So Quickly Kill a really valuable procedure as to propagate a lot of wild and extravagant claims for it which are not and never could be justified by the facts.

—Too many are forgetting that this truth applies to matters pertaining to health as certainly as it does to “get rich quick procedures.”

Isn’t It Stimulating to Read that Ivan Petrovitch Pavlov, the Dean of Physiologists, is still at work in his researches, and, although over 75 years old, is producing some of his best work?

Let us hope that world affairs will soon be so that the output of this remarkable Russian may be again

more widely available than it has been during recent years.

The Total Number of Accidents reported to the California Industrial Accident Commission for 1924 was 206,131. Of these accidents 645 caused death, 1319 caused permanent disability and 87,982 caused temporary disability lasting longer than the day of the injury; 116,185 were no-disability accidents but *all required skilled medical treatment*.

Golfer—Doctor, you remember you recommended golf to take my mind off my work?

Doctor—Yes.

Golfer—Well, can you prescribe something now to get it back again?

PLAY HAS BEGUN TO DOMINATE PHYSICAL EDUCATION, believes John Sundwall. “One serious difficulty, however, with the play movement,” continues this authority, “is that it has become largely emotional, and when emotions dominate any movement there are dangers ahead.”

—Several new healing cults have already grown out of the so-called “physical education” movement.

—When the Romans tangled up one end of their play movement with medicine and the other end with work, the movement perished and took much of their civilization with it.

A negro was trying to saddle a fractious mule.

“Does that mule ever kick you, Sam?” asked a bystander.

“No, suh,” said Sam, “but he sometimes kicks whar I jes’ been.”

The Doctor of the Future—Advance sheets from the report of the Rockefeller Foundation show concern for the future of physicians:

The Foundation states that, “Probably three-quarters of all doctors today are general practitioners. There are people who assert that this type of physician is doomed; that he will disappear because he cannot compete with the specialist on the one hand and with preventive and social medicine on the other.

“Such an outcome is to be viewed with concern. The well-trained, properly equipped, experienced general practitioner of ability, character, and personality is a fundamentally valuable person.

“The stimulating philosophy of individualism, with its insistence upon independence, initiative, and ambition,” continues the report, “seems to be embodied in the general practitioner, who will survive only if he can win confidence and make a living.”

Troublesome Tonsils—It requires precisely the same education, training, experience and judgment to say intelligently that the tonsils of any child should come out, that is required to perform the operation.

The day is about over—except in backwood communities—when teachers and other technicians are going to disturb families and communities by advising tonsillectomies for school children.

Inadequately educated technicians would do less injury to health by doing the operation after the diagnosis had been made by a physician, than they do by making disturbing diagnoses and finding someone who will operate on their say so.

Reflections of a Medical Teacher—One of the greatest and most enduring professional pleasures of a medical teacher, believes J. G. Beardsley (Jour. Med. Soc. of N. J.), is the satisfaction of observing the deserved success that comes to former students. One of the disappointments in a teacher’s life is the realization that a proportion of the medical men whom one has watched, guided and admired as students have gradually degenerated into performing their professional work in a manner and by methods that are not a credit to their profession, their former teacher or to themselves.

Medical Economics and Public Health

Another "National" Organization is out to Prolong Life—For a Fee—This time it is San Francisco that is the home of a "league" of specialists who are out to prolong the lives of all members by "periodical health examinations." The "profit and loss" account of this, as well as the other more or less similar corporations, will reflect the *business* acumen of its promoters. One of our good doctors says that when he reflects upon the activities of any of these "life prolonging" movements organized for *business* he always thinks of the old limerick:

"There was an old man who said, 'Hush!'
'I perceive a young bird in that bush.'
When they said, 'Is it small?'
He replied, 'Not at all!'
" 'It is five times the size of the bush! ' "

"The N. Y. Life Extension Institute," notes the Journal of the Indiana State Medical Association, editorially, "with its profitable scheme of conducting health examinations with the assistance of medical men who are merely the go-betweens, and which came in for criticism at the hands of the Judicial Council of the A. M. A. at the Chicago session, is whining. In a letter sent broadcast the Institute says that the Judicial Council of the A. M. A. is not exhibiting a spirit of justice and fairness toward the Institute, and in a rather long argument, the basis of which is the fact that 'the Institute was established and has had the cordial support and endorsement of many of the leaders of preventive medicine and public health work,' it winds up with the boast that despite the unfavorable opinion expressed by the Council, the Institute has received no resignations of any of its examiners, but, on the contrary, the Institute is increasing the number of its examiners by about two hundred per month, the bulk of whom are Fellows of the American Medical Association.

"We are not surprised," continues the editor, "to know that there are a certain number of medical men whose services can be purchased by the Institute and who are unwilling to relinquish the fees paid, even though they recognize the principle of the transaction as being inimical to the best interests of the medical profession as well as the public. We, therefore, desire to support the Judicial Council in its contention, and we approve the statement made in the Council's report to the House of Delegates."

Numerous Inquiries about the alleged virtues of compressed air, hot air, and air from the corn growing Middle West—air in tanks, by radio and in "blimp"—'tis sure cure for diabetes and what not, induces us to reply by quoting from the New York World the following story:

"The son of a poor New York woman went to California to seek his fortune. He worked hard and bought an orange grove, but bad luck overtook him and he lost everything. To cap the climax he got word that his mother was dying. Anxious to reach her bedside, he rode his bicycle all the way back to New York—for he was too poor to buy a railroad ticket. He reached his mother's home in time to find her breathing her last, and as he had no place to put his bicycle he brought it into the room where she was lying. Suddenly, and without warning, one of the tires blew out and the marvelous California air, which he had pumped into it, was diffused in the atmosphere, with the result that his mother recovered on the spot."

"Why the government should enter into competition through subsidized physicians and hospitals with physicians and hospitals that are not subsidized, and that depend for their very existence on the patronage they received from the sick and injured, is not apparent," says an observation by the Trustees of the American Medical Association.

"It has not yet authorized hungry, cold and inade-

quately clothed veterans to draw their supplies from the Army and Navy commissary departments," continues the observation, "nor has it authorized veterans who are inadequately housed to take up their dwellings on naval and military reservations. Protection from hunger, cold and exposure are as necessary to health and happiness as is medical and hospital care in time of illness and injury; yet the government has not entered into subsidized competition with the grocer, the coal man, the dealer in men's furnishings and the landlord."

"The situation," concludes our trustees, "may almost be stigmatized as communistic medicine in its most militant form, endeavoring to edge its way into American life under the cloak of patriotism."

"The public is strongly inclined to buy the advertised article, be it a phonograph or a chiropractic treatment. We do not advocate lowering, in any respect, the honorable code of ethics which has been our pride. The individual practitioner must not be advertised. The institution of medical practice must be advertised and in an adequate, dignified way which it deserves."—(Bulletin Wayne County Med. Society.)

What the Rural Nurse Owes the Rural Doctor is the title selected by "A Red Cross Public Health Nurse" for a most illuminating article in the June issue of The Pacific Coast Journal of Nursing.

After reading it, as every doctor and nurse should, the reason for a pen name is obvious.

Doctors and public health nurses are constantly drifting further apart, not because of themselves, but because of the meddlesome activities of groups of new and mostly incompetent "healthers."

"A LARGE PROPORTION of our population has sought the care of clinics and welfare associations and more and more is the practice of medicine invaded by governmental, social and welfare organizations, to the ultimate harm, as we believe, not only to the profession, but also the people. Commercialism on the part of the individual doctor will promote that movement which we recognize as a menace."—(Earp. A. M. A. Bulletin.)

"THE COMMERCIALIZING of medicine by laymen, however much it may offer from an economic point of view," believes the Cleveland Bulletin, "places the controlling factors in the hands of those who, though honest, are not by experience qualified to conduct such a business. They may employ regularly licensed physicians on a salary, but the control still rests in the hands of those who have no personal contact with, or experience in, the intricate problems of diagnosis and treatment."

"Why do doctors give away \$100,000,000 worth of free service a year in hospitals, clinics, home and office treatment, while other men give away nothing?" asks the Nebraska Med. Jour.

If the service of a plumber tinkering around a broken water pipe in a home is worth \$4 an hour, how much, one of our advertisers wants to know, is the service of a physician, ministering to a broken body, worth?

"Although all public health nurses agree that doctors should be the leaders in preventive medicine, I have recently asked myself," says "A Red Cross Public Health Nurse" (Pac. Coast Jour. of Nursing), "if, in practice, we rural nurses give the doctors the opportunity to lead which we grant them in theory. Do we not, instead, decide what should be done and then expect the doctors meekly to fall in line? As I review my own failures, I find the cause in many cases was this very attitude on my part."

"Let him who doubts the fact that doctors are the leaders in preventive medicine come to the rural districts. He will soon learn that the extent of the local doctor's approval is the limit to which the nurse may carry her ideals."

California Medical Association

EDWARD N. EWER, M. D., Oakland.....President
W. T. McARTHUR, M. D.....President-Elect
EMMA W. POPE, M. D., San Francisco.....
.....Secretary and Associate Editor for California

ABSTRACTS FROM THE MINUTES OF THE COUNCIL, FIFTY-FOURTH ANNUAL SESSION, CALIFORNIA MEDICAL ASSN.

One Hundred and Fifty-second Meeting—Held in Manzanita Cottage, Yosemite Lodge, Yosemite National Park, California, Sunday, May 17, 1925, at 8 p. m.

Present—Doctors Parkinson, MacGowan, Ewer, Alderson, Kinney, Kiger, Edwards, De Lappe, Smith, McLeod, Hamlin, Kress, McArthur, Gibbons, Curtiss, Pope and General Counsel Peart.

Absent—Doctors Beattie, Coffey, and Bine.

Minutes of the Council—On motion of McArthur, seconded by De Lappe, it was resolved that the minutes of the 150th and 151st meetings of the Council as mailed to each member thereof be approved.

Minutes of the Eighty-first Meeting of the Executive Committee—The secretary read the minutes of the eighty-first meeting of the Executive Committee, which were approved as read.

Minutes of the Eighty-second Meeting of the Executive Committee—The secretary read the minutes of the eighty-second meeting of the Executive Committee, which were approved as read.

Permanent Convention Headquarters—Harlan Shoemaker of Los Angeles, chairman of the Committee on Permanent Convention Headquarters, being present by request, reported that his committee had made three trips to that part of the coast exactly one-half way between Los Angeles and San Francisco; that nothing further had been done inasmuch as very little interest had been shown by the San Francisco members, but that his committee still thought the project was worthy of some further consideration and ought to be kept in mind.

Action by the Council—On motion of Alderson, seconded by Hamlin, it was

Resolved, That the report of the Committee on Permanent Convention Headquarters be received; and that the Committee be continued, and further that the thanks of the Council be extended to the Committee for the very large amount of work it has done.

Keene Memorial Committee—The secretary presented a letter from Mr. Louis A. Reeg of Placerville, stating that the work of the Committee on the Keene Memorial was completed.

Action by the Council—On motion of Kiger, seconded by Gibbons, it was

Resolved, That the final report of the Committee on the Keene Memorial be received; and that the committee be discharged with the thanks of the Council.

History of the California Medical Association—The secretary reported that Doctor Phillip King Brown, secretary of the Medical Historical Committee of the San Francisco County Medical Society, had informed her that his committee had accomplished nothing. She then read a letter from Doctor Hans Barkan, secretary of the West Coast Medical Historical Society, stating that nothing had been accomplished by his Society.

After discussion, it was the sense of the Council that the matter be postponed until the meeting on Monday afternoon, May 18.

Bunnell Memorial Committee—Emmet Rixford of San Francisco, chairman of the Committee on the Bunnell Memorial, being present by request, submitted the following report:

"Your Committee, appointed at the 1923 meeting of the California Medical Association on the Memorial to Doctor Lafayette Houghton Bunnell, is pleased to report that it has caused to be made a plaque, cast in bronze, twenty-four inches in diameter, commemorating the naming of Yosemite Valley by Doctor Lafayette Houghton Bunnell, a member of the Mariposa Battalion which entered the Valley in March, 1851, in pursuit of the Yosemite Indians, the members of the Battalion being the first white men known to have entered Yosemite. The plaque, designed by Mr. Paul J. Fair, U. S. Forest Service, represents a grizzly bear, by which is idealized the inhabitants of the Valley as well as the Valley itself, viewing with curiosity, if not surprise, the advent of the caduceus, symbolizing the medical profession; this, with appropriate lettering, setting forth the fact of the discovery of the Valley and the suggestion for its name made on that occasion by Doctor Bunnell.

"This plaque, through the co-operation of the Department of the Interior, is to be erected on a boulder at the site of the first and principal camp of the Mariposa Battalion in the Valley, near Bridal Veil meadow. The plaque is to be unveiled with appropriate ceremonies and dedicated to Doctor Bunnell on Tuesday, May 19. It has been arranged that the unveiling shall be done by the president, Doctor Granville MacGowan, and addresses will be made by Mr. W. B. Lewis, Superintendent of Yosemite National Park, on behalf of the Department of the Interior, National Park Service, U. S. Government; Mr. Francis P. Farquhar, on behalf of the Sierra Club, and Doctor Emmet Rixford, chairman of the Committee.

"The expense incurred for this purpose was:

"To the sculptor, Mr. Paul J. Fair, \$100; to the artist who made the cast, Mr. Fred T. Storey, \$100; photographs to be submitted to Mr. Stephen T. Mather, Director of National Park Service, \$5; Total, \$205, less \$50 contributed by Doctor Howard A. Kelly of Baltimore, Maryland, to the Bunnell Memorial. Total paid by the Society, \$155. To this will be added some small sum for expense incurred in erecting the plaque on the boulder and traveling expenses of Mr. Farquhar.

"The Committee would suggest that the House of Delegates pass a resolution of thanks to Doctor Howard A. Kelly, first, for the suggestion that such a monument be erected to Doctor Bunnell, and secondly, for his generous contribution of \$50.

"With this final report the Committee begs to be discharged.

"(Signed) Emmet Rixford, M. D., Chairman.

"Saxton T. Pope, M. D.

"Egerton Crispin, M. D."

Action by the Council—On motion of McArthur, seconded by De Lappe, it was

Resolved, That the final report of the Committee on Bunnell Memorial be received; that the recommendations of the committee be concurred in; and further that the Committee be discharged with the thanks of the Council.

Committee on Prenatal Care—Henry A. Stephenson of San Francisco, sub-chairman of the Committee on Prenatal Care, being present by request, informed the Council that the general chairman, Doctor Reginald Knight Smith of San Francisco, had called a meeting of some twelve obstetricians of the bay cities and had later appointed two sub-committees; the first under Henry A. Stephenson to handle the material on Prenatal Care, and the second under William Palmer Lucas to handle the material on the Care of the Baby. He further stated that the replies to the proposed pamphlet had arrived too late for his committee to give the matter the consideration it deserved, and believed that the Council should give Doctor Smith an opportunity to go over the material again and finally dispose of the reports. The question was then fully discussed.

Action by the Council—On motion of Alderson, seconded by De Lappe, it was

Resolved, That the Council, having heard the report of Doctor Henry A. Stephenson, sub-chairman of the Committee on Prenatal Care, concurs in the recommendation that the material be returned to the Committee; and that the Committee be requested to reconsider it and present a final report at a subsequent meeting.

Clinical Prizes—The Chair advised the Council that the Committee on Clinical Prizes had not yet been appointed, and that the Chair felt the amounts of the prizes were too small. The Council was informed that the editor also wished to establish a prize, and the Chair stated that this prize might well be competed for by the members of those state medical associations for which CALIFORNIA AND WESTERN MEDICINE is the official organ.

The whole matter was then considered and fully discussed.

Action by the Council—On motion of Kress, seconded by De Lappe, it was

Resolved, That the action of the Council at its 148th meeting, held at Long Beach, November 8, 1924, whereby three clinical prizes were established in the sums of \$100, \$75, and \$50, be rescinded; and that two prizes of \$150 each be offered—one for a paper on original research and one for a paper on a clinical subject; and that these prizes be open to the membership of the California Medical Association only, and be competed for at the 1926 Annual Convention; and further that the scope of the material be determined by the committee.

Councilor Visits—The Councilors made the following reports on their visits to the various county societies in their respective districts:

Kiger—Second District. I visited every county society in my district but Orange County. These societies appear to be doing well. Ventura, which I helped revive last year, is going very well; Santa Barbara is very good and Los Angeles is still fighting the \$100 tax.

Smith—Seventh District. I visited only Alameda, having been away for six months and so have no report to make on the other counties. Will visit the other counties next summer.

Kinney—First District. Have had Imperial over to meet with San Diego, and their organization is going very well.

Edwards—Third District. Monterey and San Luis Obispo counties are doing very well. The meetings are well attended and the visit of the councilor is doing considerable good, and many questions are asked particularly regarding Industrial Medicine and the new Medical Society. San Luis Obispo seemed to be more alive than my own county society (Monterey), which is not as active as I would like. Probably one reason for this is that the county is so widely separated. Taking it on the whole, I believe that the visit of the councilor was a good thing and had a beneficial effect.

McLeod—Ninth District. As far as my own county society is concerned, Sonoma is in good shape. I had a joint meeting last week of Sonoma, Mendocino and Lake counties, and learned that Mendocino is not functioning very well, particularly in winter, because of the great distances and bad roads. I tried to get in touch with Marin and have a joint meeting, and expect one very soon. I find that it is better to have joint meetings. Have never had the pleasure of a meeting with Solano. Humboldt is such an out-of-the-way, hard place to reach that I cannot give much report on it.

Curtiss—Councilor-at-Large. Being a councilor-at-large I have no district, but, realizing that Riverside is such a long ways from San Diego, I have tried to keep in touch with that county. It is doing very well.

De Lappe—Fourth District. I visited every functioning society in my district—Fresno, Kings, Madera, Merced and Mariposa. The meetings were all well attended. The conditions are not good, however, as out of 335 physicians in that district, only 175 are members of the California Medical Association and only twelve are members of the Medical Society of the State of California. It seems to me that such a condition requires some active solicitation. I was unable to learn the reason for such a small membership in the California Medical Association. As far as the new Medical Society is concerned, they say, "What is the use of buying something for \$10, for which you have already paid \$25 or more?"

Parkinson—Eighth District. In reporting, I desire to say that I have been derelict. I arranged for a meeting in Woodland; one in Sacramento and one in Chico, and one farther in the north. I did not accomplish very much owing to the illness and death of Doctor James, which was followed by the serious illness of my boy, and then a death in my family. Will do better next year. Will arrange to get the northern counties in Redding, and the Marysville men at Chico. The District is doing well—the medical population is increasing very materially. Will try and present a better report next year.

Scientific Programs of Hospital Staffs—The vice-president, Harry E. Alderson of San Francisco, raised the question of the scientific meetings now being held by the attending hospital staffs, which were greatly inter-

fering with the meetings of the county medical societies.

After a general informal discussion, it was the sense of the Council that the chair appoint a committee of one to outline a course of action to overcome this situation and present such plan at the next meeting on Monday afternoon, May 18.

The chair appointed George H. Kress of Los Angeles as this committee of one.

Amendments to Constitution and By-Laws — The secretary presented the proposed amendments to the Constitution and By-Laws, and informed the Council that the constitutional amendments would have to be presented to the House of Delegates at the 1925 Session, thereafter published in the Journal twice during the coming year and then acted upon by the House of Delegates at the 1926 Session; but that the amendments to the By-Laws could be presented at the First Session of the House of Delegates tomorrow evening and acted upon at the Second Session on Wednesday evening.

It was the sense of the Council that each member thereof be furnished with a copy of the proposed amendments for further consideration; and that action on the matter be referred over to the next meeting on Monday afternoon, May 18.

Report of the Council—The chairman submitted his annual report for consideration and approval before presentation to the House of Delegates. He stated that his report would not be presented before the General Session on Monday morning as in the past, but only before the House of Delegates.

It was the sense of the Council that the consideration of the annual report of the Council to the House of Delegates be postponed until the next meeting, Monday afternoon, May 18.

Adjournment—There being no further business, the Council adjourned to meet in the same place at 2 p. m., Monday, May 18, 1925.

One Hundred and Fifty-third Meeting—Held in Manzanita Cottage, Yosemite Lodge, Yosemite National Park, California, Monday, May 18, 1925, at 2 p. m.

Present—Doctors Parkinson, MacGowan, Ewer, Kinney, Kiger, Edwards, De Lappe, Coffey, Smith, McLeod, Hamlin, Kress, McArthur, Gibbons, Curtiss, Pope and General Counsel Peart. Alderson was present, and immediately excused as he was scheduled to present a paper before the Dermatology Section.

Absent—Doctors Beattie, Bine.

Walter V. Brem's Paper—The secretary submitted a letter from Doctor Walter V. Brem of Los Angeles, in which he stated that he would be unable to attend the Convention on account of Mrs. Brem's illness, and, therefore, would be unable to present his paper on "The History and Problems of Disease" before the General Session on Thursday morning, May 21.

Action by the Council—On motion of Gibbons, seconded by Kiger, it was

Resolved, That a reader be selected to present Doctor Brem's paper on Thursday morning, and that the Chair appoint a committee of one to make such selection.

The Chair appointed William H. Kiger of Los Angeles as this Committee of One.

Bank Signatures—The secretary reported that the Union Trust Company had requested that a third person be authorized to sign checks for the Association, and that the Executive Committee at its last meeting considered the matter and recommended that, "in the absence or illness of either the Chairman of the Council or the Secretary, the President or the President-Elect be authorized to sign checks."

Action by the Council—On motion of De Lappe, seconded by Gibbons, it was

Resolved, The action of the Executive Committee of the California Medical Association at its eighty-second meeting, held in the offices of the Association, 1016 Balboa Building, San Francisco, April 30, 1925, in authorizing the President or the President-Elect to sign checks in the absence or illness of either the Chairman of the Council or the Secretary be hereby ratified, confirmed and approved.

National Board of Medical Examiners—The secretary reported that thirty-one states already recognized the National Board of Medical Examiners; and that the California State Board favored such recognition, pro-

vided it could be legally recognized; and that the California Board had tried to have the law amended but the measure was thrown out in the Committee of the Assembly. The secretary then read a letter from the California Board of Medical Examiners to Doctor Martha M. Bacon of Los Angeles, which stated in part:

"There is merit in your suggestion that some plan of universal registration should be devised, and it is our understanding that considerable effort and study has been directed along this line for several years. The only outcome so far has been the organization of the National Board of Medical Examiners, whose requirements are much higher than those exacted by practically every State of the Union. An Act of Congress is the only method whereby it is possible to arrange universal registration."

After consideration, it was the sense of the Council that, as nothing could be done at this time, the matter be referred to the Executive Committee for further investigation and report.

Industrial Medical Practice—Sol Hyman of San Francisco, chairman of the Committee on Industrial Medical Practice, being present by request, read the report of his committee, which was then thoroughly discussed by all present.

Action by the Council—On motion of Kress, seconded by Hamlin, it was

Resolved, That Doctor Sol Hyman be requested to incorporate in his report, after consultation with his committee, specific recommendations as to just what they wished done; and that the amended report be submitted to the Chairman of the Council and the General Counsel before presentation at the First Session of the House of Delegates this evening.

History of California Medical Association—The question of the appointment of a Committee on the Preservation of the History of the California Medical Association was raised, and the chair announced that a committee of three, with power to collaborate with other members of the Association, would be appointed later.

Amendments to Constitution and By-Laws—The general counsel submitted the following amendments to the Constitution and By-Laws, which were thoroughly discussed: (These were published in full on page 896 of the July, 1925, issue of CALIFORNIA AND WESTERN MEDICINE, which see.)

Action by the Council—On motion of Coffey, seconded by Kress, it was

Resolved, That the amendments to the Constitution and By-Laws as prepared by the General Counsel be approved; and that such amendments be referred to the House of Delegates with the recommendation of the Council that they be adopted.

Report of the Council—The chairman submitted the proposed "Report of the Council," which was then considered. It was the sense of the Council that the chairman be instructed to include a paragraph on "Income Tax Deductions" and "Permanent Convention Headquarters" in this report.

Financial Statements—Morton R. Gibbons of San Francisco, Acting Chairman of the Auditing Committee, submitted a brief report on the present status of the financial conditions of the California Medical Association and CALIFORNIA AND WESTERN MEDICINE for the information of the Council.

Place of 1926 Meeting—Dudley Smith of Oakland extended to the Council a cordial invitation from the Alameda County Medical Association and the City of Oakland to hold the 1926 Annual Convention in Oakland, the home of the President-Elect, Edward N. Ewer.

The secretary then read letters from the Alameda County Medical Association, the San Diego County Medical Society and the San Francisco Convention and Tourists' League, inviting the California Medical Association to hold its 1926 meeting in Oakland, San Diego and San Francisco, respectively.

Action by the Council—On motion of Smith, seconded by Gibbons, it was

Resolved, That the invitation of the Alameda County Medical Association be accepted and that the 1926 Annual Convention of the California Medical Association be held in Oakland.

Doctor Kinney then advised the Council that San Diego would request a meeting at Coronado at a later date.

Scientific Programs of Hospital Staffs—The Committee of One, George H. Kress of Los Angeles, acting under instructions received at the last Council meeting, reported that it seemed desirable to keep the programs of general hospital staffs from overlapping with the programs of county medical meetings, and that, after consultation with other members, his committee desired to present the following resolution:

"Whereas, The scientific programs of the attending staffs should concern themselves especially with the diseases and injuries of patients in such hospitals; and the attending staff scientific programs should not take the semi-abstract or literary trend that has long been and must necessarily continue to be a natural part of the scientific programs of county medical units; and

"Whereas, Our county medical societies are the constituent units of organized medicine in our state, and the development of organized medicine is absolutely essential to the protection and further growth of both the scientific and material interests of medicine in California; therefore be it

"Resolved, By the Board of Councilors of the California Medical Association, that the attention of the members of the constituent county units, who, at the same time, are members of attending hospital staffs in their respective communities, be called to the importance of not overlapping or interfering with proper scientific activities of both these highly important expressions of medical activity and development; and that your Board of Councilors presents these suggestions for the consideration of program committees of attending hospital staffs, so that these basic facts, which are of so great importance to county societies and attending staffs, may be constantly kept in mind."

Action by the Council—On motion of Smith, seconded by Kiger, it was

Resolved, That the resolution submitted by Doctor Kress' Committee be adopted; and that it be sent to all county medical units and to all hospital staffs.

Application for Associate Membership—The secretary presented an application for associate membership in the C. M. A. from Doctor Charles N. Leach, who is connected with the Rockefeller Foundation at Montgomery, Alabama.

It was the sense of the Council that, in accordance with the proposed changes in the Constitution and By-Laws, Doctor Leach be advised that he must make application for associate membership through some component county society.

Delinquency in State Association—The secretary advised the Council that the State Association considered its members delinquent on March 1, deprived them of their Journal on April 1, and that the A. M. A. considered them delinquent on April 1, whereas many of the county societies did not consider their members delinquent until much later in the year; in fact, Los Angeles not until November 1. She then stated that this variance in delinquency dates between the county societies and state association was causing much misunderstanding and resentment on the part of the general membership, and that she felt something should be done to correct it. The matter was then thoroughly discussed.

Action by the Council—On motion of Smith, seconded by Coffey, it was

Resolved, That the action of the Council at its 143rd meeting held in Los Angeles, May 11, 1924, and as contained in Minute 29 thereof be rescinded; and that all county units be instructed that all members of the California Medical Association and, therefore, all members of the component county societies who have not paid their dues on March 1 of each year shall be dropped from membership in accordance with the Constitution and By-Laws of the California Medical Association; and further that all component county societies be instructed to amend their constitutions to correspond with the Constitution and By-Laws of the California Medical Association.

Amendment to Constitution of California Association of Medical Social Workers—Request from the California Association of Medical Social Workers for ratification of an amendment to their constitution was pre-

sented, and referred to the general counsel for consideration and recommendation.

Adjournment—There being no further business, the Council adjourned to meet in the same place at 2 p. m., Tuesday, May 19, 1925.

One Hundred and Fifty-fourth Meeting—Held in Manzanita Cottage, Yosemite Lodge, Yosemite National Park, California, Tuesday, May 19, 1925, at 2:40 p. m.

Present—Doctors Parkinson, MacGowan, Alderson, Kinney, Kiger, Edwards, De Lappe, Coffey, Smith, McLeod, Hamlin, Kress, McArthur, Gibbons, Curtiss, Pope and General Counsel Peart.

Absent—Doctors Beattie, Bine and Ewer.

Walter V. Brem's Paper—Doctor Kiger, committee of one appointed at the last Council meeting, informed the Council that Doctor Roy W. Hammack of Los Angeles, who is connected with Doctor Brem's Clinic, would read Doctor Brem's paper on "The History and Problems of Disease" before the General Session on Thursday morning.

Amendments to Constitution of California Association of Medical Social Workers—The general counsel reported that the matter of proposed amendments to the Constitution of the California Association of Medical Social Workers would have to go before the Advisory Council of that Association; and that the members of the Council of the C. M. A. were members thereof.

Action by the Council—On motion of McArthur, seconded by Kress, it was

Resolved, That the matter of the proposed amendments to the constitution of the California Association of Medical Social Workers be referred to the Executive Committee with power to recommend action by the members of this Council when the Advisory Council of the California Association of Medical Workers meets to consider the question.

Status of A. J. Pacini of Chicago—The secretary reported that, after the program had gone to press, Doctor H. J. Ingersoll of Los Angeles had requested that Doctor A. J. Pacini of Chicago be given a place on the program; that, upon investigation, she was informed that Doctor Pacini was a very well posted man and able to give something of value to the Association; and that, accordingly, the doctor was placed upon the program of the California Association of Physiotherapists.

The secretary then stated that two members of a company advertising in the Journal had just informed her that Doctor Pacini was in the employ of the Victor X-Ray people (also Journal advertisers) and that they objected very strongly to Doctor Pacini's appearance on the scientific program; and further that they had been advised by the secretary to submit a written protest to the Council on the matter. This written protest was then read, and the question fully considered by the Council.

Action by the Council—On motion of Kress, seconded by Coffey, it was

Resolved, That the question of Doctor A. J. Pacini's appearance on the program of the California Association of Physiotherapists be referred to a Committee of Two, consisting of the Chairman of the Council and the general counsel, for consultation with Doctor Pacini; and further that a written statement be secured from the doctor safeguarding the rules and regulations of the California Medical Association in the matter of presentation of papers at an annual convention.

Commercial Representatives on State Programs—The question of representatives of commercial organizations being allowed space on the Section Programs was considered in view of the criticism of Doctor Pacini's appearance on the program of the California Association of Physiotherapists. It was the sense of the Council that a Committee of One be appointed by the chair to draft a resolution for presentation at the next Council meeting on Wednesday, May 20.

The chair appointed Doctor T. C. Edwards of Salinas as this Committee of One.

Hotel Headquarters for 1926 Meeting—The secretary presented a wire from the Hotel Oakland requesting that that hotel be made Hotel Headquarters for the 1926 Convention. It was the sense of the Council that the wire be placed on file for consideration at the proper time.

Inspection of Yosemite Hospital—The secretary ex-

tended an invitation to the Council from Doctor Claude H. Church to visit the Yosemite Hospital. There being no objection, it was the sense of the Council that the members thereof inspect the Yosemite Hospital at the end of this Session.

Permanent Convention Headquarters—The question of Permanent Convention Headquarters was again considered, and it was the sense of the Council that it hold its next meeting in Los Angeles in the fall, a special meeting be held with the Los Angeles County Medical Association to consider Permanent Convention Headquarters and Optional Medical Defense; and that when the Council next meets in San Francisco the same questions be presented before the San Francisco County Medical Society; and further that, if possible, the Council hold a meeting in the central part of the state during the year.

Reports on Association Activities—Dudley Smith of Oakland raised the question of the state office furnishing each Councilor with a copy of what the state office wishes brought before the various county societies throughout the year. After a general discussion, it was the sense of the Council that the secretary be instructed to furnish each Councilor, from time to time, with an outline of such matters as, in her judgment, should be presented to the county medical societies.

Adjournment—There being no further business, the Council adjourned to meet in the same place at 2 p. m., on Wednesday, May 20, 1925.

One Hundred and Fifty-fifth Meeting—Held in Manzanita Cottage, Yosemite Lodge, Yosemite National Park, California, Wednesday, May 20, 1925, at 2 p. m.

Present—Doctors Parkinson, MacGowan, Ewer, Kinney, Kiger, Edwards, De Lappe, Coffey, Smith, McLeod, Hamlin, Kress, McArthur, Gibbons, Curtiss, Pope and General Counsel Peart.

Absent—Doctors Beattie, Bine and Alderson.

Permanent Convention Headquarters—Harlan Shoemaker of Los Angeles, chairman of the Committee on Permanent Convention Headquarters, being present by request, reported further on the work of his committee and the desirability of having permanent convention headquarters for the State Association. The question then fully discussed by all present.

Action by the Council—On motion of Kress, seconded by De Lappe, and unanimously carried, it was

Resolved, That, having heard the report of the Committee on Permanent Convention Headquarters, it be the sense of the Council that a permanent location or home at which Annual Sessions of this Association could be held seems highly desirable.

Instructions to Committee on Permanent Convention Headquarters—The Council then thoroughly considered and discussed the feasibility of devising some plan whereby the Association as a whole or as individual members might handle a proposition such as a permanent home.

Action by the Council—On motion of McArthur, seconded by Gibbons, it was

Resolved, That the Committee on Permanent Convention Headquarters be requested to prepare a plan or method whereby property at any point can be acquired; and how such property can be administered while it is being held for the benefit of the Association.

House of Delegates Sessions—The question of scheduling no section or other meeting on the nights of the meetings of the House of Delegates was raised by Councilor Kress and thoroughly discussed.

Action by the Council—On motion of Kress, seconded by De Lappe, it was

Resolved, That the Council rule that, as regards General Sessions, House of Delegates Sessions and League Meetings, no Sections' meetings be permitted except with the special consent of the Council.

Section Papers—The president-elect, Edward N. Ewer of Oakland, advised the Council that there is a general complaint throughout the State regarding the non-publication of papers presented at Annual Sessions, and stated that he felt something should be done about it:

Action by the Council—On motion of Ewer, seconded by Smith, it was

Resolved, That the secretary be instructed to correspond with the chairman and secretaries of all Sections, suggesting that, on behalf of the Council, the number of

papers for presentation at Annual Sessions be curtailed wherever possible, and pointing out why such curtailment is necessary, particularly with a view to shorter papers; and further that a synopsis of all papers must be submitted to the State office for examination by the Committee on Scientific Program before presentation at an Annual Session.

Personnel of Committee on Scientific Program—The question of the personnel of the Committee on Scientific Program was raised and, after a general discussion, on motion of Kress, seconded by McArthur, it was

Resolved, That the general counsel be requested to prepare an amendment to the Constitution and By-Laws changing the character of the personnel of the Committee on Scientific Program, and the method of its election.

Status of A. J. Pacini of Chicago—The Chairman advised the Council that, in accordance with instructions received at yesterday's meeting, he and the general counsel had conferred with Doctor A. J. Pacini of Chicago and Doctor H. J. Ingersoll of Los Angeles regarding the character of the paper he was to present that evening before the California Association of Physiotherapists; that Doctor Pacini had stated he had no intention of violating the rules of the C. M. A. and had voluntarily written and signed the following letter:

"Dr. James H. Parkinson,
"Chairman, Council, California State Medical Society.

"Dear Dr. Parkinson:

"In accepting an invitation to discuss the subject of Ultra violet radiation before one of the sections of the State Medical Society, I am keenly mindful of the imperative necessity that all allusions to matters which might be interpreted as having commercial taint be completely occluded from remarks. This is not different from the situation which I have many times before encountered on similar occasions with many other State Medical Societies, and it is, therefore, perfectly agreeable to me to subscribe entirely to the wishes suggested by the council. It was, and is, my intent to refer only to such scientific researches as I have had to do with in consequence of my position as Director of the Department of Biophysical Research of the Victor X-Ray Corporation of the General Electric Company.

"No remarks which I shall make will be published by me nor by the Corporation which I represent, nor will they be given to anyone unless it be by the expressed wish of the Council.

"Very truly,

"A. J. PACINI (Signed).

"May 19, 1925."

It was the sense of the Council that the letter furnished by Doctor A. J. Pacini of Chicago was satisfactory; and that the secretary be requested to place it on file for future reference.

Commercial Representatives Debarred from State Program—T. C. Edwards of Salinas, as the Committee of One appointed at the last Council meeting on Tuesday, May 19, submitted the following resolution:

"Whereas, The Council deems it unwise and indelicate that officers, employees, agents or other representatives of commercial corporations, companies or firms be allotted space on the program of the California Medical Association, and so advises; therefore be it

"Resolved, That the Chairman of the Committee on Scientific Program of the California Medical Association be hereby instructed that, in future, no representatives of commercial companies be permitted space on any program at an Annual Session of the said California Medical Association."

Action by the Council—On motion of Kiger, seconded by Gibbons, it was

Resolved, That the resolution as submitted be adopted.

Place of 1926 Meeting—The secretary presented wires from Mayor John L. Davie and the Oakland Chamber of Commerce inviting the California Medical Association to hold its 1926 meeting in Oakland. The wires were referred to the secretary for reply in due course.

Adjournment—There being no further business, the Council adjourned to meet in the same place at 2 p. m. on Thursday, May 21, 1925.

One Hundred and Fifty-sixth Meeting—Held in

Manzanita Cottage, Yosemite Lodge, Yosemite National Park, California, Thursday, May 21, 1925, at 2 p. m.

Present—Doctors Parkinson, MacGowan, Ewer, Alderson, Kinney, Kiger, Edwards, Smith, McArthur, Gibbons, Curtiss, Pope and General Counsel Peart.

Absent—Doctors De Lappe, Beattie, Coffey, McLeod, Hamlin, Bine and Kress.

Adjournment of 1924 Council—On motion of McArthur, seconded by Gibbons, it was

Resolved, That the 1924 Council adjourn sine die; that the 1925 Council convene; and that the secretary call the roll.

Present—Doctors Parkinson, Ewer, McArthur, Kinney, Kiger, Edwards, Smith, Kress, Gibbons, Curtiss, Pope and General Counsel Peart. Doctor Alderson was also present.

Absent—Doctors De Lappe, Beattie, Coffey, McLeod, Peers, Bine, Catton and Shoemaker.

Election of Chairman—On motion of Ewer, seconded by McArthur, it was unanimously

Resolved, That James H. Parkinson of Sacramento be elected Chairman of the Council to succeed himself for the ensuing year.

Resignation of Councilor McArthur—William T. McArthur of Los Angeles tendered his resignation as Councilor-at-Large in view of his election as President-Elect of the Association, which was accepted by the Council.

Councilor-at-Large From Los Angeles—On motion of McArthur, seconded by Kiger, it was unanimously

Resolved, That Harlan Shoemaker of Los Angeles be elected Councilor-at-Large to fill the vacancy caused by the resignation of William T. McArthur, whose term expires in 1926.

Absence of Councilor Peers—The chairman reported that Doctor Robert Peers of Colfax had informed him before leaving the Valley that morning, that he did not know his name was to be presented to the House of Delegates for nomination as a Councilor-at-Large or any other office, and, therefore, would be unable to attend today's Council meeting.

Appointment of Secretary—On motion of Kiger, seconded by McArthur, it was unanimously

Resolved, That the Council desires to record its appreciation of the fact that it will be honored in the secretarial chair by Doctor Emma W. Pope of San Francisco; and further that the present salary be continued.

Appointment of Editor—On motion of McArthur, seconded by Kiger, it was unanimously

Resolved, That William E. Musgrave of San Francisco be reappointed to succeed himself as editor of CALIFORNIA AND WESTERN MEDICINE for the ensuing year at a salary of \$1 per annum.

Appointment of Auditing Committee—The chair appointed as members of the Auditing Committee for the ensuing year Doctors Rene Bine and Morton R. Gibbons of San Francisco, stating that Doctor Gibbons would serve as Acting Chairman until Doctor Bine is able to resume his work.

Appointment of Committee on Arrangements—After consideration, it was the sense of the Council that President Ewer be allowed further time in which to appoint the 1926 Committee on Arrangements.

Fall Council Meeting—The date of the fall meeting of the Council was discussed, and it was the sense of the Council that this matter be referred to the Chairman of the Council and the Secretary for decision; and that the meeting be held in the south late in September or early in October. It was also decided that, as usual, an open meeting be held on the evening of the Council meeting to consider Industrial Medicine and any other subjects; and further that a joint meeting with the local society be held the preceding evening to discuss Optional Medical Defense and any other matters; and further that this joint meeting be held on the regular meeting night of such county society.

Re-Distribution of Councilor Districts—The recommendation of the Reference Committee regarding the re-distribution of Councilor Districts was considered. It was the sense of the Council that the matter be kept on the Council docket for consideration at each meeting; and further with the understanding that Orange County be transferred from the First to the Second District and

that Kern County be transferred from the Second to the Fourth District.

Industrial Medical Practice—The recommendations of the Committee on Industrial Medical Practice and the Reference Committee regarding "rules and regulations" in such practice was considered.

Action by the Council—On motion of Gibbons, seconded by Kiger, it was

Resolved, That the matter of Industrial Medical Practice be referred with power to act to the Executive Committee with the recommendations of the Reference Committee regarding rules and codes in such practice for research and carrying out the instructions of the House of Delegates; and further that the Chairman of the Committee on Industrial Medical Practice, Sol Hyman of San Francisco, be present at such meetings of the Executive Committee; and further that when such rules and regulations and codes are in shape that Ray Taylor of Los Angeles, chairman of the Los Angeles Section of Doctor Hyman's Committee, be invited to discuss the matter with the Executive Committee.

Yosemite Hospital—The resolution, submitted to the House of Delegates by Doctor R. G. Dufficy of San Rafael, requesting an appropriation for the Yosemite Hospital, was thoroughly considered; and it was the sense of the Council that a special letter of transmittal be prepared by Doctor Morton R. Gibbons and the general counsel.

Action by the Council—On motion of Ewer, seconded by McArthur, it was

Resolved, That the resolution on Yosemite Hospital be referred to Doctor Morton R. Gibbons and the General Counsel for consideration and submission of a letter of transmittal for approval by the Executive Committee; and further that this resolution be forwarded to each United States Congressman and Senator and the officers of the National Park Service.

Recognition of Delegates—The question of certification and recognition of delegates at House of Delegates' meetings of the California Medical Association was thoroughly considered; and it was felt that none but the duly elected delegate or his alternate should be seated.

It was the sense of the Council that the matter be referred to the Executive Committee for investigation and change in the Constitution and By-Laws in accordance with the rules and regulations of the A. M. A.

Annual Sessions—The president-elect, William T. McArthur of Los Angeles, raised the question of the number of section meetings during the annual convention, which was fully discussed by all present, together with the question of the personnel of the program committee.

It was the sense of the Council that the Committee on Scientific Program should also include the secretaries of the main sections; and that the secretary be empowered to seek their assistance in the preparation of the annual program; and further that the secretary be instructed to write all section secretaries with reference to holding joint scientific meetings and their business meetings, wherever possible, at luncheons.

Address by President-Elect—The Chair called upon the president-elect, William T. McArthur of Los Angeles, who expressed his appreciation of the honor conferred upon him.

Legal Address at Annual Meetings—The general counsel stated that, if the Council felt it was sufficiently worth while, he would have a representative of his legal staff address the Association at the annual-session next year. It was the sense of the Council that such a suggestion should be carried out.

Optional Medical Defense—Councilor Kress of Los Angeles submitted the following notice regarding Optional Medical Defense, which he suggested should be referred to county societies for publication in black type in the various bulletins of such county societies:

"Have you secured the optional defense furnished by The Medical Society of the State of California? It gives you defense in malpractice suits by the attorneys of the California Medical Association. You owe it to yourself to secure this protection. Address request for information, or check for yearly coverage (\$10) to Dr. Emma W. Pope, secretary, 1016 Balboa Building, San Francisco."

The secretary was instructed to write all county secre-

taries asking them to publish this notice on all printed matter issued by their county society, and requesting that this notice be published in a different and blacker type; and further that such notice be published in each succeeding issue for 1925.

Adjournment—There being no further business, the Council adjourned to meet in the South sometime in the fall.

SECTION ACTIVITIES OF THE C. M. A. AT THE 1925 ANNUAL SESSION

(Continued from the July issue, page 894. Abstracts from Minutes received too late for that issue.)

Dermatology and Syphilology Section—This section held the usual three meetings under the chairmanship of George D. Culver, San Francisco; Hiram E. Miller, San Francisco, secretary. The scientific meeting was carried out very much as published. Many of the papers, carefully discussed and edited, will appear during the year in CALIFORNIA AND WESTERN MEDICINE.

The chairman's address on "A General Consideration of Susceptibility to Skin Diseases" was published in the July issue.

At the business meeting, Moses Scholtz, Los Angeles, was elected chairman; C. E. Schoff, Sacramento, vice-chairman, and Samuel Ayers, Los Angeles, secretary, for the ensuing year.

In discussing plans for the next meeting it was suggested that a symposium on Ultra-Violet Light Therapy and one on some phase of syphilis would be desirable.

Those attending these meetings included:

Harry Alderson, George F. Koetter, Moses Scholtz, J. C. Pickett, C. E. Schoff, H. E. Miller, George Culver, E. K. Stratton, Norman Epstein, Albert Meads, R. V. Lee, Brown, I. C. Sutton, Yates, Samuel Ayres, Howard Morrow, John Ruddock, Frank Baxter, Rea Ashley, Shirsper, Gustave Taubles, and twenty-seven others whose name we were unable to obtain.

Obstetrics and Gynecology Section—Three meetings of this section were held under the chairmanship of P. O. Sundin, Los Angeles; secretary, J. W. Sherrick, Oakland.

May 18—The regular program, embracing a symposium on Eclampsia, was carried out. Chairman Sundin read his address upon The Etiology of Eclampsia.

H. A. Stephenson, San Francisco, read a paper on Laboratory Aids in the Diagnosis and Control of Eclampsia. This paper was discussed by H. M. Ross of Los Angeles.

Hans Von Geldern, San Francisco, read a paper on Recurrent Toxemia.

Margaret Schulze, San Francisco, read a paper on The Conservative Treatment of Eclampsia. This was discussed by E. N. Ewer of Oakland, who emphasized the excellent results of conservative treatment, favoring the rotunda method and advised against any use of M. S., but suggested elimination, starvation, etc.

J. C. Irwin, Los Angeles, read a paper on The Role of Cesarean Section in the Treatment of Eclampsia.

These papers were discussed by J. Vruwink, Los Angeles, who emphasized the conservative attitude, and, with regard to magnesium sulphate, reported excellent results in a series of cases. H. M. Ross, Los Angeles, reported excellent results with magnesium sulphate, and cited several illustrative cases.

May 19—The second meeting, with Dr. R. H. Ramsey, chairman of Pediatrics Section, in the chair, was held in conjunction with the Pediatrics' Section. A Symposium on Birth Injuries was presented.

The paper on Cranial and Intracranial Injuries from the Standpoint of the Obstetrician by F. M. Loomis, Oakland, was read by J. W. Sherrick.

R. H. Kuhns, San Francisco, read a paper on Symptoms and Diagnosis in Infants; Clinical Significance in Later Years.

H. C. Naffziger, San Francisco, read a paper on the Surgical Management of Birth Injuries. General discussion followed.

Henry Dietrich, Los Angeles, read a paper on Mongolian Twins.

May 21—At the third meeting, Chairman P. O. Sundin

appointed A. B. Spalding, San Francisco, H. A. Stephenson, San Francisco, and Michael Creamer, Los Angeles, on the nominating committee. They suggested that the chairman and secretary be appointed from the same locality in order to facilitate the necessary arrangements for programs, conferences and other matters that may arise during the year. J. W. Sherrick, Oakland, was nominated for chairman, and J. A. Sperry, San Francisco, for secretary. This was put in the form of a motion and carried.

There being no further business the regular program was carried out. This consisted of a Symposium on Pelvic Relaxation and Prolapse.

A. W. Meyer gave a paper and lantern slide demonstration on Some Points in the Anatomy and Mechanics of the Pelvic Floor. Discussion by Olga McNeile, Los Angeles.

John Vruwink, Los Angeles, read a paper on Pre-disposing Factors in Pelvic Relaxation and Prolapse. Alice Maxwell, San Francisco, opened the discussion.

Michael Creamer, Los Angeles, read a paper on Benign Lesions of the Cervix in Association with Pelvic Relaxation and Prolapse. Discussion was opened by Shaw, Los Angeles.

Frank Lynch's paper on The Problem of Partial Prolapse with Cystocele and Rectocele in Young Women was read by Alice Maxwell, San Francisco. H. A. Stephenson, San Francisco, discussed this paper.

A. B. Spalding, San Francisco, read a paper on The Treatment of Procidentia. This was illustrated by lantern slides and statistics in 400 cases. J. A. Sperry, San Francisco, opened the discussion. The program was then thrown open to general discussion.

ALAMEDA COUNTY

Alameda County Medical Association (reported by P. S. Nusbaumer, secretary)—At the regular meeting of the Alameda County Medical Association held June 15, 1925, R. G. Van Nuys read a paper, entitled "Living Anatomy: A Roentgen Study of Stomach, Liver and Colon in 1000 Healthy Adults," in which he stated that these studies give a new picture of the normal positions of these organs. The positions of the viscera in the upright and horizontal positions are compared. Van Nuys believes that the anatomy of the viscera, based on a study of the dead, loses most of its value and gives students many wrong concepts of visceral form, position and relations. The doctor claims that the anatomy of the viscera should be taught as found in the living. He finds low positions of the stomach and colon to be the most common in normal adults, and says the use of the term gastropptosis and coloptosis is seldom justifiable.

In "Notes on the Interpretation of Blood Chemical Analyses," Hobart Rogers states that he believes that blood chloride estimations are practically valueless in nephritis, owing to the coincident retention of water by the kidney which is deficient in chloride excretory power. He has observed that the Folin Wu method for blood creatinin estimations give lower values than the Myers Lough method when applied to the same bloods.

Others have reported similar observations with new blood sugar methods. Rogers feels that it is necessary to know the method by which a given result was obtained in order to properly interpret it and that clinicians must build up a new set of clinical data whenever a new method is adopted.

Dr. Barbera reported twelve cases of cervical ribs reviewing the embryology and symptomatology and pointing out the fact that they often closely simulate neuritis, arthritis, myositis and aneurism. Eighty-five per cent of these anomalies occur in women. Surgery is indicated in a small per cent, being necessary in only one of his cases. The doctor warns against too hopeful a prognosis when surgery is resorted to. The non-surgical treatment, which consists of exercises and braces, was outlined.

The interesting discussions of these papers were participated in by A. C. Siefert, Gertrude Moore, O. D. Hamlin, S. A. Jelte and N. A. Cary.

CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The regular monthly meeting of the Contra Costa County Medical Society was held Saturday evening, June 27, at the offices of Cunningham and Carpenter in Richmond.

Wallace I. Terry was the speaker of the evening. He discussed the various actions of intravenous drugs on the bacteriostatic action in the blood stream and organs. A lively discussion followed and much good resulted therefrom. We wish to have Doctor Terry with us again in the future.

Leopold H. Fraser was elected to membership in our society, a valuable member, and we were delighted to receive him. The members adjourned after the meeting to Marino Grill, where lunch was served. The following members were present:

William A. Rowell, Crockett; Rosa A. Powell, Richmond; C. E. Camp, San Pablo; P. C. Campbell, Richmond; J. P. Breneman, El Cerrito; G. M. Baumgarner, Richmond; Hall Vestal, Richmond; W. E. Cunningham, Richmond; Leopold H. Fraser, Richmond; Denninger Keser, Richmond; F. L. Horne, Crockett; L. St. John Hely, Richmond. Nurses—Elizabeth Redmond, R. N.; Mrs. Nora L. Purviance, R. N.; Mrs. Etta L. Kerfoot, R. N.



FRESNO COUNTY

Fresno County Medical Society (reported by John Montgomery, secretary)—The resignation of T. Floyd Bell as secretary of the County Medical Society was accepted by the Board of Governors, and John Montgomery was appointed to fill the unexpired term of Doctor Bell.

At the monthly luncheon of the society, a traveling bag was presented to Doctor Bell and good wishes were extended to him in his work at the University of California Hospital, where he will do work in obstetrics and gynecology.

At this meeting Father O'Sullivan was the principal speaker. He gave a very interesting description of the organization of Sisters' hospitals in general, and of the plans for the proposed hospital in Fresno. This will be built on a ten-acre site at the corner of Fruit and Floradora avenues. It will be erected by Nuns of the Dominican Order. This hospital, as all other of the 500 Sisters' hospitals in the United States, will be operated as a separate and distinct corporation, all the money received being spent in the operation and improvement of the local hospital. The Sisters comprising the Fresno body will donate their services, thus enabling the hospital to keep costs down within the reach of many who cannot now afford hospital care. All donations given the hospital here will cut down the interest charges and thus enable the hospital to still further lower hospital costs. There will be an open staff of physicians and the hospital will be available to patients of all creeds alike.

The first hospital opened in the new world was opened by a body of Nuns; the City Hospital of New Orleans is operated by such a body; as is also the hospital of Mayo Brothers at Rochester.

There are 500 such hospitals in the United States at present and in them are half of the hospital beds in the country.

By discussion and questions it was brought out that hospital construction costs would amount to about \$3600 per bed, this figure to include all accessory buildings and equipment. It is expected that the local hospital will begin with an initial fifty-bed capacity and increase as the work warrants extension.

Fresno County Hospital has recently graduated eight internes and now has in their places, Doctors Wightman and Paine from Northwestern, Doctors Hazel and Gleason from University of Michigan and Doctors Baldwin, Owens, Nilsson, and Hershey from Loma Linda.

The new unit of the Fresno County General Hospital is nearing completion. This is to comprise the outpatient clinics, the admitting department, emergency dressing rooms, x-ray, and maternity wards.

Doctor Frank Ruff has recently taken charge of the x-ray department of Burnett Sanitarium. Doctor Ruff comes to Fresno from the U. S. Public Health service at Fort Lyon, Colorado.

MARIN COUNTY

Marin County Medical Society (reported by J. H. Kuser, secretary)—Meeting of Marin County Medical Society was held on June 18 at 8 p. m. at the rooms of the San Rafael Club. The meeting was opened by H. O. Hund, president.

The following members and guests were present: Doctors H. O. Hund, Josephi, Marsten Jr., Masurio, C. W. Clark, L. L. Stanley, R. M. Furlong, W. F. Jones, A. H. May, J. H. Kuser and Harry Spiro, who was invited as a guest.

The order of business was dispensed with so that Doctor Spiro had ample opportunity for his paper. The doctor gave an extremely interesting address on angina pectoris and its various manifestations, after which a general discussion followed.



MENDOCINO COUNTY

Mendocino County Medical Society (reported by P. J. Bowman, secretary)—On June 27, at 7 p. m., there was held a supper, followed by a joint meeting of the Mendocino and Lake County Medical Societies, to which the Sonoma Society was invited as guests, at the Palace Hotel in Ukiah.

President Raymond Babcock presided. The speaker of the evening was Carl Hoag of San Francisco. He presented two very helpful discourses on goiter and fractures of the forearm, each of which was followed by general discussion.

At the end of the regular meeting there was an election of officers of the Mendocino Medical Society for 1925-26. Homer Wolfe of Albion was elected president, and P. J. Bowman, secretary and treasurer.



ORANGE COUNTY

Orange County Medical Association (reported by D. R. Ball, secretary)—The regular monthly meeting was held May 5 at the Orange County Hospital. Thomas S. Blair of Santa Ana read a paper on "The Legitimate and Illegitimate Use of Sedatives, Anodynes and Narcotics." The author drew largely from his experiences as head of the Bureau of Narcotic Enforcement for the State of Pennsylvania, which position he held for many years before coming here. Albert Hoffman of Anaheim read a paper on "Experimental Work on the Etiology of Peptic Ulcer." The writer has just completed an extensive piece of research work in proving the specific bacterial cause of ulcer and his results were reported in the paper. He exhibited a number of specimens showing experimental ulcers produced in guinea pigs during the course of his experiments.

The June meeting consisted in a joint gathering with the Orange County Dental Society at St. Ann's Inn, Santa Ana, the evening of June 2. Some sixty odd members of the two organizations were present. The subject of "Focal Infection" was chosen for common discussion. George Dock of Pasadena presented the medical point of view. Dr. Dock has been one of the pioneer workers in this field and drew largely from his own observations in his able discussion. Charles E. Wonder, D. D. S., of Los Angeles, presented the dental aspect. He emphasized the point that many devitalized teeth, which do not show abscesses in the x-rays, may be foci of virulent infection and should be removed if other more evident places of absorption are not found. A spirited general discussion followed from the members. The meeting was, on the whole, one of the most enjoyable and profitable that the society has had for some time.

The Santa Ana Clinical Society met at Ketner's Cafe the evening of May 22. The speaker of the evening was Dr. Maynard, pathologist at the Los Angeles General Hospital. He presented a review of the question of bubonic plague in general and then went on to a description of the pneumonic outbreak of some months ago in Los Angeles. Charts were shown of the epidemiology of the outbreak tracing the spread from case to case. In conclusion a series of lantern slides, showing the different pathological features of the disease, was shown. The talk was considered most worth while by all present.

A recent development of much importance, both to the

community and to the local profession, is the organization of a visiting staff at the Orange County Hospital. This movement has been under discussion for some time and has now taken concrete form. The staff for the present hospital year includes the following members: Surgery, J. M. Burlew, D. C. Cowles and H. A. Johnston; medicine, J. L. Maroon and D. R. Ball; pediatrics, Joseph Robinson, W. S. Wallace and R. P. Yeagle; obstetrics and gynecology, J. H. Lang, S. A. Marsden and Bessica Raiche; otorhinolaryngology, C. H. Brooks, M. H. Heldman and H. D. Newkirk; neurology, F. E. Coulter and R. A. Cushman; urology and dermatology, C. R. Lane. The staff is organized as follows: President, Harry E. Zaizer, superintendent of the hospital; vice-president, H. D. Newkirk, and secretary, C. R. Lane. A schedule of attendance for ward and clinic duty has been worked out and the full staff holds a scientific meeting the third Thursday of each month.

One new member has been taken into the society in the person of William C. Bruff of Anaheim.



SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reporter by Bert S. Thomas, secretary)—The June meeting of the local society was devoted to a "Clinical Evening." It was held in the new auditorium at the Sacramento Community Hospital. Those in attendance included Doctors Nahl, Scatena, Yates, Babcock, Jones, Thomas, Gundrum, Beach, Thom, Stern, Dillon, Hale, Dunlap, Soutar, Snyder, Farrell, Brown, Atkinson, Beattie, Lindsay, Cress, Lubben, Schoff, Murphy, Wilder, Turner, Lipp, Klick, Parkinson, Drysdale and Wise.

A word about the attendance before turning to the more interesting program of the evening. On May 18, 1925, California Medical Association adopted the following resolution:

"Resolved, By the Board of Councilors of the California Medical Association that the attention of the members of the constituent County units, who, at the same time, are members of attending hospital staffs in their respective communities be called to the importance of not overlapping or interfering with the proper scientific activities of both these highly important expressions of medical activity and development.

The scientific programs of the attending staffs should concern themselves especially with the diseases and injuries of patients in such hospitals. The attending staff scientific programs should not take the semi-abstract or literary trend that has long been and must necessarily continue to be a natural part of the scientific programs of County Medical Units.

Our County medical societies are the constituent units of organized medicine in our state, and the development of organized medicine is absolutely essential to the protection and further growth of both the scientific and material interests of medicine in California.

Your Board of Councilors presents these suggestions for the consideration of program committees of attending staffs so that these basic facts, which are of so great importance to County Societies and attending staffs, may be constantly kept in mind."

It seems that a good number of members should have their attention particularly called to this resolution as there is no doubt that certain members of our local hospital staffs are neglecting their most important medical constituent unit, probably due to the fact that a considerable portion of their time is taken up with their respective staff meeting. By examining the attendance of both the Sisters' Hospital and Sutter Hospital staff meetings, it was found that a number who have faithfully attended these meetings each month, have attended our otherwise well-attended meetings either not at all, or but once, so far, this year. We believe that the resolution adopted by the State is a very wise one, and wish to call your particular attention to it.

To the meeting itself: The minutes of the May meeting were read and approved. In the report of the board of directors, it was announced that the September meeting will be in the hands of the roentgenologists, and that the other two scientific meetings of the year would probably be devoted to a Surgical Symposium and a Pediatric one.

It was suggested that all members take note of the

fact that the new A. M. A. emblem is now available, and that its use will eliminate the present trouble of permitting practically anybody to take advantage of the parking privileges, now kindly granted by the city to all duly authorized medical men. This emblem has been copyrighted by the A. M. A., and may only be obtained with its registered number through their office. Just as soon as the members are able to obtain their emblem, the police will be notified of its significance.

Secretary reported that Mervyn F. Frandy had transferred from the Santa Barbara Society to the local one. Gundrum moved and Nahl seconded that the annual banquet deficit be paid from the treasury.

Program of the Evening—Leo P. Bell presented three cases of "Banti's Disease." In his remarks, he followed the idea of Rosenow, that the disease is caused by a streptococcus admitted originally through the respiratory tract. The spleen, being a lymph gland, is a filter, and, through this filtration, becomes infected. The primary stage of the disease is a thrombo-phlebitis of the capillaries. The disease, as originally described, was really what we now recognize as the third stage of the disease; the first stage being the pre-acitic stage, without gastric hemorrhage; the second stage is that when gastric hemorrhages supervene, where anemia becomes apparent and leukopenia is present; the third stage, Banti described. Here we have ascites, greatly enlarged spleen, with destruction and regeneration of liver tissue. Bell opposes operation in the first stage. At this time, removal of infectious foci and transfusion are used. Since the damage done as found in the second and third stage is irreparable, since the spleen is no longer acting as a filter but is merely accumulating toxins primarily directed at liver destruction, and, since the pathology is one of fibrosis and endothelial proliferation, the spleen should be removed in these two later stages. Bell sees no reason for less than 100 per cent recoveries after the immediate operative mortality is passed.

In the discussion, Dunlap briefly discussed two of his recent cases; he also asked as to the ground for believing the disease to be one of streptococcus origin, quoting Monihan, who had often declared that if such a case could be traced to a foci of infection, then the disease was not Banti's. Thomas enquired about the relative proportion of permanent kidney damage done in these cases, the question coming from the fact that in a recent case requiring splenectomy, there had been a massive amount of albumen found in the urine at the time of operation; six weeks post-operative there was no trace of albumen to be found.

In closing, Bell suggested that the idea of streptococcus as the causative factor in the disease, was a very recent one. He suggested that the albumen found in these cases was usually due to a nephrosis.

Schoff presented a patient with leprosy. Cigar-shaped bundles of the bacillus were obtained from the nasal septum by the thousands by Snyder.

Scatena presented a rather advanced case of Hodgkins' Disease. He called attention to the fact that Yates and Bunting have regularly recovered a micro-organism in these cases, but they have been unable to establish the cause by completing Koch's cycle as proof. In discussing this case, Gundrum classified Hodgkin's Disease as one group of what he was pleased to term "Lymphocytomata."

Beach presented two cases of peri-nephritic abscess, one of which was of a primary type, and one of the secondary type. Hale had seen the last case four years ago, and had the pyelograms taken at that time to compare with the present ones.

Gundrum presented a chart of a severe diabetic, six months' pregnant, and with a bi-lateral pyelitis. It was most interesting from the standpoint of sugar tolerance, the use of insulin throughout, and the variation in the whole picture during an intercurrent staphylococcus aureus blood infection.

Babcock discussed a case presenting a typical Parkinson syndrome in a child.

The meeting adjourned to the banquet table.



Sacramento Society for Medical Improvement (reported by Bert S. Thomas, secretary)—In view of the fact that we have no July or August meetings, I wish to

report various notes of interest that have occurred since our last meeting.

A note was received from the office of the surgeon of the Ninth Corps Area, showing us that there is but one member in good standing in our society on the list of Reserve Medical Officers. This is Major Archibald A. Atkinson. There are four other local physicians on the list. We believe that the men of our society should heed the call that the army is sending out, and suggest that they volunteer their patriotic service to the nation in time of national emergency.

We are happy to welcome Hans Schluter to Sacramento. He comes to us after four years of post-graduate work in obstetrics, with the idea of handling this type of work only. He has not, as yet, affiliated with the state organization, but we feel sure that we can report him as our next new member.

Doctor Titus of Great Falls, Montana, is anticipating entering practice in Sacramento, about August or September.

June B. Harris is reported as having left for home from his trip to England.

Norris R. Jones is the new resident at the Sutter Hospital.

Angus McKinnon comes to us from the San Francisco Hospital as the new resident at the Mater Misericordiae Hospital.

A letter has just been received from W. E. Briggs from Paris. After starting from the Orient, and constantly heading West, the doctor is now well on the last leg of his year's trip around the world. He is expected home in September.

J. W. Crawford is still in Philadelphia, taking post-graduate work in eye, ear, nose and throat.

Oscar Johnson, returning from the American Medical Association gathering, reports a most enthusiastic meeting. His visit to the Massachusetts General Hospital was particularly interesting.

We have to report the loss of a good member. George Sanderson has left Folsom and has entered practice in Stockton.

William Miller has found it necessary to convalesce in Colfax. We wish him a speedy return to our active circle.

Harry R. Baird has returned from a tour of the South.



SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock, M. D.)—The monthly dinner for June was held by the County Medical Society in the San Diego Hotel on Tuesday, June 9. Business was suspended for a splendid scientific program as follows:

1. J. C. Yates gave a very practical talk on some medico-legal questions upon which the rank and file of our profession should be better informed. The various workings of the Anti-Narcotic Law seemed to have especially called for explanation.

2. C. L. Stealy discussed at some length the technic of the Salivary Urea Test, based upon original work done by himself in his private and hospital practice. While there is a strong appeal to a quick test of this sort which can be done in the office without drawing blood from the patient, Stealy's conclusions were that the discrepancies between this test and the standard blood urea test were so wide as to make the former seem unreliable. The paper was intelligently discussed at some length by R. J. Pickard and E. F. F. Copp. The latter's experience with the test under consideration led him to feel distinctly more favorable toward it than the other speakers.

3. Bronchiectasis, a symposium presenting the various aspects of the subject. L. H. Redelings outlined the clinical diagnosis with emphasis on the desirability of an early diagnosis being made; H. A. Thompson presented a clear summary of the pathology of the subject. Elliott presented a radiography of the subject with some excellent x-ray films, some of which showed the value of surgery in this condition. Dr. Elliott also discussed the value of laryngeal injection of lipoiodol in outlining the pathology of the subject by x-ray. C. M. Fox closed the symposium with a comprehensive description of the

various surgical methods used in the treatment of this troublesome bit of pathology.

The following physicians were recently elected to full membership in the society: A. M. Muhl, Alice Huff Crandall, W. F. McColl, A. B. Smith and W. T. Dunn. Doctors Albert Martin, H. M. Fine, L. J. Bernard and E. U. Reed were elected to associate membership. Charlotte Baker, one of our honored members, was recommended for the permanent fellowship in the A. M. A., in accordance with the provisions for such fellowship in the latter's constitution.

J. W. Sherrill, director of the Scripps' Metabolic Clinic, has returned from an extended trip in the East, visiting his former associate, Dr. Frederick M. Allen of Morristown, New Jersey. While away, Doctor Sherrill delivered papers at the California Medical Association in session at Yosemite National Park, as well as at the A. M. A. in session at Atlantic City.

The following members of the local profession have returned from the East after visiting the A. M. A. and various other clinics: Grace M. Kimball, J. D. Hartley, Robert Pollock, William Ruoff, Arthur Wegeforth and George B. Worthington.

E. F. F. Copp of the Scripps' Metabolic Clinic is now in Toronto, Canada, where he was formerly associated with Doctor Banting. On this visit, Doctor Copp read papers at the California Medical Association at Yosemite Park and at the Canadian Medical Association at Regina, Canada. Copp has already made for himself a warm spot in the hearts of the local medical profession.

National Defense Day was recognized on July 4 by a liberal registration on the part of the medical men, dentists and nurses of San Diego, many of whom were in line in the splendid military parade during the forenoon. Our national patriotism is kept warm through the untiring enthusiasm of Lieut. Col. Alfred E. Banks, in charge of Evacuation No. 90 of San Diego.

Already the program committee is at work getting out some attractive papers for the fall, as the society resumes its session in September.



SAN FRANCISCO COUNTY

Franklin Hospital Staff (reported by Ewald Angerman, secretary)—A staff meeting of the Franklin Hospital Clinical Society was held at the hospital May 4, 1925, at 8:30, Frank R. Dray presiding.

At this meeting, Doctor Shiels urged more support for the County Medical Society, which was concurred in by all those present.

The paper of the evening was presented by Conrad Weil, choosing for his subject, "Surgical Treatment of Lung Tuberculosis at the Clinic in Munich." Doctor Weil, who recently returned from abroad, gave a very interesting and instructive outline of his experiences in Europe.

CHANGES IN MEMBERSHIP

New Members—Los Angeles County—Howard R. Cooder, Ruth J. Temple, G. J. Torell.

Sacramento County—Royal de R. Baronides, John West Wilson.

Glendale County—Harold J. Cooper.

San Diego County—William T. Dunn, William F. McColl.

Santa Monica County—Charles E. Rooney.

Long Beach County—Francis B. Settle.

Transferred—Clement H. Arnold, from Santa Clara County to San Francisco County; S. S. Kalman, from Alameda County to Siskiyou County; Mervyn F. Frandy, from Santa Barbara County to Sacramento County; Lolita F. Flewelling, from Orange County to Alameda County; Charles A. Love, from San Luis Obispo County to San Bernardino County.

Deaths—Bluhm, George Irving. Died at San Francisco, June 20, 1925, age 57. Graduate of School of Medicine, University of Illinois, 1894. Licensed in California in 1901. Doctor Bluhm was a member of the San Francisco County Medical Society, the California Medical

Association and a Fellow of the American Medical Association.

Endicott, Edwin Eugene. Died at Jackson, June 27, 1925, age 51. Graduate of the Kentucky School of Medicine, Louisville, 1894, and licensed in California the same year. Doctor Endicott was a member of the San Joaquin County Medical Society, the California Medical Association and a Fellow of the American Medical Association.

Freeman, William. Died at Fullerton, June 29, 1925, age 84. Graduate of the Indiana Medical College, Indianapolis, 1877. Licensed in California in 1895. Doctor Freeman was an honorary member of the Orange County Medical Society, the California Medical Association and the American Medical Association.

Utah State Medical Association

SOL G. KAHN, Salt Lake City.....President
WILLIAM L. RICH, M. D., Salt Lake.....Secretary
J. U. GIESY, Kearns Building, Salt Lake City,
Associate Editor for Utah

VACATION TIME

All work and no play is said to make Jack a dull boy. And why not? If all life phenomena partake of the nature of electro-magnetic manifestations—if the cell, be it brain or muscle or gland, be but a minute electro-magnetic cell in its primal nature—a tiny storage battery as it were—then why should too much, too steady, too continuous use of one such series of cells not gradually bring about a state of exhaustion which shall make us dull indeed? Actually we burn our batteries out.

In this sense change of endeavor, of application or of scene is synonymous with rest. And certainly the doctor needs rest whether his patients realize the fact or not. Because the doctor is human—regardless again of what his patients say or think, and the doctor plays a pretty steady shift. In reality it's twenty-four hours long, unless the particular medico who proves the exception has arrived at a point where he may leave much to his assistants and thereby slip off now and then for a seance with a golf ball as a form of rest. And not only is it twenty-four hours, but it's seven days in a week. In addition, the doctor does not live his own life; he lives many lives. That is, the interests, the welfare of many lives are constantly with him. He takes his cases to bed with him—figuratively, of course. Going back to an electrical comparison, the doctor's brain cells are always "cut in"—always at work. And this way lies brain fag.

Consequently the doctor needs a vacation just as much as any of his patients—all of whom are ready to declare that they need and deserve a rest, because—brain fag means less effective work. Less effective work is apt to mean disaster to both the patient through lack of desired result and to the doctor through loss of prestige, failure to deliver and, therefore, added mental stress.

But vacation—change of scene, a meeting with other and possibly fresher minds—rest, means a return to routine with a freshened zest. In this sense vacation for the medical man is an actual investment for the benefit of both the patient and the doctor himself. There is a very potent source of recuperation in a golf ball or a fishing rod if properly used, even though the nineteenth hole is not as

popular as it was before the eighteenth amendment got in its work.

THIS MONKEY BUSINESS

As we write they are "Hangin' Danny Deever in th' Mornin'." In other words they are trying John Scopes. The little town of Dayton, Tennessee, is selling soft drink stand concessions about the courthouse—the last issue of Judge has printed a cartoon of William Jennings Bryan with a monkey perched upon his head, plucking at his few remaining hairs, and captioned "He loves me, He loves me—not," and the Great Commoner himself has stood on a hill outside of Dayton and preached a sort of sermon on the mount.

Verily, yea verily, the antics accompanying the Scopes trial might almost inspire one with a feeling that the theory of evolution—or rather of anthropoidal descent from the monkey—were well founded were it not for the deeper meaning masking back of its more farcical face.

Whether man be descended or *ascended* from the monkey tribe, or whether they are but branches of a common trunk, we do not undertake to state. Certainly man himself is guilty of much which makes the possibility seem not so far fetched. But God is God and certainly as the Creator of the Universe not to be proved or disproved by the trial of a high-school professor twenty-four years of age.

The pitiful part of the thing to our minds is, that there should in reality be any quarrel between science and religion—or any man or sect of men today so narrow-minded as to feel that there is any conflict between mankind and his God. Science recognizes God—his works. And the latter should speak to man of His verity in themselves. Any other assumption than that of an Intelligent Creative Power back of the Universe of which our Earth is a part, is an insult to intelligence. And the Scopes trial will settle nothing except the two points as to whether John Scopes is convicted, and the State of Tennessee has a right to pass a law telling its people what to say and what to think.

But the great danger in the episode is really to ourselves. Too much are we "monkeying" with law, until we are threatened with a very plague of laws. We are told what not to do to such an extent that the very inhibition becomes the cause of law breaking, through the average man's resentment of the attempted infringement of the God-given rights of personal choice. What the race needs today in this country is a greater recognition of natural law, and a fewer and saner number of man-made laws. Forbidding a man to drink won't stop his drinking. Q. E. D., as the geometers put it, "that has been proved." Forbidding a man to think, we feel won't stop his thinking. Commanding a man to believe will not greatly bolster his faith. Thought and faith are both things EVOLVED, and God alone could have made a man out of either a bit of clay or a monkey. For the rest, this monkey business is just—monkey business after all.

Salt Lake County Medical Society (reported by M. M. Critchlow, secretary)—A special meeting of the Salt Lake County Medical Society was held at the Com-

mercial Club, Salt Lake City, June 18. Meeting was called to order at 8:10 p. m. by President John Z. Brown. Fifty-three members and three visitors were present.

The speaker of the evening was James F. Cooper, Medical Director, Research Department of the American Birth Control League, Inc., New York City. He talked of the aims, principles and policies of the league and discussed in detail the results obtained by investigation in the Contraceptive Clinic in New York City.

Utah Notes (reported by J. U. Giesy, associate editor for Utah)—Doctor H. P. Kirtley has left the city by motor for a trip to Portland, Seattle and Vancouver.

Doctor Foster Curtis has returned from a trip of over four thousand miles by motor, including in his itinerary Bryce's Canyon, Los Angeles, San Francisco, and Portland.

Doctor E. M. Neher is back from a trip by rail and boat to Alaska.

All these things hit in well with our editorial on vacations. And we plead the sentiment there expressed as excuse for the brevity of notes for the current month. Anyway, it's too hot to work or write and the asphalt is becoming a quaking morass in the middle of the street. Utah is experiencing the hottest wave in the history of the local weather bureau and we feel like taking our own advice about a vacation. Still, with seven beautiful canyons within easy motor distance from the heart of the city, why should anybody complain of the heat?

The 1925 Session—The following changes in information about the U. M. A. meeting in September should be noted.

Doctor Engman, through causes of unpreventable nature, will not be present as scheduled.

Wallace I. Terry (Surgery) and Frank W. Lynch (Gynecology), both of the University of California, will be present however. In this we have been fortunate.

Walter C. Alvarez, who will be present, is Asst. Professor of Research Medicine, the Medical School of the University of California, and not Professor as was erroneously published last month.

John Sundwall of the University of Michigan will, it is now hoped, be the chief speaker at the public meeting to be held during the U. M. A. session.

It is the plan of Doctor Goeltz of our program committee to drive to Pocatello, Idaho, where many of our guests are to be on the program of the Idaho State meeting, and bring these gentlemen back with him in cars, with a dinner en route, so timing the trip as to arrive here Sunday night before the opening of the Utah meeting.

Flaccid Paraplegia—Two cases of flaccid paraplegia are reported by Edward Livingston Hunt and Leon H. Cornwall, New York (Journal A. M. A.). In the first case the postmortem examination disclosed a thrombosis of the abdominal aorta beginning about 5 cm. above the bifurcation of the common iliacs and extending downward into the femoral on the right and just to the femoral on the left. The thrombus was reddish white, firm and well organized. From gross examination it appeared to obstruct completely the lumen of the aorta, both common iliacs and their external and internal branches. From the gross appearance of the thrombosed portion of the aorta and its branches, it appeared that the occlusion was complete. But microscopic examination showed that there were small channels between the margin of the thrombus and the intima of the aorta containing blood. The dorsalis pedis and its branches also contained a moderate amount of blood. The second case represents a case of extensive softening and degeneration of the spinal cord following an extradural hemorrhage. The hemorrhage induced mechanically a thrombosis of the vessels that furnish the blood supply to the cord, the resultant pathologic change being one of ischemic softening. As would be expected from the extensive degeneration of the gray cornua and white columns of the cord, the clinical picture was that of complete flaccid paralysis, complete anesthesia to all types of sensation below the level of the lesion, bladder and rectal incontinence, and atrophy of the musculature of the lower extremities.

CORRESPONDENCE

POPE TRAVELOGUE

Leslie Simson's Camp,
Tanganyika, May 25, 1925.

My dear Dr. Musgrave:

It is about a month since I wrote you last and many events have transpired since that date.

We have kept up our wild career of lion hunting and have the skins of twenty-five of these mighty beasts hanging outside our storeroom. Eight lions we have killed entirely with our bows and arrows, and our experiences have been varied and exciting. We have stood fourteen charges, stopping most of their rushes at three to five yards. Our shooting distances with the bow for these beasts extends from forty to eighty-five yards.

Two lionesses have charged our motor car while we were rounding them up. In one of these whirlwind stunts I was riding on the running board, ready to hop off and shoot with my bow when a sudden turn of the lioness and a corresponding swerve of the car nearly threw me off into her jaws. It seemed funny at the time. I held on by one finger and we had to dispatch this dangerous lady with a rifle. She tried to climb in the front seat.

We have a small number of other animals added to our list such as hyaenas, jackals, leopards, cheetas, wildebeasts, Tommies, elands, foxes, badgers and zebras. Besides a large number of regular camp meat secured with the gun.

But so long as one hears the low menacing grunt of a lion on the velt and the thunderlike roar of their team work at night as they round up their kills; so long as one can go out as we did this morning and see fourteen of these lordly beasts file slowly out of the donga where they have fed upon fresh meat, this long will one's muscles tighten, the blood pressure rise and one feels the urge to "go and get 'em"! And we do.

We did not attack these fourteen, but ran them, cut out two large males from the bunch and brought them to bay out on the plains. There we fought it out to a finish.

Incidental to all this feverish diversion, I have been laid low with quotidian malaria, and now I am feeding upon quinine. We have also the tsetse fly at our very doors, but they are reported to be uninfected with trypanosomes. The anopheles also were reported to be "not loaded"—but you know how that sort of a gun goes off!

I've been keeping tab on the livers of all our animals for Doctor Mentzer of the Mayo Clinic and have done the autopsies of seventy-five individuals and made drawings and measurements of the gall ducts of fifteen different species.

The weather continues mild, the evenings chilly with warm afternoons and occasional showers. It is much like California in Tanganyika, so we contemplate staying here in our present camp for two or three months, later going to the great volcanic crater of Ngorogoro.

We are surrounded by immense quantities of game though it is not all accessible for bow shooting. Our nearest native village is Ikoma, a district of scattered huts, numbering in all a thousand or so inhabitants. It is, of course, the big metropolis of these parts. It has no postoffice, no stores, no roads, no white men, but just as important to the noble tribe of Wakoma as Los Angeles is to the world at large. It has its own heated existence and, doubtless, to some the world revolves about Ikoma. I take it, therefore, that you will be deeply interested in the little bits of gossip that we pick up from this center of learning.

I send an alleged clipping from the principal newspaper of Ikoma:

"The Ikoma Garbage Can,"

Emptied on very rare occasions.

The latest news from the royal household is to the effect that His Royal Highness—Mtone, Sultan of the illustrious Wakomas—is still in excellent health,

though somewhat somnolent, owing to the solicitous care of his four wives and the unlimited amount of sour beer which he consumes.

It is reported that at the nearby camp of Bwana Simson there are three Volstead Americans. It is devoutly to be hoped that no modern social improvements will be introduced to our glorious land through their influence.

The Crowned Prince, Masheke, has recently returned from Bwana Simson's Camp, accompanied by his beebe number three, mother of his alleged latest royal offspring. They bear rich presents from the Americans, to-wit one gaudy skull cap, valued at 25 cents, and one red, white and blue handled Boy Scout knife. Masheke was ever the child of fortune!

Dame Scandal has it that the pretty beebe of Maridi has left his bed and board and now resides at the banda of Bwana Simson's brave gun-bearer, Kazimoto. Maridi has sharpened his pangs and taken his longest spear from the doorway. Nothing will satisfy the honor of our most worthy townsman but the blood of Kazimoto, or the payment of five shillings.

Latest advices—Kazimoto has paid a prince's ransom for his folly. He disgorged the sum of five shillings into the coffers of Mavidi, who tied the wad up in the corner of his shuka or loin cloth, and his honor is vindicated. He has now taken service with the great Bwana Simson as porter at 10 cents a day. Kazimoto and his new beebe have started on their honeymoon to Nairobi, 240 miles by the trail. The walking is excellent this time of the year.

NOTICE IS HEREBY GIVEN OF THE GREAT COMING CEREMONY, THE FESTIVAL OF CIRCUMCISION. All youths between the ages of thirteen and fourteen are hereby commanded to appear at the banda of the medicine man at the appearance of the full moon.

Cheer up, boys, the fundi is the possessor of a very long sharp knife, the music will be grand. This is the one big event of your young life. Reserve seats for ladies as per usual will be two handfuls of ground meal. Come one, come all! Register your bets with the gatekeeper and leave your spears outside!

Tembone, the mighty hunter of the Wakomas, has recently returned from Bwana Simson's camp where he presented the Great Bwana with a pumpkin and half a dozen yams, asking modestly in return that the Bwana shoot him two zebra with his punduke.

It is reported that our fellow townsman was given a shilling and a toy balloon in payment. Tembone enjoys these little walks of seventy miles, and after all his toto packed the vegetables.

FOR SALE! CHEAP!

One loin cloth, three yards mericani, slightly used, 5 years' wear, and a coil copper wire ankle bracelet in exchange for one young wife, must have amiable disposition. Apply to Dolo, the flute player.

Feeling that I've given you all the news that's fit to print, I draw this sad epistle to a close.

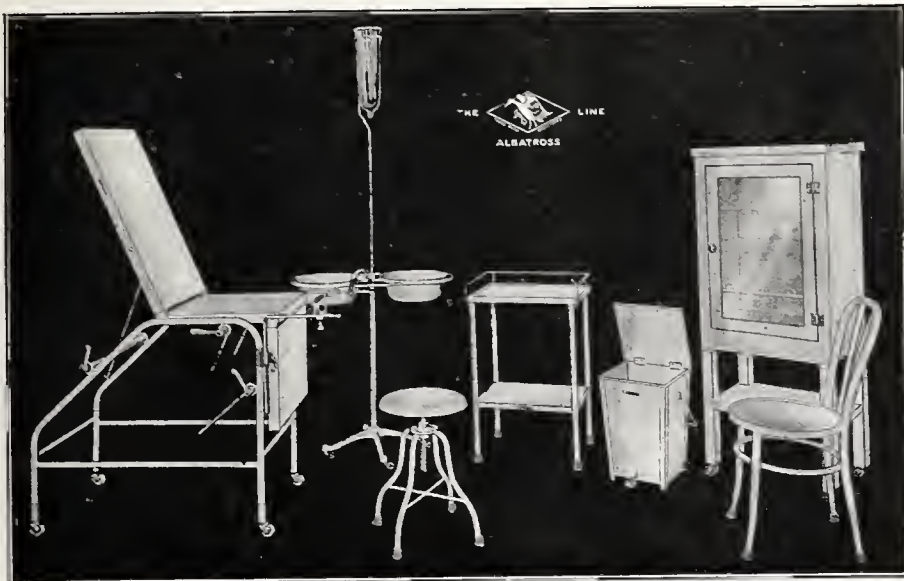
I am as ever,

Very cordially yours,

SAXTON POPE.

Mercury Rubs—It has been pretty clearly demonstrated that the mercury that is rubbed into the skin is absorbed from the sebaceous glands and hair follicles, and to some extent from the sweat glands. What is left on the skin after the rubbing is over is of no service, and cleanliness suggests that it be thoroughly washed off with benzene or other solvent.

What the physician, convinced of the practicability of mercurial medication, by way of the skin, is particularly interested in is an ointment that can be used with some degree of scientific exactness, and one that does not advertise the patient's misfortune to his acquaintances. Parke, Davis & Co. are offering little cakes or blocks of cocoa butter, containing metallic mercury, which they call Mercurettes, and which the patient can conveniently carry with him, on occasion subdividing them into halves or quarters for use. Each Mercurette contains fifty grains of mercury, uniformly distributed throughout the mass. See advertisement in this issue.



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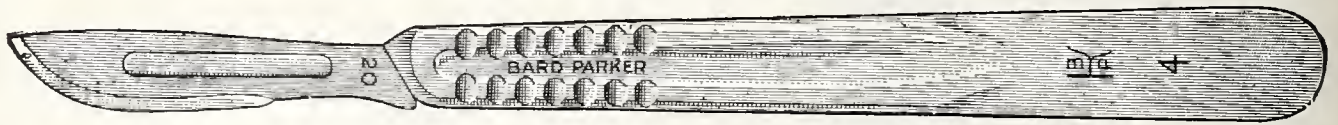
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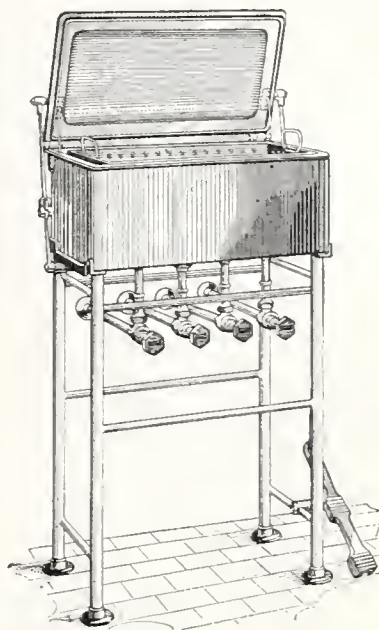
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Cerebral Vasculature—Fifteen brains were prepared and studied by Temple Fay, Philadelphia (Journal A. M. A., June 6, 1925). Five were injected after removal with metallic mercury. Ten were injected in situ with barium sulphate, and later removed for study. The studies seem to indicate that communications are numerous between the various zones of vascular supply, and that these communications are of considerable size, available for collateral circulation. In cases of thrombosis of one of the cortical cerebral trunks, lowering the head, raising arterial pressure with the application of heat to the overlying scalp, may offer some added chance of improvement or recovery if the patient is seen early, and if the thrombosing process has not involved the anastomotic branches. Some degree of anastomosis has been evident clinically, frequently seen in the recovery of temporary loss of function, and has usually been explained on the re-establishment of the arterial supply through the thrombosed vessel. The extent of end arteries in the brain as shown by these injections varies in different preparations. A wide range of factors may influence these findings, such as degenerative changes in the vessels themselves, postmortem clotting, and uneven injection by the opaque fluid. It seems evident, however, that the subcortical regions are supplied by end arteries. With few exceptions only, anastomotic branches can be traced in the stereoscope; these are not constant in each specimen. A more intensive study of these branches is now being undertaken, particularly in the fields of each arterial supply, the points of fusion between the three main systems being characterized by anastomotic branches. It seemed, on study of the three large arterial supplies to the cortex, that the frontal lobe supplied by the anterior cerebral differed considerably from the remaining two arterial distributions. This was most marked in the appearance of large, swinglike loops dropping down from the cortex, probably following the convolutions and radiating toward a center near the anterior horn of the lateral ventricle. The circuitous course taken by the anterior cerebral artery to reach its areas of distribution differs in that seen from the middle and

posterior cerebral arteries, which show few loops of this character and tend to run more directly to their source of distribution on the cortex. Perhaps the inference could be drawn that the frontal lobe has developed more recently than the phylogenetic plan of the arterial system produced for its supply, and consequently the more recent demands on this vessel have given rise to the complexities throughout its distribution.

The Female Sex Hormone and Gestational Gland—Robert T. Frank and R. G. Gustavson, Denver (Journal A. M. A., June 6, 1925), summarize their most important conclusions thus: Each sex cycle is preparatory to gestation, the normal sex cycle being the fertile one that leads uninterruptedly to parturition and lactation. An abortive cycle occurs when pregnancy fails to develop. Soon after ovulation the anabolic phase ceases, a catabolic period succeeding it. In most forms the catabolic period is involutionary. In the primates this period is destructive (menstruation). The endocrine factors producing the cyclic changes are successively supplied by the follicle, corpus luteum and placenta. To emphasize this continuity, the authors propose the name of the gestational gland for this triad (follicle, corpus luteum and placenta). By substitution (subcutaneous injection) with lipoid extracts of these glands (follicle fluid, corpus luteum, placenta) they have obtained: In female castrates or in immature animals alike: (a) premature sex development (pubertas praecox); (b) hyperplasia of the tubular system and mammae, especially marked in rabbits. In castrates: (c) in rats, vaginal spreads characteristic of estrus, together with hyperplasia of the duct system; (d) in rats, treated with potent extracts, typical estrual contractions of the uterus suspended in Locke's fluid. The active substance has been sufficiently concentrated to produce physiologic results in a total dosage of 2.25 mg. (0.00225 gm.). The sex hormone is a specific substance elaborated by the gestational gland, taken up by the lymph and blood stream and selectively utilized only by Muller's tract and the mammary glands. The chemistry of the sex hormone is not fully determined.



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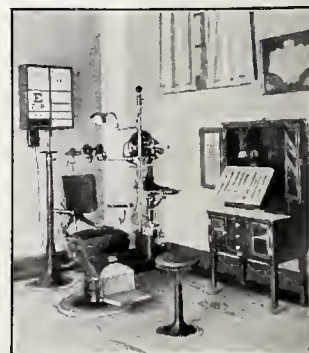
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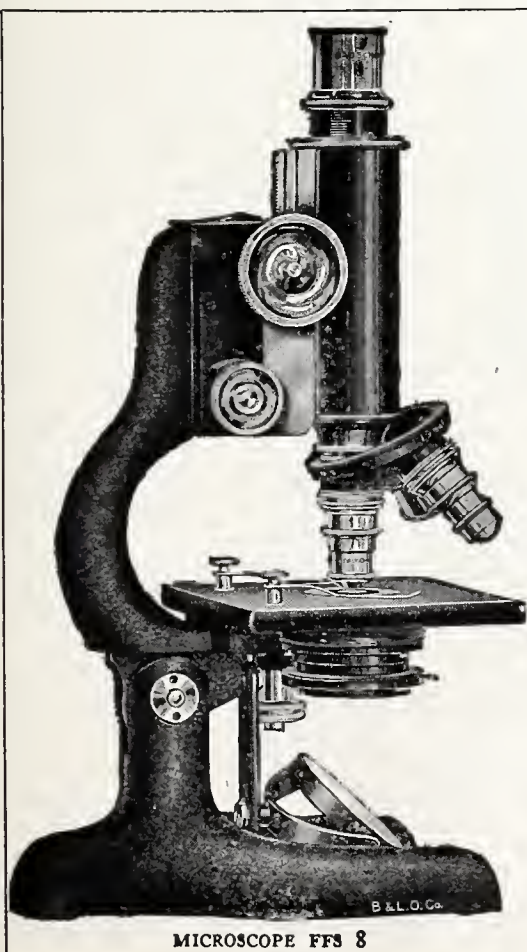
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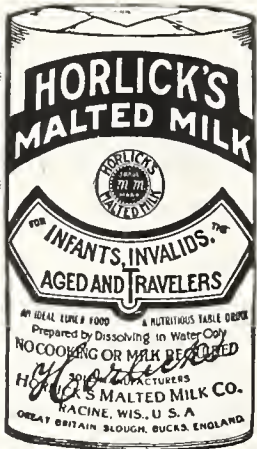
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Whole Grain Wheat

Inquiries by some doctors and by numerous other persons of the Better Health Service seems to indicate that the propaganda of the Whole Wheat Co. is pleasing—to them. The guiding force behind the Whole Grain Wheat Company, according to the Investigating Department of the A. M. A. (Journal A. M. A.), seems to rest in its president, C. H. Woodward, whose name appears extensively in the advertising. The company's advertising methods are ingenious and many. In addition to advertisements in the ordinary channels, newspapers, etc., the Whole Grain Wheat concern publishes a number of booklets and pamphlets, and gets out a monthly house organ, called *The Motive*, which has C. H. Woodward for its editor and publisher and chief contributor. Also the concern, apparently, organizes so-called "food clinics" in various towns and has as a subsidiary advertising organization the high-sounding "American Educational Food Council." This "Council," appears to be a mere "paper" organization.

Woodward argues that the cure for all disease is Whole Grain Wheat because it is *not* denatured, and will make up the deficiencies of the denatured food on which a crazy world is feeding. We are told that Whole Grain Wheat has cured such serious diseases as cancer, tuberculosis, Bright's disease, diabetes and colitis, as well as such conditions as "catarrh," constipation, asthma, bed-wetting in children, etc. So much for the exploitation methods of the Whole Grain Wheat Company. As to the product itself, it is, apparently, nothing more than whole grain wheat, partly cooked.

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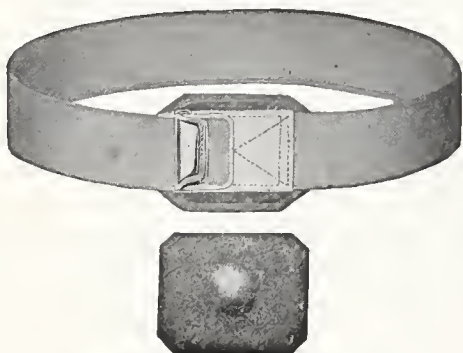
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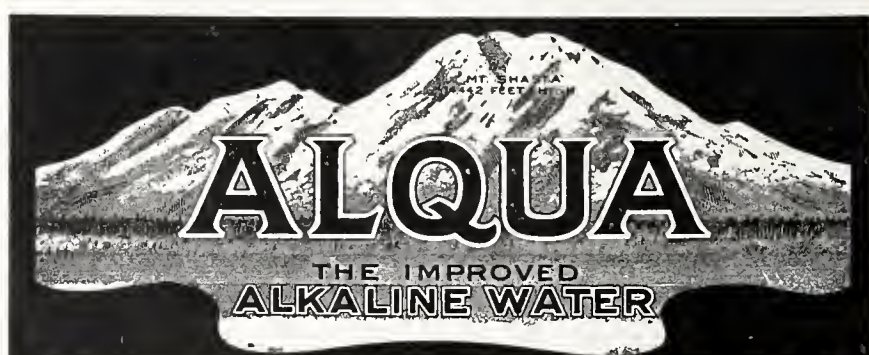
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BOOK REVIEWS

This column is conducted solely in the interests of California and Western Medicine readers. Critical comment, favorable and unfavorable, purely from the standpoint of the interests of the medical reader, will be made about books selected from the larger number acknowledged in the Books Received column. The advertising columns are open to book publishers who wish to make additional statements about their publications.

The Crippled Hand and Arm. By Carl Beck. 243 pages. Illustrated. Philadelphia and London: J. B. Lippincott Company. 1925.

This book fills a real demand for a book on the hand, inasmuch as it describes and well illustrates many forms of disability of this member. The chapters deal with the elementary anatomy, function congenital deformities, crippling by injuries, mutilations, burns and disease, disturbances of the arm crippling the hand, and technic.

The reconstructive part, of which there is considerable, is disappointing in character and is of a period at least ten years previous. No use was made of the tubular pedicle skin-flap. From this and from the apparent disregard of the cosmetic appearance, very disfiguring scars resulted, which can not be approved of in modern reconstructive surgery. Nor can we sanction fascial tubes about nerve sutures or the bridging tendons in fingers by silk; nor the making of median longitudinal incisions in hands or fingers, as pictured on the frontispiece and other illustrations of this book.

Aside from the reconstructive work, the book has an instructive and extensive description of crippled hands and illustrates them with a large series of photographs. It also describes well the treatment of webs of fingers and describes a new operation of transplanting a toe nail on a finger.

Personal Hygiene Applied. By Jesse F. Williams, M. D. for sale by advertisers in this issue. Courtesy copy supplied by the publishers, W. B. Saunders Company. Price \$2.50.

A book which, according to the preface, is designed for the use of "teachers and students," and we might add obviously for serious-minded college students. It is a very good book, made up of a surprising assortment of information, essential, in the author's opinion, to "improve the quality of human life." It takes quite a liberal and unusually versatile mind to include much of the contents

of the book under a title of hygiene. While most of the statements made—but not all by any means—will be quite generally accepted, many of them, no doubt, will receive the challenge always invited by dogmatic statements about matters of controversy. The book is about as readable as Gray's Anatomy.

The Life of Sir William Osler (two volumes). By Harvey Cushing. For sale by advertisers in this issue, price \$12.50.

A book worthy of its peerless subject which is equivalent to saying that it is the best biography since that of Pasteur. It is as fascinatingly interesting as fiction and is a stimulating and inspirational influence that every one who can read should have. Osler will, unquestionably, be portrayed in history as the ideal physician that his friends and students considered him during his life. But he also was a great citizen and people who think, from all walks of life, will find much that is helpful and more that is charming in this remarkable story of the life of a remarkable man.

Diseases of Children for Nurses. By Robert S. McCombs, M. D. Price \$3. For sale by all book dealers listed in the advertising pages of this issue.

This book appears to be an attempt to write down, as it were, a textbook of diseases of children to suit the intelligence of students of nursing. Like so many similar attempts it fails to make interesting reading. A careful, intelligent examination of many of the medical books for nurses explains in part why student nurses often feel sleepy in class. The book under review appears to us to be an average one of its class. It quite frankly is an exposition of practices and teachings of one hospital. This, if nothing else, would limit the distribution of the book. Many, and we believe the majority of physicians and schools of nursing, will challenge several of the author's statements and question the advisability of others. For example, even at this date this book states a silver solution MAY be placed in the eyes of the newborn "in cases where there has been a pre-existing vaginal discharge." The law in this state and elsewhere requires—and rightly—that this service be rendered to every newborn baby.

Gynecology, Medical and Surgical. By P. Brooke Bland. 1257 pages. Illustrated. Review copy by courtesy of the publishers, F. A. Davis Company. For sale by our advertisers. Price \$11.

Bland offers a textbook on gynecology to the profession,
(Continued on Page 1077)



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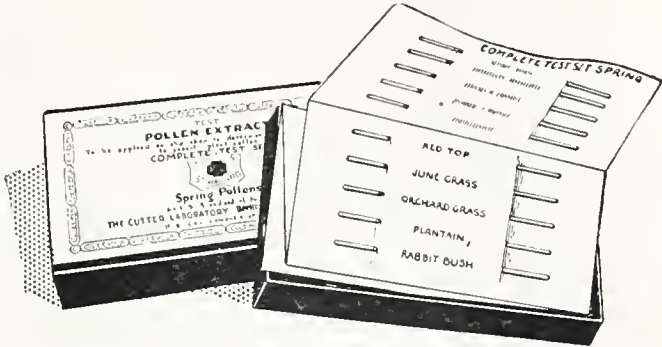
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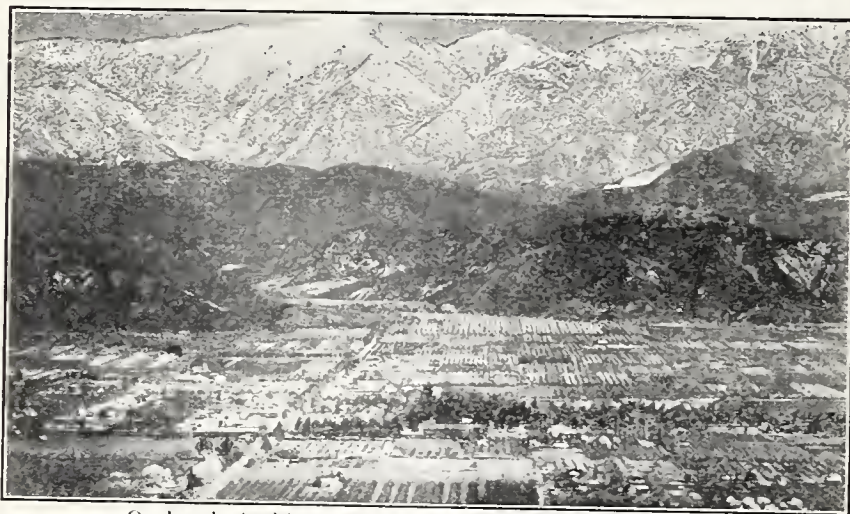
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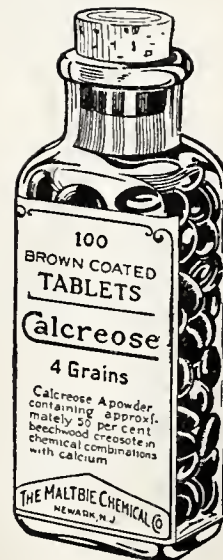
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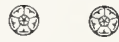
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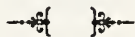
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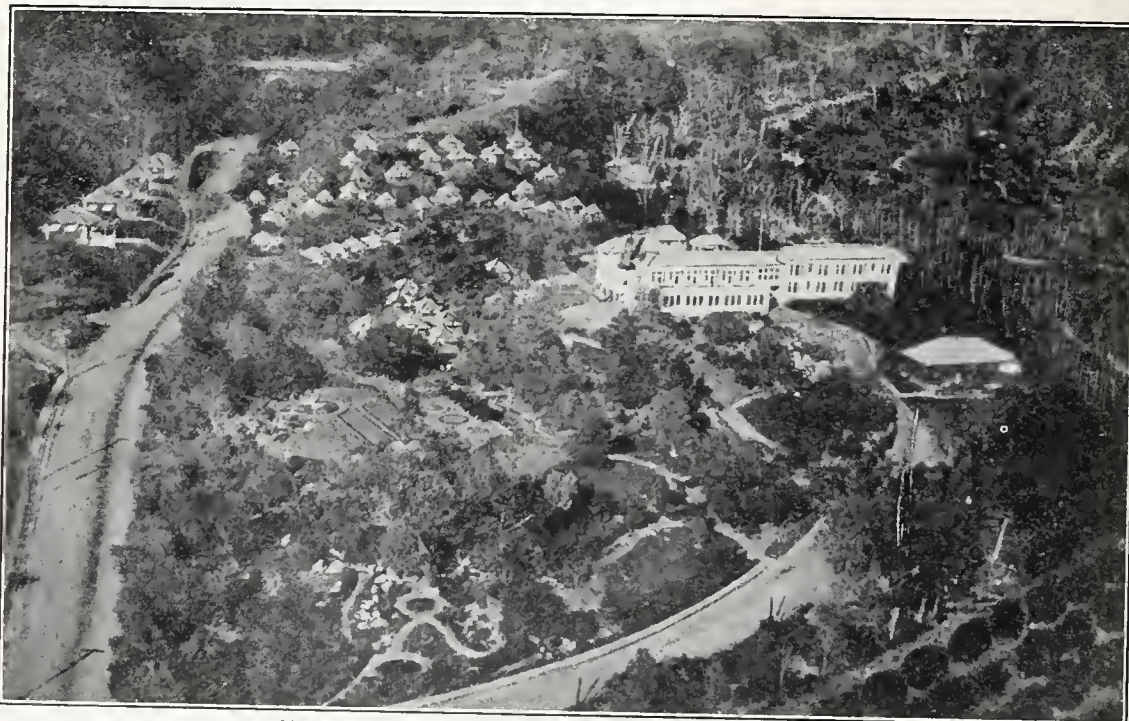
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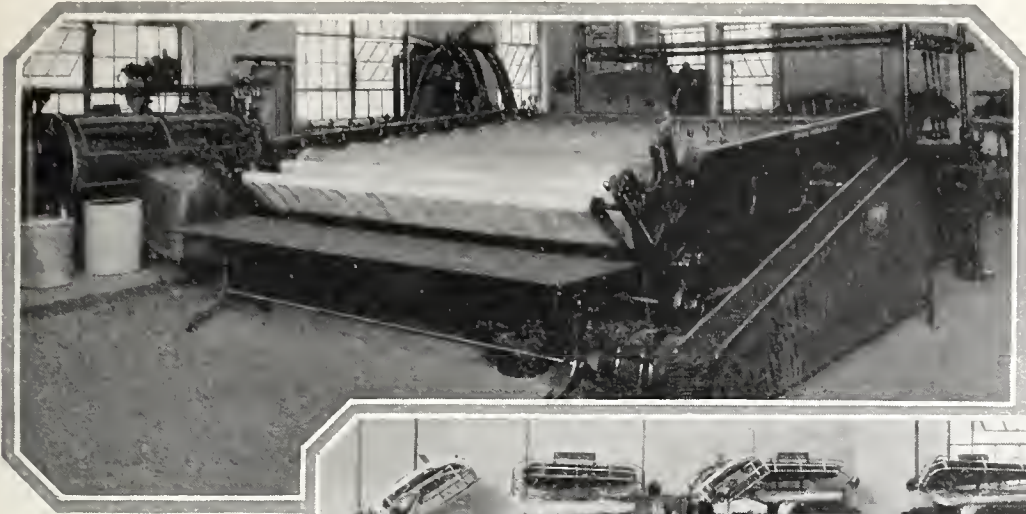
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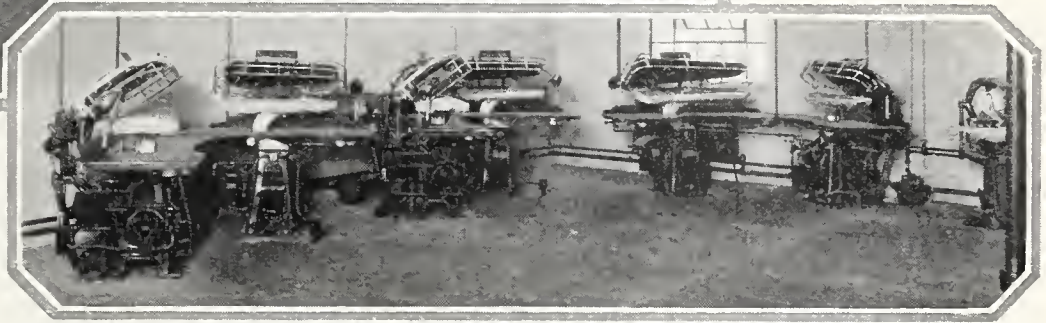
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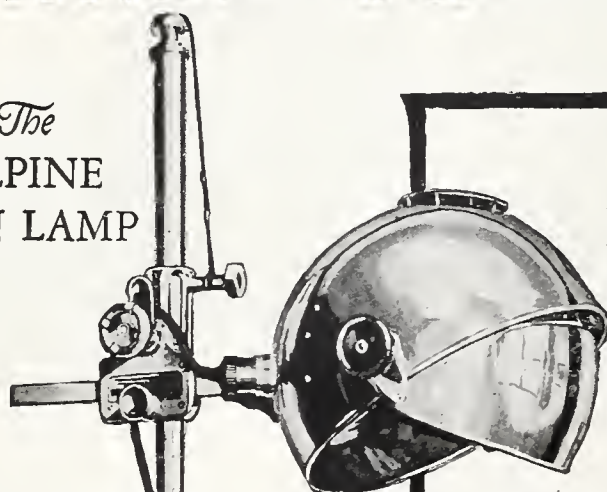
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BOOK REVIEWS

(Continued from Page 1062)

and, from its size, comprising some twelve hundred pages, one would expect a rather complete review of modern gynecology. Unfortunately, this is not so. After reviewing the volume, one is reminded of the earlier books on gynecology with an attempt to make it look more modern by adding some of the more recent advances.

In Bland's book, the unimportant commonly obscures the essential. Many recognized modern operative procedures are woefully lacking. In the field of medical treatment little is said about such new methods as dyes, galvanism, diathermy. The book is profusely illustrated and many illustrations reproduced are unnecessarily large. Microscopic illustrations are entirely too frequent. In fact, special pathology in general is not sufficiently emphasized.

Pathology and Bacteriology of the Eye. By E. Treacher Collins and M. Stephen Mayou. Review copy supplied by the publishers, P. Blakiston's Son & Co. For sale by advertisers in this issue.

The first edition was a volume in the International System of Ophthalmic Practice published thirteen years ago. This one is a separate and independent work, greatly enlarged, in which the recent developments in the pathology and bacteriology of the eye are included.

Several of the chapters, namely the ones on inflammation and degenerations, have been entirely rewritten, while many changes have been made in the remaining chapters. Those to be especially noted are the observations on slitlamp microscopy and further additions in glaucoma and hypertony.

The illustrations are extremely good and carefully chosen. The index is well arranged so that it can be used as a convenient reference in the pathology and bacteriology of the eye.

The book is highly recommended as a reference, as well as a guide in the study of the pathology of the eye.

The Physiology of the Mind. An interpretation based on biological, morphological, physical and chemical considerations. By Francis X. Dercum. 287 pp. Illustrated. Review copy supplied by the publishers, W. B.

Saunders Company. 1925. For sale by advertisers in this issue.

This book, reviewed in its first edition, has been increased from 150 to 287 pages by elaboration in each chapter, a consideration of the doctrine of relativity in its relationship to the subject, and a barbed appendix on Freudism. The extended essay has been rearranged in chapter form and reads more easily than the first edition.

Heredity in Nervous and Mental Disease. By Association for Research in Nervous and Mental Disease. A series of investigations and reports. Vol 3. 332 pp. Illustrated. Review copy from the publisher, Paul Hoeber. For sale by our advertisers. Price \$3.75.

This is number three of the series of reports by the Association for Research in Nervous and Mental Diseases. As in the others, it consists in a series of papers presented by members and guests, each paper or group of papers being followed by discussion and questions. The general consideration of the subject of inheritance is followed by chapters on the pathogenesis of heredity and familial disease of the nervous system, on the pathological aspects of the same, on heredity in the psychoses and a concluding essay on heredity as exemplified in literature. One of the most interesting papers is Stockhard's on the experimental production of degeneracy. Working with guinea pigs, "alcohol acts as a selective agent to bring out a group of unusually strong specimens. . . . Should one desire to apply these experimental results to the human alcohol problem, it might be claimed that some such elimination of unfit individuals had benefited the races of Europe, since all of the dominant races have a definitely alcoholic history."

The Practice of Pediatrics. By Charles Gilmore Kerley and Gaylord Willis Graves. Third edition. Review copy by courtesy of the publishers, W. B. Saunders Company. For sale by advertisers in this issue of California and Western Medicine.

In collaboration with G. W. Graves, Charles G. Kerley presents a new edition of his "Practice of Pediatrics," which shows many improvements and additions since it last appeared in 1919. Improvement in printing has added to the clearness of the text and the comprehensibility of the contents, and a re-arrangement of the

(Continued on Page 1078)



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BOOK REVIEWS

(Continued from Page 1077)

material has lead generally to a more logical grouping than that previously used.

The miscellaneous collection of ills designated as "rheumatism," unfortunately, still persists, though assuming the more pretentious name of "rheumatic diathesis." The title of the chapter on "Muscles, Bones and Joints" is a misnomer, for it contains nothing at all on muscles, one single page on joint diseases, and mentions only two bone affections.

It is to be regretted that gymnastic and physio-therapeutic methods were dropped from this edition; on the other hand, the disappearance of unclassified diseases is noted with gratification. The fact, that it has been possible to eliminate this chapter completely, stands as a tribute to medical progress during the past few years.

Major changes stand out in the chapters on infant nutrition. Special emphasis is placed on artificial feeding, food properties, physiological requirements and charts, bacteriology and chemical analysis and considerable space is also devoted to evaporated milk.

Possibly the greatest advance made lies along the lines of blood chemistry; the causes and treatment of pertussis; pyloric obstruction with its differentiation between spasms and hypertrophy and corresponding treatment; hydrocephalus as classified by Dandy; rickets on the basis of vitamins as well as calcium and phosphorus balance; Diphtheria with its toxin-antitoxin immunization; scarlet fever with its Dick test; Dochez immunsera; and finally, diabetes with its insulin treatment.

The use of x-rays is assigned a prominent place in diagnosis and transfusion in the treatment of many ailments, a great number of which were formerly beyond medical help.

Pathogenic Micro-organisms. By William H. Park, Anna Williams and Charles Krumwiede. Complimentary copy supplied by the publishers. For sale by advertisers in California and Western Medicine. Price \$6.50.

The recent (eighth) edition of this standard work is of doubtful justification, although the revising of chapters on immunity freshens the book, and increases its usefulness from the practical viewpoint. The work of the local New York Board of Health in active immunization against diphtheria is given in considerable detail. Few noteworthy advances in bacteriologic technic are noted, but there is an improvement in bacterial grouping. Bacteriophage is briefly considered. The chapter on complement fixation is disappointing.

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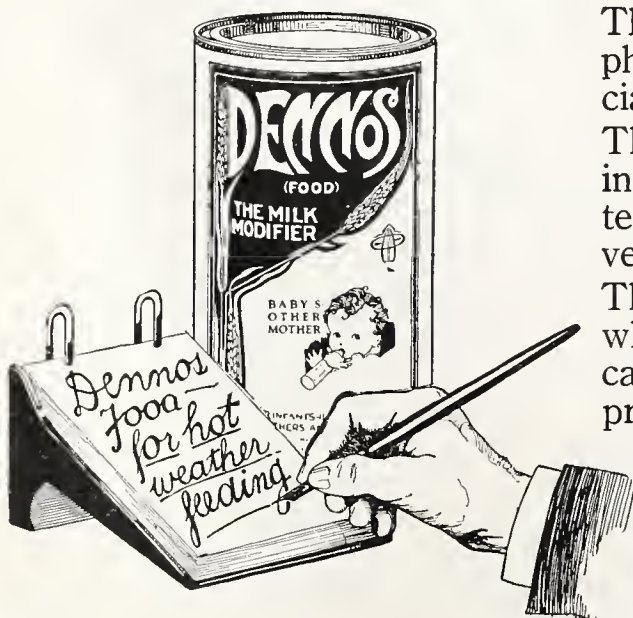
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Tuesday 8:00 a. m.—Weekly Staff Conference.

Tuesday 9:00 a. m.—Urologic and Cystoscopic Examinations. Louis Clive Jacobs, M. D.
Wednesday 8:30 a. m.—Operations. Charles G. Levison, M. D., and Harold Brunn, M. D.
Thursday 8:30 a. m.—Eye, Nose and Throat Operations. Aaron Green, M. D., and Herbert Cohn, M. D.
Thursday 9:00 a. m.—Medical Ward Rounds. Emilo Jellinek, M. D.
Friday 8:30 a. m.—Clinical X-Ray Conference. Lloyd Bryan, M. D.
Friday 9:00 a. m.—Pediatrics Rounds. E. Chas. Fleischner, M. D., and Ralph Kuhns, M. D.
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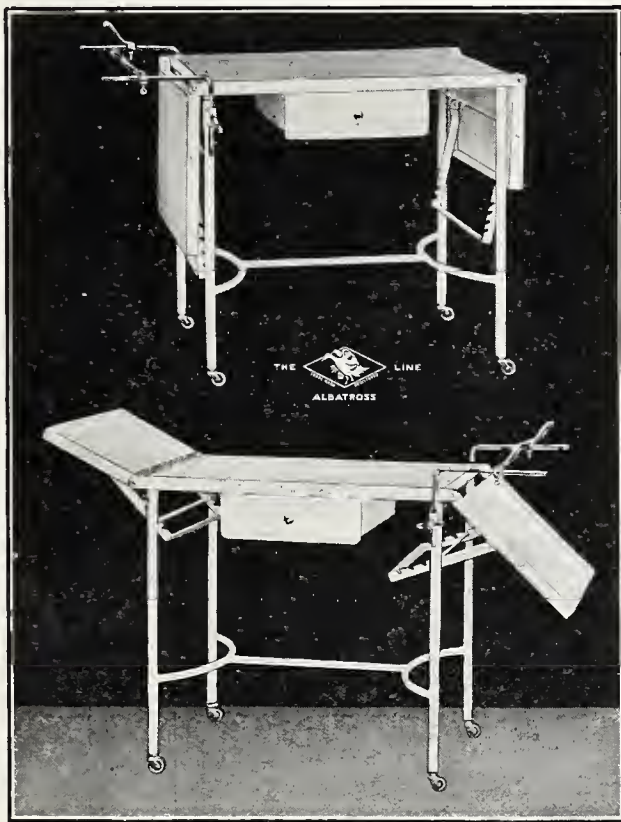
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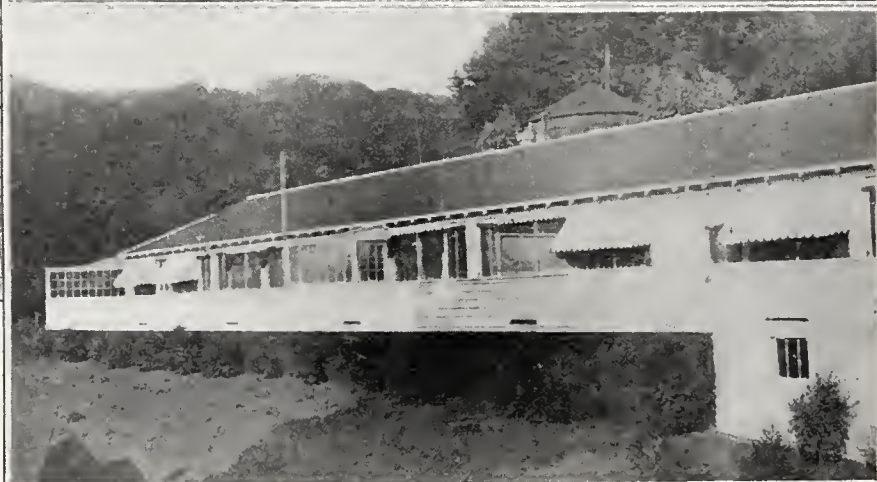


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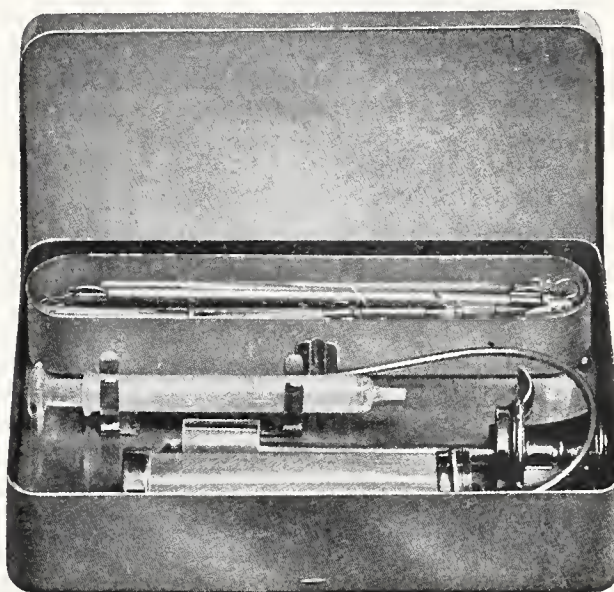
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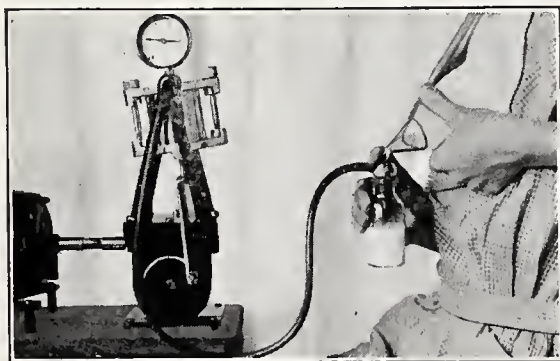


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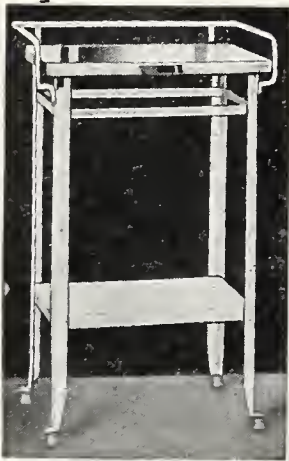
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Distribution of Physicians in the United States—
Raymond Pearl, Baltimore (Journal A. M. A.), says that because the physician cannot be socially and economically set wholly apart as different from the rest of humanity, his life and circumstances are subject to the flow and interplay of general economic circumstances. In looking, therefore, for the fundamental causes underlying the present difficulty of an excess of urban and a defect of rural physicians, Pearl reviews what have been the major economic and social movements affecting the two moieties of the general population which live in these two situations. From his figures it is evident that on the basis of recent behavior, each addition of \$100 to the average per capita wealth of a region means that approximately one physician per 30,000 of population will come into the region and start business, while, for each decrease of \$100 in the average per capita wealth, approximately one physician per 30,000 of population will move away to try his fortune elsewhere. This mathematical approach to the simplest and most general economic factor in the situation lends support certainly to one aspect—the financial and economic—of the evidence presented in the report of Mayers and Harrison. The evidence shows that, disregarding all distinction between urban and rural location, the regional distribution of physicians in the country is in close accord with the general economic status of the several regions. Further, the value of all farm property per capita of rural population in each geographic region may be taken as an index of the relative wealth and prosperity of different farming regions. On this basis it is apparent that generally the exodus in recent years of physicians from the rural locations, which has given so much concern, and precipitated the present discussion, had had associated with it a definite and marked decline in the per capita real value of farm property. In short, it is seen once again that the behavior of the physician in the conduct of his affairs betokens a considerable degree of good economic common sense. In 1923 physicians were

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fewer in proportion to population in these small towns (essentially rural) communities than they were in 1906. In only one region (East North Central) is the slope of any physician trend line upward, and there only slightly so. In every case in which there is a detectable difference, the downward slope of the physician trend line is less steep in the case of the towns of less than 1000 population than it is in case of towns of from 1000 to 2500 population. But the differences in slope between the physician trend lines for the two groups of towns (under 1000 and from 1000 to 2500) are all small, and probably not significant statistically. In every case but one (Middle Atlantic) the trend of one or both of the physician lines very closely parallel the trend of the real value of farm property. In the Middle Atlantic group of states, the slope of the farm property line is distinctly steeper than that of either of the physician lines. But in general it is clear that in nearly all parts of the country the relative rate at which the available medical service in rural areas has declined in recent years has been almost exactly the same relative rate that has measured the decline in rural wealth, as indicated by the real value of all farm property. Summarizing the discussion to this point, it may be said that whether one looks at the distribution of physicians relative to large geographic regions, or at the movement of physicians away from rural communities, the same outstanding fact emerges. The economic situation of the region, as such, or the change of the economic situation in time, parallels the facts regarding the relative frequency of physicians. It is difficult to escape the inference that the former is one of the primary causal factors in the production of the fact observed about the latter. The physicians behave, in the conduct of life, about as any group of sensible people would be expected to. They do business where business is good, and avoid places where it is bad. Like any other normal person, the physician wants to make a decent living. Experience has shown him that it is harder to do this in the country than it is in the city. Therefore, he either sticks to or moves to the city. Another point emphasized is that in the major portion of the United States it made no significant difference in the mortality rate of a community in 1920 whether that community had few or many physicians per unit of population. Two morals suggest themselves from this result. The first is that perhaps the chief social and human value of the physician is in alleviating suffering rather than in preventing death, at which last task he must in every case ultimately fail. The second is that we seem to have here in some part a mathematical demonstration of the wisdom inherent in the now proverbial remark to the effect that while there is a great difference between a good physician and a poor one in respect of the results of their activities, there is no significant difference between a good physician and no physician at all.



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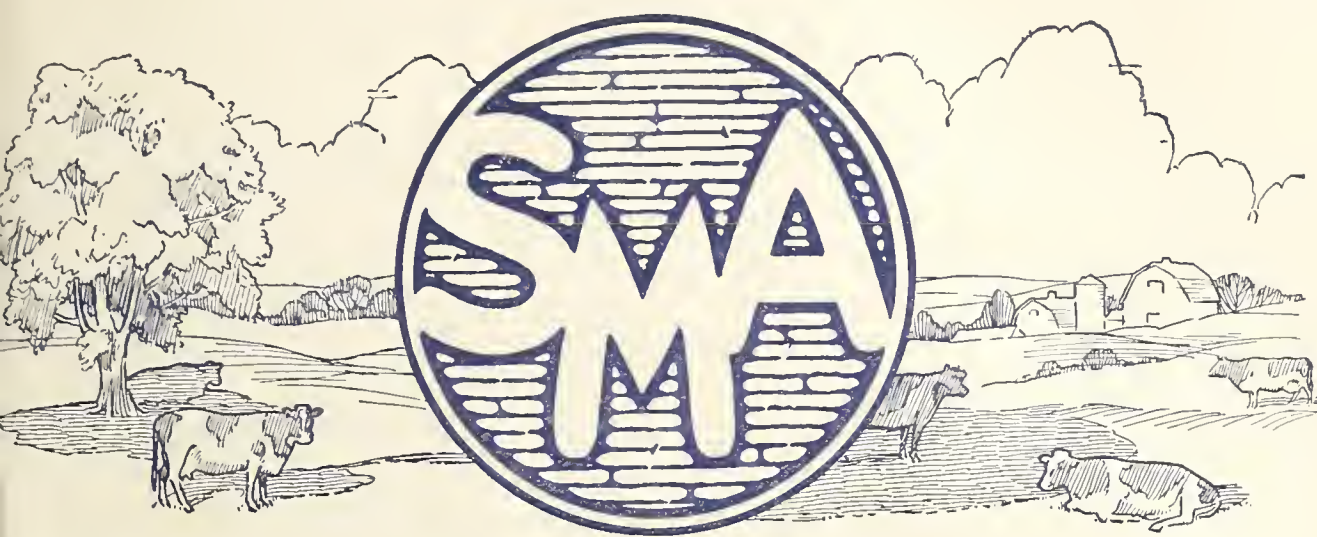
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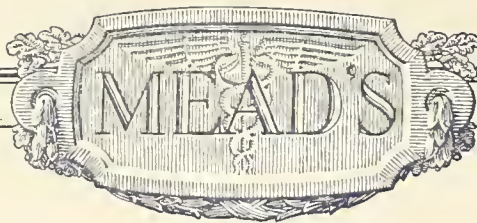
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VOLUME XXIII

SEPTEMBER, 1925

No. 9

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Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 10, 1918.

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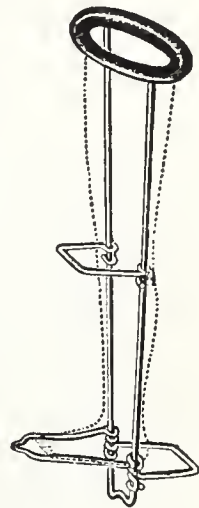
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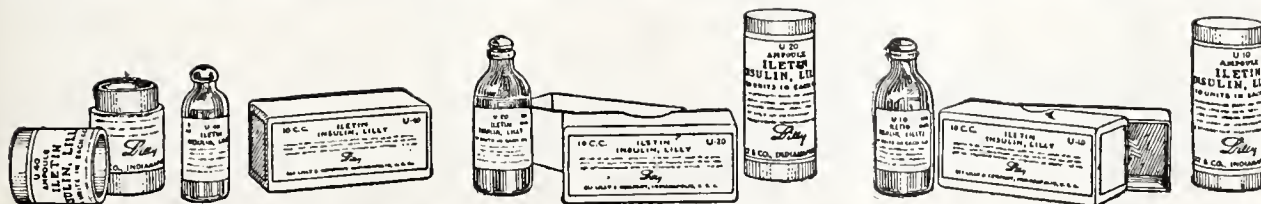
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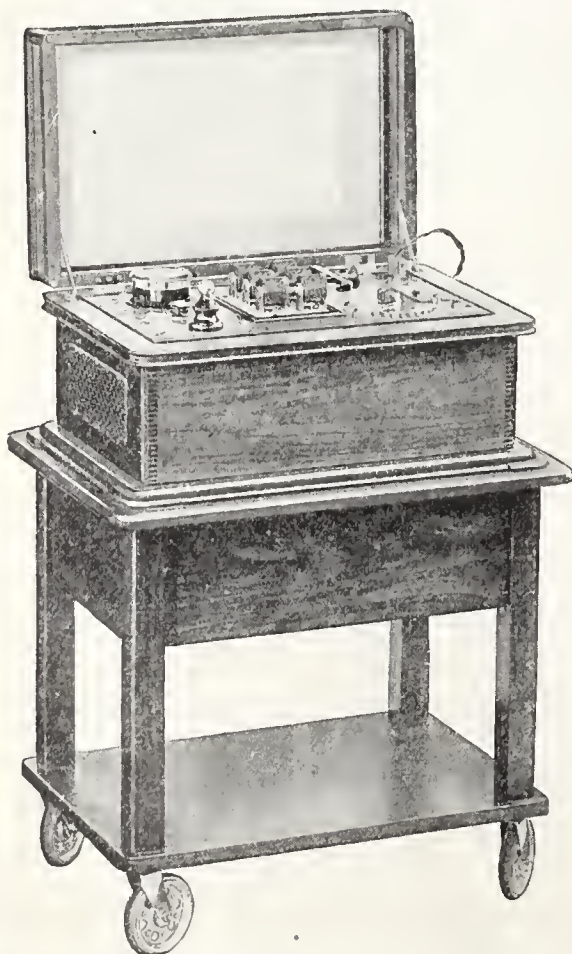


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Mechanics of Back Strains—Z. B. Adams, Boston (Journal A. M. A., July 25, 1925), reviews the mechanics of the joints in the different regions of the spine, in order to show the effect of the shift of their relative positions to one another, on the stress brought on the ligaments, and thus to show where strains usually occur. The region of the spine in which the strains most commonly occur is the low cervical region. Strains in the thoracic spine are not common. This region is well braced by the ribs. When there are severe distortions, as in scoliosis and in Pott's disease, occasionally there is pain due to strain; but when the deformity develops slowly and is constant, there is surprisingly little pain. At the dorsolumbar junction, one of the most limber spinal sections, there are frequent strains, chiefly in the round and hollow-backed type of person. There are but few cases which show symptoms that can be attributed to the midlumbar spine. The ability to hold the back in the best position to avoid strain certainly depends, to a large degree, on how the body trunk is poised on the feet, knees, and hips. First of all, patients should be shod properly, so that the weight is not thrust down on the heads of the metatarsal bones. This does not mean alone the avoidance of high heels, but it means a shoe long enough to avoid pressure of the vamp seam on the metatarsal shafts and heads, preventing their being raised. It means no cramping of the toes. The weight should be carried on the foot in good position, with the arch of the foot held up, and the leg rotated outward, so that the pivots of the knee and ankle are in the same plane; the knees straight, not in hyperextension. This allows the trochanters to be held back and the femoral necks to approach the pelvis, with the normal, forward inclination of 15 degrees, and this forward push props the acetabula upward and forward, and diminishes the possibility of backward tilt of the hip bones and pelvis as a whole. The proper treatment of these back strains involves getting the muscles into condition. At the same time, patients should be trained to stand in the proper position, so that their bones support the weight. The muscles hold them there. When the ligaments have been torn, it is analogous to a sprained ankle, or when

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badly stretched, to a chronic flatfoot, and the cure is not always an easy or rapid process to accomplish. In the acute cases of low back strain, a surprising amount can be accomplished by adhesive strapping on the skin, to bind the gluteal muscles together and prevent the backward tilting of the pelvis. In the severe cases in which real damage has been done, and the ligaments have to shorten and repair, braces and corsets must be used; but one should not lose sight of the importance of developing the muscles, the anterior abdominal wall, the psoas and glutei, as well as the quadratus lumborum and erector spinae, and get the skeletal frame into the position in which it can support the weight at the best mechanical advantage. When the back symptoms seem to have developed as the result of a congenitally defective fifth lumbar vertebra, locking of this section of the spine by bone-graft or fusion is necessary to get permanent relief.

Electric Cataract—Walter S. Franklin and Frederick C. Cordes, San Francisco (Journal A. M. A., July 25, 1925), emphasize this point: In dealing with electrical burns about the face and eyes, the possible development of a cataract must be considered for a period of two years. In industrial cases, this possibility should be reported. The lenticular changes of an electric cataract are rather characteristic, the anterior cortex together with the deeper layers of the lens being involved. The opacities as a rule are flaky, although sometimes finely granular. The voltage causing electric cataract may vary from 220 to 50,000 volts. The eye nearest the site of the burn usually shows the most marked changes. Electric burns may cause serious changes in the globe without the production of a cataract.

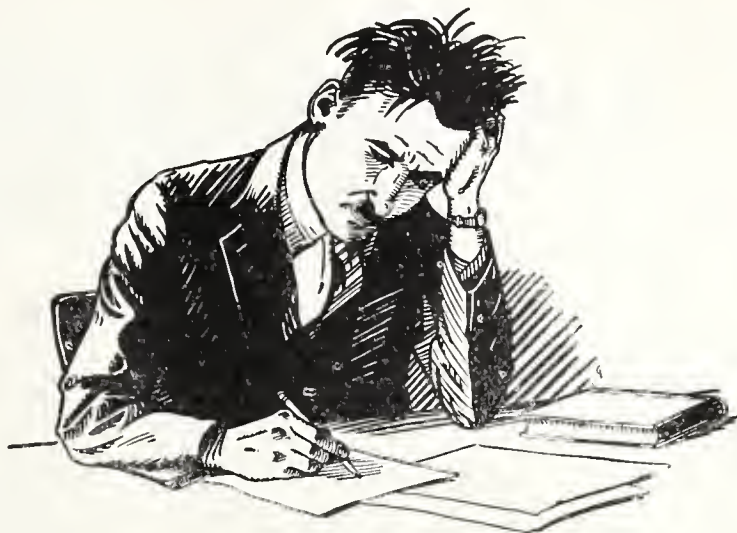


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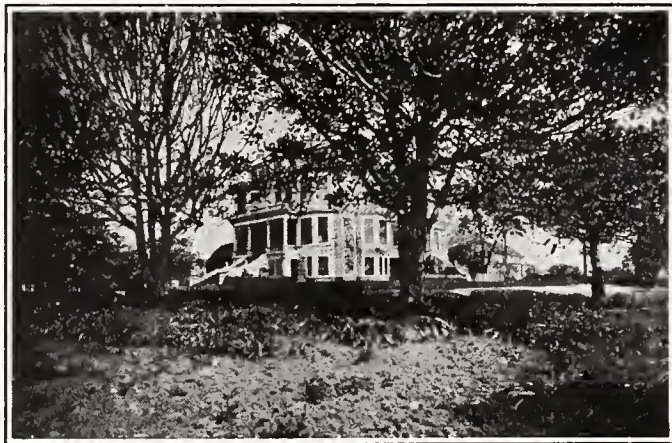
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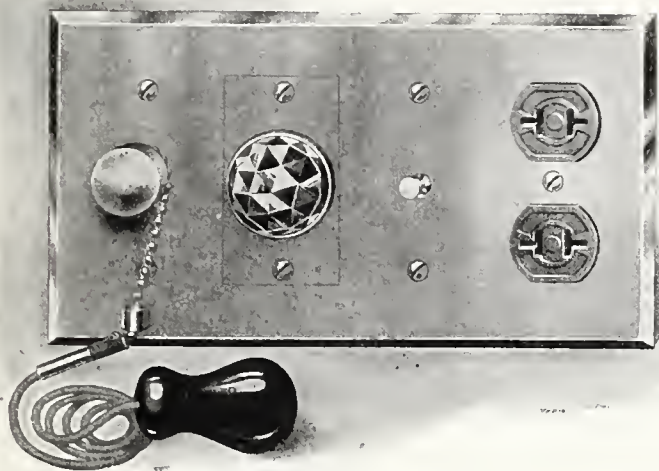
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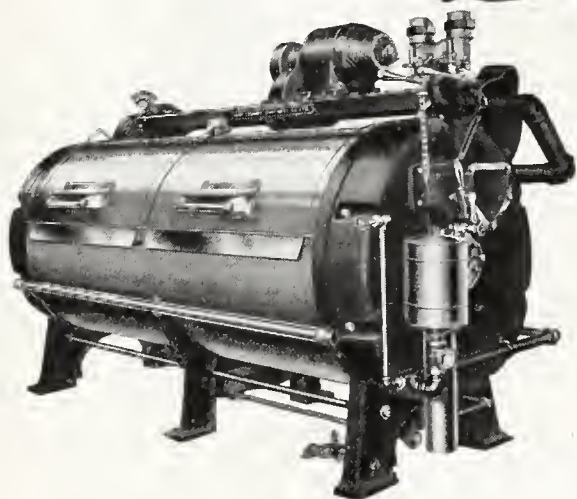
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All books received are promptly acknowledged in this column. Such acknowledgment is the only return California and Western Medicine feels obligated to render in return for the courtesy of the sender. Selected books believed to be deserving of comment will be reviewed solely in the interests of our readers. Our advertising columns are open to publishers of acceptable books for such further statements as they care to make.

Diseases of the Bronchi, Lungs, and Pleura. By Frederick T. Lord, M. D. Second Edition, revised, with the addition of a chapter on Pulmonary Tuberculosis. Illustrated with 107 engravings and 3 colored plates. Lea & Febiger, Philadelphia and New York. 1925.

The Ophthalmic Year Book, Volume XXI, containing bibliographies, digests, and indexes of the literature of ophthalmology for the year 1924. Edited by William H. Crisp, in collaboration with a large editorial board. Published by the Ophthalmic Publishing Company, Chicago. 1925.

Jahresbericht Über Die Gesamte Innere Medizin Und Ihre Grenzgebiete. Bibliographisches Jahresregister Des Kongresszentralblattes Für Die Gesamte Innere Medizin Und Ihre Grenzgebiete Herausgegeben Von Der Schriftleitung Des Kongresszentralblattes Fünfter Band Bericht Über Das Jahr, 1922. Berlin Verlag Von Julius Springer, 1925.

Is Man Natively Criminal?—This question was propounded, discussed and its implication largely endorsed at a recent international gathering of educated persons.

Booth Tarkington (American Magazine) takes the subject for a text in a serious article that challenges the interest and attention of all who are concerned with the welfare of the human race:

"If it be true," says Tarkington, "that we are natively criminal, then boyhood must be a period of conflict between the boy and the trained adult. The latter calls

himself society, and makes the laws, while the boy (according to the expert's conclusions and the old wives' tales, too) is still so new in the world that he cannot help being strongly inspired by the criminal impulses of which he principally consisted when he was born.

"In other words, it is natural to him to be an outlaw, and, since what is not natural is artificial, his parents' duty is to train him to lead an artificial and uncongenial life of decorum, instead of the logical one of crime for which nature intended him.

"If that view be the correct one," continues this distinguished author, we have some traditional conceptions to revise. We shall have to alter our whole sentimental position in regard to youth.

"Our fond and romantic fancies about children must be reformed and all the tender idealism of childhood stored in our older literature and art abandoned."

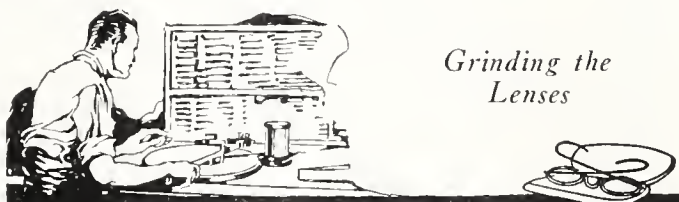
After bringing the question clearly before his readers by several illustrative stories about boys, told in his inimitable style, Tarkington concludes that man is not natively criminal, but that beginning with conception, each child reproduces all stages of evolution (from the ameba to what we are.) "That is to say," concludes the author, "a boy is not a criminal: he is the history of mankind; and, in that light, with what profound interest, with what solemn respect may we not view him! And thus, in that same light, when we look at a new baby, we may display a better intelligence of what we mean when we say, as we sometimes do, 'How, wise he looks!'

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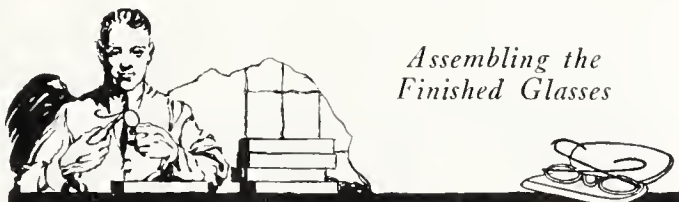
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CALIFORNIA AND WESTERN MEDICINE

VOL. XXIII

SEPTEMBER, 1925

No. 9

SPECIAL ARTICLE

DISCUSSION OF THE ETIOLOGY, SYMPTOMS AND PROGNOSIS OF ARTERIOSCLEROSIS

By JOHN PHILLIPS, M. D., *Cleveland Clinic, Cleveland, Ohio*

INTRODUCTORY NOTE

DOCTOR JOHN PHILLIPS of Cleveland, Ohio, was a guest of the California Medical Association at the 1925 session held in Yosemite National Park, and delivered this important message on certain phases of arteriosclerosis, at one of the general meetings.—EDITOR.

ARTERIOSCLEROSIS, with or without an associated hypertension, is a condition which occurs so frequently after middle life that it often occasions grave concern, not only to physicians, but also to the laity. In fact, after the age of 45 most of the tragedies of life are arterial in origin; a fact which has given rise to the oft-repeated statement that "A man is as old as his arteries." The writer proposes in this paper to discuss some of the general features of arteriosclerosis, particularly the symptoms, as he has observed them in a general and consulting practice.

Many individuals have well-marked arteriosclerosis for years, without experiencing any apparent impairment of health; and if it is uncomplicated by a high blood pressure or by impairment of renal function the condition is not incompatible with long life.

Arteriosclerosis most frequently affects the aorta and its branches; appearing with comparatively less frequency in the cerebral and the mesenteric vessels. It is important to remember that well-advanced arteriosclerosis may be present in certain vessels, such as the aorta or cerebral arteries, while the radial, brachial, and femoral arteries may give no evidence of sclerosis. The vessels of the extremities may be rigid and tortuous, while the intima of the aortic arch is smooth. Generally, however, the condition is widespread and affects all the arteries throughout the body. If an arterio-capillary fibrosis (Gull and Sutton type) is also present, the patient has arterial hypertension, and eventually sclerotic kidneys will develop. O'Hare and Walker have called attention to the fact that in cases of essential hypertension which apparently are free from arteriosclerosis of the arteries which are accessible for palpation, there may be a considerable degree of sclerosis of the small blood vessels. These authors conclude that, while their results definitely "establish the fact that the peripheral vessels play little or no part in hypertension," "they do show, however, a definite relationship between small vessel sclerosis, as indicated in the retinal arteries and high blood pressure." As they state, therefore, the condition of the retinal arteries should be considered a fair index to the condition of the small vessels throughout the body.

The pathological condition of the larger vessels produced by arteriosclerosis may be summarized as follows: There may be small, yellow, non-elevated areas of fatty degeneration beginning in the tunica intima. Gelatinous areas may be scattered over the intima, appearing particularly at the orifices of the arteries. These may fuse into larger plaques and at times may undergo calcification. There may be areas of atheromatous softening which project above the level of the intima, thus causing a roughening of the inner surface of the vessel. Coincident with these changes, the tunica media becomes atrophied and sometimes shows foci of necrosis and areas of calcification. The adventitia becomes thickened and indurated. As a result of these changes, the artery becomes elongated and tortuous and may show aneurysmal bulgings. In arteriosclerosis of the Gull and Sutton type, our knowledge of the changes in the capillaries has been greatly enriched by capillaroscopy.

ETIOLOGY

Many factors, of which we are still ignorant, undoubtedly play a part in the etiology of arteriosclerosis. Undoubtedly, heredity plays an important role. Many patients are born with defective vascular tubing. We have all seen families, in every member of which arteriosclerosis has developed at an early age. In considering the importance of heredity, however, it should be borne in mind that the occurrence of fatal cases of arteriosclerosis in several members of a family may have been due to the fact that they all lived in the same environment, were exposed to the same infections and had the same faulty habits of living and eating. Syphilis is the most important single factor in the etiology of localized arterio-

sclerosis. The majority of aneurysms of the aorta are due to syphilitic infection. Other infectious diseases, such as typhoid fever, as has been emphasized by Thayer, scarlet fever or influenza or the presence of localized foci of infection may cause arterial changes. Arteriosclerosis due to these causes is not always associated with hypertension. In my experience with out-patients in hospital practice I have been impressed with the frequent occurrence of arteriosclerosis in young men, who, at an early age, were compelled to do heavy manual labor, and who harbored foci of infection, such as infected tonsils or teeth. As a rule, the arterial changes in these patients were not associated with hypertension. Intoxicants, such as alcohol, lead, tobacco, or the toxins of gout tend to promote the development of arteriosclerosis. On the basis of my own experience, I do not believe that alcohol is as important an etiological factor as tobacco. Overeating, because of the resultant obesity, is responsible for many cases of arteriosclerosis, especially those associated with hypertension.

The role of diet in the etiology of hypertension and arteriosclerosis, aside from the production of obesity, is to a degree uncertain. In spite of recent studies by Mosenthal and others, in which they disclaim any marked relation of protein intake to the blood pressure, clinical experience in cases of hypertension in which the patient has been accustomed to a heavy protein diet over a prolonged period, and in which the symptoms have been somewhat ameliorated by the diminution of proteins, makes one still question the final value of a study of a series of hospitalized patients for a limited period of time.

A very real danger in some cases is that of under-feeding, with resultant anemia, and Mosenthal sounds the warning that, in order that the health and strength of the patient may be maintained, the amount of diet should be regulated according to the hemoglobin content of the blood, which should not fall below 80 per cent. It should be borne in mind also that, in regulating the diet, the prime essential is weight reduction and, therefore, an undue proportion of carbohydrates should not be prescribed in place of protein.

As for Allen's conclusions regarding the influence of sodium chloride on the production of hypertension, here again it would appear that observation of the effect of the elimination of salts in hospitalized patients is not a sufficient criterion. Allen's findings as to the value of the elimination of salts in the treatment of high blood pressure have not been confirmed by most other observers. As O'Hare and Walker state: "The only reason given for the almost universal restriction of salt in treating hypertension is based on the assumed decreased viscosity of the blood resulting therefrom. But this is mere assumption and not proved or accepted. Perhaps the close relation between chronic nephritis (with salt retention) and vascular hypertension is responsible for the salt reduction treatment. Perhaps it is pure empiricism or a clever method to prevent over-eating by rendering the food less palatable."

Certainly, general clinical experience does not appear to assign any important etiological role to the intake of salts; and the same may be said regarding the fluid intake. The essential etiological factor,

as far as diet is concerned, would appear to be the weight factor. Obesity is the real enemy rather than this or that food constituent.

In recent studies to discover which, if any, metabolites might have a pressor effect and, therefore, might be a factor in the production of hypertension, Major and Stephenson state that the guanidine compounds normally excreted by the urine have a marked and prolonged pressor effect. Moreover, they have found that patients with essential hypertension, as well as those with chronic nephritis associated with hypertension, have a decreased output of guanidine bases.

Whatever may be the cause of hypertension, however, whether it be renal disease, infection, the retention of certain metabolites, such as guanidine, overeating, or the stress and strain of modern life, it is eventually followed by arteriosclerosis. Undoubtedly, essential hypertension (hyperpiesia) leads to arteriosclerosis. Advanced arteriosclerosis with aneurysms may occur in small children. Recently, I saw a child 5 years of age with thickened tortuous arteries, with well-marked sclerotic changes in the retinal vessels, and with a systolic blood pressure of 220 and diastolic of 130. At autopsy the typical changes of advanced cardiovascular renal disease were found.

In addition to these types of arteriosclerosis, caused by infection, or by heredity, or by hypertension, the arteriosclerosis of old age should be mentioned—the type which Albutt calls "descrescent" or involutionary. This type, in which the arteries are thickened, tortuous and markedly calcified, is not necessarily associated with hypertension.

The role of the endocrines in the production of hypertension and arteriosclerosis has not been established, although that some relationship exists is suggested (1) by the undoubted etiological importance of obesity; (2) by the arterial hypertension which is associated with the menopause; (3) by the fact that hypertension associated with an adenoma of the thyroid gland is relieved by thyroidectomy; and (4) that worry, and prolonged emotional strain, which, as Cannon believes, are directly related to the function of the endocrine organs, are mentioned as causes of hypertension and arteriosclerosis.

SYMPTOMS

In considering the symptoms of arteriosclerosis, although, as a rule it is a generalized condition affecting all the vessels of the body, yet, as stated above, the pathological changes may be much more advanced in certain areas of the body than in others. The symptoms of arteriosclerosis are due to the following causes: (1) A reduction in the blood supply to an organ, as the result of which the function of the organ is impaired and fibrous tissue gradually replaces the normal parenchyma; this process is well illustrated by the fibrous myocarditis, which results from coronary sclerosis. (2) Necrosis, which occurs when the sclerosis of the vessels has advanced to the point of obliteration. This is most marked when the affected vessels are the so-called "terminal" or "end-arteries" as, for example, in the heart or brain. In the brain this necrosis produces areas of softening; in the extremities gangrene may result. (3) Angiospasm, which is more apt to occur in sclerosed

than in normal vessels. Angiospasm of the extremities gives rise to pain and ischaemia, such as is seen in Raynaud's disease. Spasm or intermittent closing of the cerebral vessels causes transient attacks of aphasia, monoplegia, or hemiplegia, or, at times, convulsions—the so-called vascular crises described by Pal of Vienna.

It is obvious from the above description that the symptoms of arteriosclerosis can be best considered in their relation to the various areas which may be involved. In some patients in whom the condition is generalized, the only symptoms may be a gradually increasing weakness, loss of mental acuity, failing appetite, increasing pallor, and loss of weight.

The symptoms of *cerebral arteriosclerosis* depend on the fact that the blood supply of the brain is diminished, with resultant impairment of the nutrition of the brain. It requires, however, a considerable diminution of the blood supply to produce symptoms, for the brain is supplied with a much greater quantity of blood than is actually necessary for its normal function. The first symptoms produced by a decreased blood supply to the brain are those which are characteristic of neurasthenia, i. e.: undue fatigue, mental and physical, after a moderate day's work; diminished capacity for mental concentration; a marked inclination to worry over trifling business difficulties or about the health. The patient is often irritable and forgetful, and at this stage may become much depressed, believing that he is no longer of any use in the world; he may even show suicidal tendencies. The lack of memory is manifested by difficulty in the choice of words and particularly by forgetfulness of recent events, in contrast to memory of the experiences of childhood which is retained much longer. The loss of memory may gradually increase until the patient becomes unable to take part in any conversation beyond saying "yes" or "no." Sometimes the patient, who may previously have been very fastidious about his dress, becomes very neglectful of his personal appearance. These general symptoms indicate a sclerosis of the anterior cerebral artery.

In cases in which cerebral arteriosclerosis is associated with hypertension, headache, vertigo, tinnitus aurium, insomnia and at times vomiting, may be striking symptoms. The development of intense headache in the later years of life is due to sclerosis of the cerebral vessels more frequently than to any other cause. The presence of a well-marked arcus senilis and the discovery of characteristic changes in the retinal vessels by ophthalmoscopic examination may reveal the true cause of the headache. Vertigo, either severe or manifested simply by a sense of insecurity of equilibrium, is a common symptom. Some of these patients complain of vertigo when they are in certain positions, particularly when lying flat on the back. In cases of hypertension associated with arteriosclerosis, noises in the ears (tinnitus aurium) are nearly always present at some stage of the disease.

In cases in which the arteriosclerosis is associated with high blood pressure, there may occur attacks of transient monoplegia, hemiplegia or aphasia due to intermittent claudication or closing of the cerebral vessels, these attacks sometimes being associated with migraine. These "larval apoplexies," as Sir

Clifford Albutt has called them, may be accompanied by convulsions, and they are often followed within a few months by cerebral hemorrhage.

In many patients there is evidence of this hypertonic contraction of other vessels, such as the angina which indicates spasm of the coronary arteries, abdominal pain indicating the involvement of the mesenteric arteries, and cramps when the vessels of the extremities are concerned.

The differential diagnosis in these cases is not difficult. A sudden hemiplegia, as a rule, is caused by hemorrhage, by embolism, by thrombosis, or by intermittent closing of the cerebral arteries. The first three of these conditions cause destruction of brain tissue with resultant loss of function. The last causes a temporary impairment of function in the part of the brain affected—a halting of brain function as the result of the temporary closing of the channels which convey the blood, a condition comparable to intermittent claudication. The transitory character of the hemiplegia, therefore, is the striking feature in cases of vascular spasm.

The *middle cerebral artery* is the vessel most frequently affected. Lesions of this vessel will cause contralateral hemiplegia and hemianesthesia and—especially when the artery on the left side is affected—both motor and sensory aphasia.

Lesions of the third division of the *left middle cerebral artery* will cause alexia with hemianopsia or hemiachromatopsia dextra. Thrombosis of the *posterior inferior cerebellar artery* will cause unilateral paralysis of the larynx and palate, dysphagia, contralateral hemianesthesia and homolateral trigeminal anesthesia. Obstruction of the *basilar artery*, or aneurysm of this vessel or its branches, may give rise to a train of symptoms and physical signs which are usually grouped as characteristic of bulbar paralysis. Thus, there may be occipital pain, pupillary rigidity with myosis, disturbances of articulation, dysphagia, dyspnoea, tachycardia, arrhythmia, drooling, explosive laughter or crying; paralysis of the fifth, seventh, eighth, ninth, tenth, eleventh, and twelfth cranial nerves; and sometimes unilateral convulsions, hemianesthesia and hemiataxia with hemiplegia alternans. Sclerosis of the *internal auditory artery* affects the cochlear and vestibular apparatus, causing labyrinthine deafness, with vertigo and vomiting. If the posterior cerebral artery is affected the patient may complain of vertigo, temporary hemianopsia, scintillating scotomata with headaches and temporary amblyopia. Sclerotic changes in the *ophthalmic artery* cause arcus senilis in the cornea, visible changes in the retinal vessels in the nature of tortuosities, indentations, thickenings, obliterations, minute hemorrhages and yellowish spots due to degeneration of the lamina vitrea of the choroid; while among the other occasional findings are thrombosis of the central artery of the retina, glaucoma and intractable senile conjunctivitis. Arteriosclerosis of the *cerebellar vessels* may lead to cerebellar ataxia, with asthenia, atonia, and astasia.

True *aneurysms of the cerebral arteries* are quite uncommon, as is shown by the fact that among 501 aneurysms Crisp found aneurysm of the intracranial arteries in only seven cases. Beadles collected 555 cases of cerebral aneurysms and classified them in four groups: (1) Those in which the first indica-

tion of a cerebral lesion had been an apoplectic attack due to rupture of the aneurysmal sac. (2) Those in which fatal apoplexy had been preceded by symptoms suggesting a cerebral tumor or other cerebral lesion. (3) Those in which there had been indications of a cerebral tumor only. (4) Those in which there had been no symptoms whatever during life, the aneurysm having been discovered at autopsy. In over one-half the cases the first symptoms noticed had been those characteristic of apoplexy.

Some cases of aneurysm of the cerebral arteries have presented such symptoms as headache, dizziness, loss of memory, or even insanity; in fact, in many of the reported cases the aneurysm was found at autopsy in patients who had died in hospitals for the insane. When the aneurysm affects the basilar artery, focal symptoms due to involvement of the cranial nerves may be present; but when other arteries are affected, the focal symptoms are not definite enough to facilitate diagnosis. At times the general symptoms of brain tumor—headache, vomiting, and choked disk—are present, while in rare cases a murmur has been heard on auscultation of the skull. Very few aneurysms larger than a marble have been described, and one the size of a hen's egg would be considered very large.

Involvement of branches of the main trunks mentioned above may give rise to similar but less pronounced symptoms and physical signs. Sclerosis of the *spinal arteries* may produce motor and sensory disturbances which are paraplegic in character, with loss of sphincteric control and diminished reflexes.

Arteriosclerosis of the *ascending aorta and the aortic arch* as a rule is easily recognizable clinically by the following characteristic signs: (1) There may be pulsation in the suprasternal notch and in the first and second interspaces to the left and right of the sternum, together with a high position of the subclavian arteries. Occasionally a diastolic impact may be felt. (2) The retromanubrial and paramanubrial dulness is increased. (3) The second sound of the heart in the aortic area has a tympanitic or bell-like quality. (4) On fluoroscopic examination the mediastinum is seen to be widened and the heart to lie transversely. (5) There may be signs of pressure on the trachea such as inspiratory stridor and of pressure on the veins within the thorax such as dilatation of the superficial vessels of the upper part of the chest. (6) In some cases there are signs of insufficiency of the aortic valve.

In making the differential diagnosis it is important to bear in mind that a substernal goiter may cause widening of the mediastinum, and pressure on the trachea and the vessels, with resultant inspiratory stridor and dilation of the veins. In acute aortitis the patient may complain of intense substernal pain so that acute pericarditis and acute mediastinitis also must be considered in the differential diagnosis.

In patients with *atherosclerosis of the aorta* pain simulating an angina may occur, this being due in some cases to an infringement on the lumen of the coronary arteries at their point of origin from the aorta. If the dilatation of the aorta reaches a sufficient size to be termed an aneurysm, then, in addition to the previously mentioned signs, there will be

a tracheal tug; signs of pressure on the left recurrent laryngeal nerve, with resultant paralysis of the vocal cord; of pressure on the esophagus with dysphagia; of pressure on the trachea with hoarseness, paroxysmal cough and inspiratory stridor; of pressure on the spine, with severe intercostal neuralgia; of pressure on the cardiac sympathetic nerves, with inequality of pupils; of pressure on the superior vena cava, with occlusion of the vessels arising from the arch.

Aneurysm of the *ascending arch* may be marked by a large pulsating tumor to the right of the sternum. If there is moderate dilatation of the *descending portion of the aorta* the only symptom may be a persistent intercostal neuralgia so that the condition can only be detected by a roentgenological examination. If there is any aneurysm of this portion of the aorta, there may be extreme pain in the back from erosion of the vertebrae, pain in the sides and over the sternum from pressure on the intercostal nerves, dysphagia and pulsation in the back on the left side of the median line and fluoroscopic examination may disclose a circumscribed pulsating expansile shadow.

Arteriosclerosis of the *coronary arteries*, with the resultant gradual impairment of the blood supply to the heart muscle, may lead to a fibrous myocarditis with subsequent decompensation. The most striking symptoms of this condition are attacks of angina and dyspnoea, the latter often being described as cardiac asthma. In these patients with so-called cardiac asthma, the dyspnoea, which is paroxysmal in type, is often accompanied by wheezing or by a true pulmonary edema, usually occurs at night, though it may follow exertion or emotional excitement; the pulse is rapid, small and soft, and the area of cardiac dulness is often widened; and various forms of cardiac arrhythmias may be present. In extreme forms of myelomalacia, cardiac aneurysm or rupture of the heart may occur.

In these cases sudden death from coronary thrombosis may occur. If a smaller branch of one of the coronary arteries is occluded the patient may survive, the striking features in such a case being: (1) Very severe precordial pain, which is transmitted to the arms, to the neck or to the epigastrium; the pain is persistent and very difficult to relieve by morphine; (2) a grayish, ashen color of the face with cold perspiration, suggesting severe shock; (3) a rapid fall of both the systolic and the diastolic blood pressure; (4) mild delirium accompanied by elevation of temperature of one or two degrees; (5) an increase in the size of the heart with at times the development of a faint systolic murmur at the apex and a pericardial friction rub in a limited area, usually to the left of the sternum in the third interspace; and (6) a gradual enlargement of the liver as the result of congestion.

Sclerosis of the *pulmonary artery*, a condition sometimes called Ayerza's disease, sometimes accompanies emphysema and mitral valve lesions. The most striking symptoms are dyspnoea, cyanosis, and repeated hemoptysis. On examination, the right ventricle of the heart is found to be hypertrophied, and the second sound of the heart in the pulmonic area is accentuated.

In sclerosis of the *abdominal aorta*, the patient

often complains of pain and a rigid, tortuous vessel can be palpated. If an aneurysm is present it can be felt as a pulsating expansile tumor, above the umbilicus, the pulsation persisting when the patient is in the knee-elbow position. Sometimes a loud bruit can be heard over it. In making the diagnosis it is important to differentiate the throbbing aorta of anemic neurasthenic individuals.

Arteriosclerosis may affect the branches of the abdominal aorta—the coeliac artery, the mesenteric arteries and their intestinal branches, and the renal arteries. The symptoms and signs of arteriosclerosis of the *coeliac artery* and its branches include epigastric pain, vomiting, haematemesis, melena and if an aneurysm is present, an abnormal pulsating mass will be found in the epigastrium. In cases of aneurysm of the *hepatic artery* an incorrect diagnosis as of gall-stones or of duodenal ulcer is usually made. Thrombosis of the *mesenteric artery* causes acute abdominal pain, bloody stools, vomiting and signs of intestinal obstruction. If the *renal arteries* are involved there may be polyuria, albuminuria with casts and sometimes red cells in the urine. Other more advanced cases will present all the symptoms and signs of a contracted kidney, with low specific gravity of the urine, nocturia, albumin and casts, arterial hypertension, and hypertrophied heart.

The signs of arteriosclerosis of the *vessels of the extremities* include thickened, tortuous, often beaded arteries, and in the lower extremities the disappearance of pulsation in the dorsalis pedis and posterior tibial vessels. As a result of the poor circulation, cramps in the extremities are frequent, especially upon walking. Pains and various forms of paraesthesias are often complained of. At times there is marked acrocyanosis or evidence of erythromelalgia. In the more advanced cases as in diabetes, gangrene results.

In cases of generalized arteriosclerosis with arterio-capillary fibrosis (Gull and Sutton type) arterial hypertension with subsequent arteriolar nephritis is present. In these cases the heart is hypertrophied, and in the later stages impairment of renal function is evidenced by the fixed specific gravity of the urine, diminished phthalein output, and high blood urea.

PROGNOSIS

The prognosis of arteriosclerosis varies according to whether or not it is associated with high blood pressure. Patients with advanced arteriosclerosis may live to a good old age if the condition is not associated with arterial hypertension. The most frequent causes of death are (1) cerebral hemorrhage, or occasionally cerebral thrombosis; (2) myocarditis with broken compensation; (3) angina with or without coronary thrombosis; (4) uraemia; (5) an intercurrent disease such as pneumonia; (6) some associated condition, such as rupture of an aneurysm, thrombosis of the mesenteric vessels, general sepsis due to gangrene of the extremities, etc.

In considering the immediate prognosis in cases of arterial hypertension associated with arteriosclerosis, two classes of cases might be considered: (1) Those without demonstrable impairment of renal function; and (2) those with impairment of renal

function. In the first group the systolic pressure varies from 180 to 200 and the diastolic from 75 to 100. The heart is hypertrophied and the vessels tortuous. These patients may live for twenty to thirty years after the condition is first discovered, but eventually they will show renal impairment. In these cases death may be due to cerebral hemorrhage, angina or myocardial failure. As a rule the first objective sign of cardiac defeat is a marked lowering of the systolic blood pressure. In other words, a lowering of the systolic pressure with resultant lowering of the pulse pressure is a sign of weakness of the cardiac pump. Even after the signs of myocardial failure have manifested themselves, rest and the judicious use of digitalis may improve the patient's condition so that he may live for years, provided he recognizes his limitations and adapts his physical activities accordingly.

In the second group in which renal impairment is the result of an arteriolar nephritis, the outlook as to the duration of life is not good. These patients have a high systolic pressure varying from 180 to 220 or even higher, while the diastolic varies from 110 to 160. In a recent study of 484 cases of arterial hypertension, sixty-four cases had a diastolic blood pressure of 130 or more, and of these, thirty-six cases, or 53.4 per cent, were dead within three years. Of 115 patients with a diastolic blood pressure of 120 or more, 50 or 43.5 per cent were dead within three years. Patients with a phthalein output of less than 20 per cent for two hours, or whose blood urea taken while fasting is 50 mgms. per 100 cc. or more, seldom live for more than two years. The outlook is especially grave in patients in whom the blood creatinin is above 5 mgms. per 100 cc. Retinal hemorrhages and albuminuric retinitis also are very unfavorable prognostic indications.

Of course there are exceptional cases in which the grave prognosis is not fulfilled, but these exceptions only serve to emphasize the general rule.

Cleveland Clinic.

Sugar Content of Blood in Runners Following a Marathon Race—Marathon runners who competed in the race of 1924 and showed blood sugar levels below normal were placed on a moderately high carbohydrate diet during this year's training season. In addition, they were advised to take a large amount of carbohydrate twenty-four hours before the race. Another group of runners who developed symptoms of weakness and hunger in the 1924 race were studied during this year's training season with the purpose of determining, if possible, at what stage in a twenty-five-mile run the symptoms of hunger and weakness were likely to develop. It was found that this was apt to occur between the fourteenth and eighteenth miles. Therefore, in addition to being advised to eat moderately large amounts of carbohydrate before the race, these athletes were supplied with glucose candies to be eaten from time to time while running. In addition, they were supplied with tea containing a large amount of sugar at stations along the course. The blood studies made by Burgess Gordon, L. A. Kohn, S. A. Levine, Marcel Matton, W. de M. Sriver, and W. B. Whiting, Boston (Journal A. M. A.), showed normal sugar levels in all runners, in contrast to the low figures obtained last year. There was also a striking improvement in their general physical condition. In a number of instances the running time was faster than in the year previous and the participants finished in better position. It seems, therefore, that the picture of exhaustion, weakness, shock, and other symptoms of hypoglycemia following prolonged effort may be prevented by the adequate and timely ingestion of carbohydrate.

IS REMOVAL OF THE GALL-BLADDER OR DRAINAGE THE OPERATION OF CHOICE? WHY?

SURGICAL "CONVERSAZIONI" BY INVITED AUTHORS

INTRODUCTION BY THE EDITOR

Every medical editor receives many letters from his readers, complaining of the diffuseness and prolixity of authors. It is said that many medical essayists generalize too much and too frequently "go a long way around" to avoid making a definite statement. Most of our readers who take the trouble to express themselves to the editor want to see more short, clearly and unequivocally expressed, messages about practical problems of the practical "bedside doctor." Many of them tell us that they are as much interested in a clear statement of the best practice in a given situation as they are in a statement of some new discovery—more, in fact, than in a new discovery not yet in shape to be utilized by the practicing doctor. All doctors take pride in the slow, tedious work of our research colleagues in efforts to add new knowledge to the available store. They like to see this work published in appropriate places, and wherever it approaches the plane of practical utility they like to see it in our magazine.

We wonder if their position is sound? In any event, after repeated conferences with editorial councilors, we have hit upon the plan of trying out a series of medical and surgical "conversazioni," the subjects to be practical and sharply limited, and the discussions to be limited to a few hundred words each. The only way the editor may judge the usefulness of this or any other innovation is by the reaction *we receive* from our readers. So you will help in promoting the usefulness of CALIFORNIA AND WESTERN MEDICINE if you will write and give us your frank reaction as to whether these "Conversazioni" are useful enough to be continued. Now, to our subject: IS REMOVAL OF THE GALL-BLADDER OR DRAINAGE THE OPERATION OF CHOICE? WHY?

ANDREW STEWART LOBINGIER (Merritt Building, Los Angeles) — Removal of the gall-bladder *and* drainage best meet the indications for an infected liver and pancreas. More harm has come of cholecystectomies done where there was no pathological justification than in any other field of abdominal surgery. Only surgeons who have devoted years of conscientious study to these infections are competent to deal with the surgery of the gall-bladder and ducts. Physicians (as distinguished from surgeons) have been abundantly justified in their criticism of the ill-considered work and unhappy results so often following cholecystectomies without drainage, and in cases where adequate pathology did not exist. There is no group of infections anywhere in the body where fine judgment, founded on intelligent understanding of the pathology and pathologic physiology, is more imperative.

There is no field where the floundering operator of scant pathological training and experience has more melancholy failures charged against his stupidity. It seems incredible, in the light of the work of Graham, Peterman and Mann, that we should still see the literature burdened with verbose screeds on cholecystostomy versus cholecystectomy. Surgeons who have worked and written authoritatively in this field know what to do in the right hypochondrium from the pathology which they find there. They meet the problem competently when they are confronted with it.

In infective hepatitis and cholangitis we have recommended the removal of the gall-bladder down to the junction with the cystic duct, fixing in a firm walled drain, to be kept there for six or eight weeks. Partial cholecystectomy, with protracted drainage of the liver and ducts, we believe, will be the surgery of the future for hepatitis, pancreatitis, cholangitis, and cholecystitis. The technique of this drainage has been described elsewhere ("The Principle and Technique of Drainage in the Surgery of the Gall-Bladder and the Bile Tract," California State Journal of Medicine, February, 1924).

PHILIP K. GILMAN (Stanford Medical School, San Francisco)—Given a proper understanding of the pathology of the biliary apparatus, there is no need for discussion of the above subject. One should no more drain and leave an infected gall-bladder than an infected appendix.

If the infection is confined to the gall-bladder only, cholecystectomy suffices. If the infection involves not only the gall-bladder but ducts as well, drainage must be secured in addition to removing the removable infected organ—the gall-bladder.

This drainage is best secured through either the cystic duct or the duct plus the adjoining portion of the gall-bladder, and should be maintained long enough to insure its object. If this drainage be not carried out, it is partially secured sooner or later by failure of the sphincter at the duodenal end of the common duct. The patient, however, during this period continues to suffer from the infection in the ducts. Of even more importance is the question of drainage, with pancreatitis, added to the cholecystitis and hepatitis.

Cholecystectomy plus drainage is the operation for infection of the gall-bladder and ducts. Experience is needed and familiarity with the appearance of the organs in the right upper quadrant, both in health and disease. Without these, exploration of the upper abdomen should not be attempted. Ill-advised surgery, as well as insufficient surgery, result here in grief and criticism.

H. H. SEARLES (University of California Medical School, San Francisco) — The question offered for this discussion does not include the diagnosis of the disease for which the patient is to be treated. Therefore, we have to consider all of the conditions where such measures should be employed. Varying types of pathology in the gall-bladder and biliary system, or different stages of the same type, call for different plans of surgical treatment. Both cholecystectomy and cholecystostomy are accepted surgical procedures. There are positive indications for the use of either the one or the other.

In the ordinary case of chronic cholecystitis, with or without stone formation, simple cholecystectomy offers the most rapid and complete relief from symptoms, and is accompanied by only slight risk. In cases of long standing, with advanced liver and pancreatic involvement drainage of the common duct must also be done.

On the other hand, operation should be limited to a palliative cholecystostomy in those cases of acute progressive cholecystitis which show a rising pulse, temperature, and leucocyte count, in spite of attempts to check the process by rest, hot stupes,

etc. In such emergencies, exhibiting a true picture of the "acute abdomen," cholecystectomy has been found by costly experience, even in the hands of the most skilful, to result in a very high mortality. We must, therefore, resort here to drainage alone. When, as a result of this procedure, inflammation has subsided, secondary cholecystectomy is generally required for a cure.

Cullen, analyzing a fairly large series of cases of gall-bladder disease of all types treated by cholecystostomy, has found, in a careful follow-up, that a very large percentage of these patients were completely relieved of their symptoms. He feels that with such results the safer, simpler operation of cholecystectomy is to be preferred in the hands of the average surgeon. Yet we find, in most hospitals today, cholecystectomy being employed in the treatment of the ordinary case of chronic cholecystitis, while cholecystostomy assumes the lesser role of a palliative procedure for emergency cases.

GEORGE THOMASON, M. D. (Hollingsworth Building, Los Angeles) — The correct answer to the above question is both affirmative and negative, depending entirely upon the circumstances under which the choice has to be made. The wisest decision in many cases taxes the judgment of the operator, and necessitates the summoning of every detail of his personal observation, as well as the facts gleaned from the experience of others, for the last word has not yet been said in reference to gall-bladder surgery. The history of radical gall-bladder surgery does not yet extend back far enough to make it possible to lay down dogmatic rules which shall govern in all cases of biliary disease. Conflicting opinions emanating from various centers confirm this statement. However, it is evident, as further data accumulates on this subject, there is more and more earnest plea for extirpation of the gall-bladder in the vast majority of cases rather than for drainage.

Careful study of the literature, back over a period of some years, reveals the fact that most surgeons of large experience in gall-bladder surgery present quite uniform records of removing 90 per cent of involved gall-bladders, and draining only about 10 per cent. It seems probable that in future there will be some slight increase in the percentage of drainage cases as precision and classification are a little further developed.

Personally, I believe that in any patient with a history at any time of common duct involvement there will be promise of better permanent results from drainage. Once a common duct has been the site of obstruction or inflammatory change it is a potential source of danger, and a gall-bladder remaining available for attachment to the stomach or duodenum to facilitate the biliary flow from the liver to the intestine may prove of inestimable value, often to the point of being life-saving. No doubt, in the future, recourse to this method of supplying biliary drainage will be more frequently utilized than in the past.

In acute cholecystitis and empyema of the gall-bladder the dangers of cholecystectomy are altogether too great, and drainage should be the opera-

tion of choice, with probable necessity for cholecystectomy at a varying period later.

Earlier recognition of gall-bladder involvement, either with or without stones, with removal of the gall-bladder before the stage of complication ensues, will result in permanent cure and obviate whatever necessity there might otherwise be for drainage.

E. F. HOOVER (861 Sixth Street, San Diego) — Hard-and-fast rules can no more be laid down here than elsewhere in surgery. Cases must be individualized and carefully studied before opening the abdomen, and again when the laparotomy is done; a quick, careful survey will then determine the proper procedure for the individual case.

Cholecystectomy is probably the operation of choice, in the chronic case, when the gall-bladder is easily accessible and when it is apparently so diseased as to preclude its return to a normal state following drainage.

Certain acutely ill patients who present a profound toxic state, accompanied by a rising differential and total leucocyte count, rising temperature and pulse, and which at operation will present a gall-bladder in the pre-gangrenous state, must only be drained.

In other patients it is not always technically or mechanically possible to do a cholecystectomy, without adding too great a burden to the patient's recuperative power. Nor has the last word been said as to the function of the gall-bladder, or as to the consequences of cholecystectomy.

C. H. Mayo, in a series of 242 cholecystotomies, reports 53 per cent cured. This is strong evidence that the operation has merit for the selected patient. He reports 219 cholecystectomies, with 71 per cent cured. Eighteen per cent better results, but not a perfect score.

It is well to remember that the greater amount of abdominal surgery, of necessity, is not done by the limited specialist, who too many times, in his remarks, is inclined to be unmindful of his own humble beginnings and his ever-present failures.

FRED R. FAIRCHILD, M. D. (Woodland Clinic, Woodland, California) — A general answer to the above questions cannot be given. To answer intelligently, many assumptions must be made and numerous correlated conditions considered.

If the question proposes to determine the relative operative risk—assuming one or the other type of operation for all classes of gall-bladder disease—the answer would be that drainage is the safer procedure.

If the question proposes to determine the relative efficacy of the two procedures—assuming one or the other type of operation for all classes of gall-bladder disease—the answer would be that removal is the method of choice.

But no experienced surgeon operates under the above limitations. The problem is not general. It is specific. Each case must be treated according to its own determining factors. The operator of experience and wisdom does not know until the abdomen is opened whether he will drain or remove the gall-bladder or remove the gall-bladder and drain the biliary channels.

From personal observation I feel that drainage

rarely cures. It gives excellent temporary relief. Unless there are factors—hepatitis, dehydration, lowered kidney function, jaundice, very acute infection, etc.—adding material hazard to cholecystectomy—the gall-bladder had better be removed. If there is evidence of chronic infection—hepatitis, pancreatitis, etc.—the cystic duct should also be drained.

If the correlated conditions add material hazard to cholecystectomy, the gall-bladder should be drained and at the time of election removed. I am not convinced that a positively diseased gall-bladder ever returns to normal. If it does not, its menace as a constant source of focal infection will probably be greater than the immediate hazard of cholecystectomy.

In cases of very acute gall-bladder disease with unsatisfactory general condition, drainage under local anesthesia, with removal at a subsequent time, should give the best mortality records and the most satisfactory ultimate results.

CLOSING NOTE—Now that you have it before you, what is your reaction? From the standpoint of an editor who reads and attempts to evaluate over a million words of copy a year, it is excellent.

Certainly, it is definite enough, brief enough, and “snappy” enough to please a medical Brisbane.

Do you want more of the same type of “Conversations,” or don’t you? Let the editor know your wishes, and while you are about it, in case you approve, suggest other subjects and state whether or not you would be willing to take part.—Editor.

RECENT ADVANCES IN CANCER RESEARCH

By LUDWIG A. EMGE, M. D., *San Francisco*

(From the Department of Obstetrics and Gynecology, Stanford School of Medicine, San Francisco)

Most of the recent findings point toward a cancer-controlling substance of constitutional origin which experimentally can be increased or decreased at will.

Cancer research has opened up new aspects of cancer treatment which may take on concrete forms as research progresses and which ultimately may materialize into more successful methods of treatment.

DISCUSSION by Edward N. Ewer, *Oakland*; Alson R. Kilgore, *San Francisco*; Herbert W. Wall, *Los Angeles*.

IN bringing this most important subject before the members of this section it is evident that in the short time allotted it is impossible to present a detailed review of the literature on cancer research. Such a review, at best, would involve the discussion of numerous questions which at this stage of our knowledge must be considered as being of academic interest only. I have, therefore, confined myself to the very recent findings which have a definite practical bearing upon the cancer question and which, I hope, may serve you for a better understanding of the intricate mechanism that underlies cancer production and its treatment. To give a clearer picture of the various phases of cancer research, I have attempted to group the findings in such a way that their relation to each other may be clearly understood.

Heredity, unquestionably, plays one of the most important parts in the production of cancer, although this has not definitely been established for man. Maude Slye’s work on mouse cancer proves that cancer tendencies are transmitted just as any

other characteristics are passed on from generation to generation. Her work shows that selective breeding can increase or decrease cancer tendencies to a degree where cancer resistance is either completely wiped out or raised to complete protection. The basic factor must be sought in a substance transmitted in the germplasm. This factor is variable in its degree and duration of existence. It seems to be closely akin to the factors which govern the aging of tissues, but does not necessarily depend upon the age of the individual. It is the aging of tissues which brings certain functions of the body to a standstill and with this event the resistance to cancer decreases or disappears. Therefore, any factors which will favor aging of tissues must also favor cancer production. Among these factors, wasting diseases, such as syphilis or severe typhoid for instance, play a definite role. Also frequent and rapid involutions of an organ productive of cicatrix formation, such as occurs in the uterus and the breasts in rapidly recurring pregnancies exerts a definite influence (Stajano). The experimental proof for this assumption may be found in Carrel’s recent work on antagonistic growth principles of serum and their relation to old age. In these tissue culture experiments with fibroblasts, two factors stand out clearly, one is that serum loses its proliferative activity on homologous fibroblasts as age advances and the other is that this quality is then replaced by a growth inhibiting action on the same tissue. Since fibroblasts form one of the most important barriers against the advance of despecialized cells which ultimately develop into a malignant structure, we may deduct that any factor which tends to weaken the fibroblastic action must also weaken our cancer defense. With this fundamental finding before us we can no longer consider cancer as a local disease, but must assume that we have to deal with a constitutional disturbance. Bard, who expostulates that the malformation of the cell does not accept the influence of vital induction and, therefore, proliferates without limits, merely expresses the same thought in a reversed order. I shall cite further proof during the progress of this discussion that it is not so much the failure of the despecialized cell to accept the moderating influence of vital fluids as it is the disappearance of some highly specialized hormone in these fluids which allows the aberrant cell to proliferate.

Until very recently the interest of workers in cancer research was mainly concentrated on factors governing the mechanism of local cancer formation. We may accept it as an established fact that acute trauma very rarely leads to malignant growth tendencies, otherwise cancer should be rampant among wounded soldiers. The process which incites cells to undergo abnormal growth tendencies is slow and can best be classed under the general term of chronic irritation. Therefore, the many proofs that have been advanced that this or the other substance is the cause for local cancer “possibly all represent partial and different aspects of the truth” (Hegel). That not every species is susceptible to the same irritants has been exhaustively proven by the many failures in producing skin cancers in animals by the continual application of tar or its derivatives. Some species and sometimes only certain groups within

this species will react to a given irritant while others are completely immune. This was most brilliantly demonstrated by Fibiger in the production of gastric cancer by feeding the nematode *spiroptera neoplastica* to rats. While one type of rats would, in the majority, develop gastric cancer, other types only responded occasionally, while still others were entirely immune. Clinically, we observe the same phenomenon in the cancer of chimney-sweeps, laborers in the tar and paraffin industry, in the victims of bilharziasis, in the natives of Kashmir suffering from epithelioma of the abdomen and thighs and in x-ray workers with their epitheliomata of the hands. By no means all the individuals exposed to carcinogenic agents develop cancer. Therefore, the carcinogenic agent seems to be only the mediate and not the proximal factor of this disease (Leitch). Leaving out all discussions of what produces actually the reversion of the irritated cell to an undifferentiated cell of the embryonic type as being at present of academic interest only, we may accept that carcinogenic influences are exerted by any long continued irritation to which certain individuals have insufficient constitutional resistance. We also must accept that experimentally at least an irritant may produce either carcinoma or sarcoma, as has been shown in mice. Therefore, the specificity of an irritant in relation to a definite type of malignancy must be questioned.

A further factor in cancer production aside from a weakening of the constitutional resistance is the lowering of local resistance. I have alluded to this above. Wherever organs undergo periodical fluctuations in size, resulting in premature aging of the connective tissue leading to contractions of tissue fibers, or wherever cicatrix results from acute trauma, the circulation is prevented from coming into normal contact with highly specialized tissue. When this tissue is cut off from the vital fluids, its cells lose their differentiated character and revert to a more embryonal type (Lumière). Such cells then acquire the exceptional faculty for growth common to embryonal tissue. They then begin to proliferate and may produce malignant growth, provided the general constitutional factor of protection is lacking. Proof for the protective influence of connective tissue has been offered by Bierich, who noticed the multiplication of connective tissue fibers after continued application of tar before epithelial proliferation took place. On continued irritation the connective tissue reaction came to a standstill and epithelial proliferation occurred and overcame the connective tissue barrier. This investigator succeeded in stimulating connective tissue growth by one mild exposure to roentgen rays or by repeated injections of arsenic, by which methods he prevented tar cancer formation in animals.

This protective phenomenon is still more strikingly demonstrated by Murphy and Sturm in their experimental transplantation of mouse tumor into the brains of rats, guinea pigs and pigeons. Here transplants took well as long as they were entirely in the brain tissue. Once they came in contact with the ventricle or larger blood vessels a cellular reaction took place and destruction of the tumor occurred. Similarly, the transplanted tumor tissue was destroyed when a bit of autologous spleen tis-

sue was transplanted simultaneously with the tumor tissue. Here again the defensive action of connective tissue is demonstrated.

In attempting to shed further light on the protecting action of constitutional cancer resistance, Pearce and Brown investigated the subject of experimental metastasis. Although their findings have not given us further definite data about constitutional cancer resistance, they confirm that the peculiarities of metastatic involvement are largely dependent upon constitutional differences of the host which govern the nature and distribution of the lesions and the organs affected.

That cancer production is of infectious origin has again recently been claimed by Robertson, who reports the isolation of organisms of the diphtheroid type from human cancer material, with which, in a few instances, he was able to reproduce cancer in mice. Such findings, while of the utmost interest, demand further proof. Just at present they will have to be classed with those of cancer production by irritation, into which class also falls the gastric cancer produced by Fibiger, cited elsewhere. Neither is the infectious theory of cancer production strengthened by artificial tumor production in plants through inoculation with the bacterium *tumifaciens* as reported by Blumenthal and Hirschfeld. While it is true that tumor formation in plants can be produced in this way, it is also true that the resulting growth is not of a malignant type since it lacks both the power of penetration and of metastatic transplantation.

In turning to another phase of constitutional cancer resistance, I will briefly review the observations made recently on immunity in relation to cancer. Spontaneous cures of cancer have again been reported by Trinkler. Experimentally, this phase of cancer research has been investigated recently by Woglom, who could not find sufficient proof that either the stroma, or the parenchyma of the tumor, or the vascular changes occurring with the retrogression of the tumor produce the responsible factor in cancer retrogression. More positive findings were reported by Theilhaber, who concludes that since cancer commonly develops in anaemic tissue, it is necessary to raise immunity by stimulation of lymphoid and red blood cell activities. He, therefore, has employed sun and air baths, diathermy and venesection, in conjunction with surgery and radiotherapy, in order to raise immunity by increasing the activities of the circulatory system. His thirty-two "cures" of his forty-four operative cases which he observed during a period of thirteen years, demand that his assumption deserves attention. Of interest is also the report of Russ, who attempts to raise immunity by the injection of radiated cancer tissue previously removed from the host. His report is optimistic, but, like so many others, awaits the test of time.

Nakahara, who investigated the relation of lymphoid activities to cancer immunity, offers proof that such activities are dependent upon certain stimulating or depressing influences, somewhat akin to those governing sensitiveness to foreign proteins. Agents of a depressing character have a similar influence on transplanted cancer. X-ray exerts such a depressing action when a certain dosage is reached.

Applying his conclusions to clinical medicine, we cannot help but wonder if this principle does not explain the dismal failures of repeated deep radiation with massive doses of roentgen rays, where a patient, who apparently had improved marvelously after one exposure, failed rapidly after further treatments.

Numerous workers have attacked the cancer problem by studying the associated biology. The instances are by far too numerous to be reviewed here, especially so since they fail to give us essentially new information which might be of value to the clinician. The vast majority of the biological phenomena, which appear with cancer progress, must be attributed to secondary manifestations, such as anemia and cachexia. I, therefore, pass over this phase of cancer research and go on to studies of the influence of experimental radiation on cancer.

Leo Loeb has recently reviewed the literature on the effects of roentgen rays and radioactive substances on living cells and tissues. He has come to the conclusion that the main effect of radiation on tumors consists in a direct injurious effect on the tumor cells. A secondary effect is expressed in reactions of the host, which hold in check or injure still further, for variable periods, tumor cells primarily injured by radiation. He also points out that results, in which the number of lymphocytes was increased by radiation resulting in a retardation of transplanted tumors cannot, as yet, be applied to man. That there are other factors than those cited by Loeb has been claimed by Schwarz. This author believes that the specific roentgen ray sensitiveness of some carcinomas is proportionate to the tendency toward involution of the organ from which the growth originated, as, for instance, in the case of the uterus. Also Murphy, Maisin and Sturm hold that radiation of the tumor cell is not the only factor which governs cancer retrogression. These investigators found that autografts of spontaneous mouse cancer, when implanted into an area previously exposed to an erythema dose of x-ray, failed to grow in more than 70 per cent of their trials. Similarly, growing autografts would also disappear in about the same proportion if the tumor and the surrounding tissue had been exposed to an equal dose. On the other hand, autografts exposed to the same dosage outside of the body and then implanted grow progressively in 96 per cent. Their conclusion was that roentgen rays had done no direct damage to the cancer cells. To strengthen their deduction they rayed tumor tissue in situ and then transplanted it, finding that it would grow actively in the new host. Their work has been essentially substantiated by Nakahara, who also noted the increased lymphoid activity over polymorphonuclear reaction in radiated areas.

That cancer transplants will still grow after massive radiation has been claimed individually by Kok and Vorlaender. Both these investigators hold that the activity of rays is, therefore, not necessarily of a local character. They are convinced that it is the smaller (stimulating) dose which incites the production of some defensive substance most likely of the nature of a connective tissue-growth stimulant because connective tissue reactions fail to materialize if this tissue has been damaged by over-massive doses.

It is quite clear that most of the recent findings point toward a cancer-controlling substance of constitutional origin, which experimentally can be increased or decreased at will. This, to my mind, is the most momentous advance in cancer research. The unsolved portion of the problem is to locate the seat or seats of origin of this controlling influence.

Researches under way at present suggest that the endocrine system may be a definite factor in this respect. Although we all realize that the endocrine theories have been worked to death, it, nevertheless, remains a fact that these glands, as a whole or in part, constitute the governors of our most important body functions. We, therefore, cannot disregard the findings which Engel has reported on the relation of the endocrines to cancer growth. Engel has succeeded in inhibiting tumor transplants in mice effectively by the injection of thymus, and to a lesser degree by injections of thyroid derivatives. He found ovarian and testicular products ineffective, but noticed that pituitary substances had a growth-stimulating influence. In his conclusions he points out that these activities are not pharmacodynamic, but hormonal in nature, since they do not depend upon albuminous bodies of high molecular structure, but rather upon abiuretic, well broken down, albuminous products similar in nature to Abderhalden's optones. Engel is very cautious, and sounds a warning in regard to the source of the endocrine materials utilized since their qualitative as well as quantitative effects are governed by age, race and species. In defense of his experimental evidence he cites the beneficial influence of oophorectomy in operable cancer of the breast, which he explains by the retroactive stimulation produced in the thymus. Whatever truth there is in Engel's findings, a vast and hopeful field has been opened for further research. To me it is a sign that we are approaching a solution of the phenomenon which determines the constitutional resistance against cancer. Were it not for the enthusiasm and optimism among the workers in cancer research, we might just as well resign ourselves to be ultimately doomed to destruction by cancer, although such a fate lies so far ahead in the dimmest future that we cannot measure it by our standards of time.

There are numerous other questions on cancer research left undiscussed here because of their highly technical and hypothetical nature. In the main I have touched on the most vital findings which have a direct bearing on the clinical aspect of cancer. In summing up I repeat that recent cancer research has definitely shown that malignancy can no longer be regarded as a local manifestation alone, but must be accepted as a constitutional disturbance. Cancer research has opened up new aspects of cancer treatment which may take on concrete forms as research progresses and which ultimately may materialize into more successful methods of treatment.

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DISCUSSION

EDWARD NORTON EWER, M. D. (Federal Realty Bldg., Oakland)—Until recently we were advised that the only definite thing known about cancer etiology was the

requirement of a pre-existing irritant lesion. While this does not yet recede in importance, it is interesting to know of the new place in the sun being accorded to heredity and that nebulous factor, constitutional resistance, which seem likely to bring cancer into the class of systemic diseases. Doctor Emge's paper is a clear and timely resume of recent cancer research.

Belief in heredity seems to be gaining ground, but whatever role it plays in the matter is of no practical importance so far as man is concerned, for selective breeding is, of course, out of the question. Human mating is not arranged on a health betterment basis. Eugenics, at present, is only an academic pastime for certain intellectuals.

It is interesting to note the change in view in regard to constitutional tendency; and the passing of the teaching that cancer is, in its beginning, a local disease always amenable to cure by extirpation, if discovered early enough. True, we are still to gauge our treatment according to that view; and the educational propaganda to bring the patient to early treatment must go on. It is shown that local irritations long continued cause cells to lose their normal character and revert to embryonal type when they take on the rapid growth characteristic of embryonal tissue. This displaces Conheim's theory of embryonal rests. Another factor in proof of the constitutional influence and against the Conheim theory, is the occurrence of multiple primary cancers. They are not very common, but many cases have been reported by various authors. Kocher contributed a case of simultaneous primary occurrence in ovary, breast and axilla. Multiple cancers of various types occur at the same time and malignancy of different types as well, not only in paired organs but in those differing in function. Davidsohn reports a case of chorionepithelioma and primary gastric carcinoma existing together. Carcinoma in one place and sarcoma in another have been described.

While then cancer as a systemic disease is almost established, we must, as already stated, continue our attempts at the earliest eradication possible. The so-called "precancerous" stage must be looked for. The denial of a recognizable precancerous condition (Pick and Hansemann) is one of the "great hindrances in the recognition of early carcinoma" (L'Esperance.) It may not be possible to state that a particular lesion will later become cancer, because we have no means as yet to determine the individual degree of constitutional cancer resistance, but we have some facts to guide us in handling these lesions. We know the danger for the future in gastric ulcer. Epidermal and subepidermal tumors of certain types should be excised (Bloodgood). Erosions of the cervix and cervical polyps in the cancer age are portents of evil; and many experienced surgeons are beginning to urge the removal of a uterus, from the cervix of which there is an intractable discharge as the menopause approaches.

The great expenditure of time and money in cancer study is gradually making returns, and we are warranted in looking with confidence for more effective treatment in the early future.

ALSON R. KILGORE, M. D. (391 Sutter Street, San Francisco)—Doctor Emge's excellent survey of recent cancer research leaves one with the conviction that we are still wandering in a maze of more or less disconnected facts. The factor of heredity in the incidence of cancer is coming to be more and more accepted, but the relation of cancer origin and growth to the fibro-blast and lymphocyte mechanisms, to endocrine dysfunction and even to such external influences as radiation, are still largely in the realm of speculation. Many suggestions have come from research along various lines, but we are still unable to correlate the separate bits of knowledge obtained into any connected explanation of the cancer process.

There are, as brought out in this paper, several pieces of evidence pointing to general systemic changes taking place in association with cancer, perhaps resulting from the cancer—possibly causing or predisposing to the development of cancer. There is even some evidence that

experimental cancer may produce immunity against further development of similar cancers.

But, after all, whatever the final verdict of research, for practical purposes in the clinical handling of the disease, the vast majority of human cancers behave as if their origin were purely local. Certainly, the only treatment so far productive of permanent cures has been mechanical destruction or removal of cancer cells before unreachable metastasis has taken place. For the present, therefore, we ought to distinctly recognize two phases of the cancer problem—the research problem for what the future may bring—the public's problem of the present reduction of cancer mortality. In the attack on the community's present cancer problem, we have still to go on the assumption that cancer begins as a local disease and educate our public to recognize the danger-signals of cancer in its early stages.

HERBERT W. WALL, M. D. (6331 Hollywood Blvd., Los Angeles)—Doctor Emge is to be highly commended upon his able manner of handling this most important subject. All of the resources of chemistry, physics, physiology, biology, and the study of immunity reactions, have, during the past few years, been brought to bear upon this problem. Although some things have been achieved, we have yet a long way to go. Experimental work on animals has been productive of many things; oftentimes as much on the negative as on the positive side.

The knowledge that manipulation and compression often produce metastases, must be kept more prominently before us. Even subsequent to operative interference, it must be recognized that such factors are of great importance. Early operative removal of all conditions simulating carcinoma, should be the physician's attitude, without debating unduly and losing valuable time, which so often seals the fate of many a case that comes to us, long after a reasonable diagnosis has been made, and the patient tarried while the family physician failed to urge immediate action. It is the early and uncertain cases that must be recognized, if any material improvement in our mortality is to be brought about. The physician who fails to make a thorough physical examination and then follow up by every known test to arrive at a diagnosis, is guilty of criminal negligence, and his patient will later reap the inevitable consequence. One need not be an alarmist, but simply be on the alert at all times to perceive the significance of his patients' symptoms.

Removal of tissue for pathological examination is impossible in many conditions before the time of operation, and in these cases it should be avoided, if a diagnosis can be made with reasonable certainty by other methods. But where it is necessary in a doubtful case one must be prepared to follow up immediately by the radical measures which the case may demand. In dealing with incipient carcinoma, the two courses open to the physician are: (1) to await further developments, (2) to make an exploratory, to be followed at once by a radical operation if the diagnosis is positive. The first method is often the easier course, and, sad to relate, is still followed by a great many men, and it is one of the factors most directly responsible for the present enormous mortality of this disease. Let us resolutely abandon this attitude, and, by our eternal vigilance and prompt action, cut down the death rate in carcinoma, just as has been done during the past two decades in the case of appendicitis.

DOCTOR EMGE (closing)—I greatly appreciate and agree with the thorough and frank discussions presented here. If my presentation of the subject has given the impression that I advocate any deviation from the accepted radical treatment of isolated malignancies, I wish to go on record right now that I believe in the most radical methods of attack employed at the earliest moment. The subject of this review deals primarily with basic factors in the biology of cancer and not with its treatment. The reason for presenting it was to acquaint the general profession at large with certain advances which ordinarily do not come to the attention of the general practitioner because of the limited time he can devote to reading of specialized journals.

THE PSYCHO-NEUROSES: PSYCHASTHENIA, NEURASTHENIA AND HYSTERIA, WITH SPECIAL REFERENCE TO A CERTAIN METHOD OF TREATMENT

A STUDY OF 310 OF MY PERSONAL CASE HISTORIES

By THOMAS J. ORBISON, *Los Angeles*

A definite constitutional distinction, racial in character, may exist between the psycho-neuroses as found in America and those observed among foreign racial groups, based upon hereditary differences that are psychological as well as physiological.

A study of 310 private patients.

DISCUSSION by *Harold W. Wright, San Francisco; H. Douglas Eaton, Los Angeles; Milton B. Lennon, San Francisco.*

FOLLOWING the first publication of the Training Camp Method (J. A. M. A., Jan. 13, 1912) many letters have been received from various sources, among them a very stimulating one from the late Jno. K. Mitchell of Philadelphia. Further work along this line was encouraged and has been done. This included certain attempts during the war to apply its wider use in rehabilitation work. I have been the more encouraged for the reason that by its exhibition as a therapeutic measure in suitable patients one is able more completely to put to rout all those horrific camp followers of the mind that beset every psycho-neurotic.

Psycho-neuroses are disorders affecting the (combined) psychic, vegetative and sensori-motor nervous systems. They are characterized by dysfunction of the energy-making and energy-conducting (kinetic) apparatus. They do not include the true psychoses (insanities), the true neuroses, nor the sequelae of gross organic lesions—though they may complicate them or ante-date them in the same individual. They are often found in individuals suffering from these disorders and form part of their symptom complex. The great bulk of the Psycho-neuroses is made up of the Neurasthenias, Psychasthenias and Hysterias.

This paper is based upon a study of 310 private patients with their histories—viz.: 127 Neurasthenias; 140 Psychasthenias; 43 Hysterias. Its chief purpose is to again describe and emphasize anew a method of treatment that was thoroughly tried out in thirty of these patients and which affected a permanent cure in twenty-two; “very good” or “excellent” results in three; “improved” in three, treatment not completed in one; apparent cure, but not sufficient time elapsed to be sure in one.

The literature upon this subject will not be dealt with nor statistics invoked. This is essentially a clinical paper dealing especially with the therapeutic phase of the subject, which has been most efficacious in my experience.

A definite constitutional distinction, racial in character, may exist between the psycho-neuroses as found in America and those observed among foreign racial groups, based upon hereditary differences that are psychological as well as physiological. This may account for the different views of Neuro-Psychiatrists here and abroad regarding etiological factors, dominant symptoms and treatment. Biology teaches that “psychological characters appear to be

inherited in the same way that anatomical and physiological traits are; indeed, all that has been said regarding the correlation of morphological and physiological characters applies to psychological ones” (Conklin: Heredity and Environment). This being true it follows that one need not explain the phenomena of the psycho-neuroses as found in America (i. e. their symptomatology) upon the same arbitrary hypotheses, in absence of more accurate knowledge than is at present available, as are accepted (or, demanded) by some of the leaders of thought in Europe.

One other point must be brought out. It is not uncommon to hear even qualified psychiatrists assert that there is no such clinical entity as neurasthenia—claiming that as time goes on more and more cases of “neurasthenia” are found to suffer from some intercurrent disease, e. g., tuberculosis, focal infection, and so on. They reason as follows: A psycho-neurosis is without demonstrable pathology characteristic of known disease. Neurasthenia, if anything, is a psycho-neurosis—ergo: Neurasthenia must be without such demonstrable pathology—which *presumably* it is not; therefore it cannot exist as an entity! Their inference is that all so-called neurasthenias would in fact be something else if our examination were competent.

The fact is, we have long fully recognized as being a truly typical set of medical experience those patients exhibiting the symptom complex which we designate neurasthenia. To deny does not banish them. The underlying principle is that a negation of any of the experiences of life, which are accepted as competent criteria by qualified observers, is more unscientific than the acceptance of them until disproven beyond doubt. Since the time of Beard, who gave it a name, Neurasthenia has been accepted as being a definite set of pathological experiences.

As to Hysteria one finds little or no attention paid to qualitative racial differences in the literature. In my experience most of the hysterias seen in this country were of a much more quiet or depressed type than those stressed in foreign literature. In the forty-three cases of this series remarkably few gave a history of the exhibition of attacks of major hysteria, although several of their family histories included such cases. Comparatively few gave a history of “laughing and crying spells,” and the like.

An analysis of my 140 cases of Psychasthenia brings out a suggestive and perhaps significant fact—namely that an hereditary taint was present in most of them as well as in the Hysterias, but not in the Neurasthenias.

The following very brief sketches will be given as examples of the three types of psycho-neuroses comprising the series that were treated by the Training Camp Method.

I. *Psychasthenia*—Definition: Hyper or hypo irritability, especially of the psychic sphere (using the term irritability in the biological sense of response to extrinsic or intrinsic stimuli) characterized by excessive or exaggerated responses even to the normal every-day stimuli and especially to the psychogenic stimuli involving the emotional sphere (an emotion being the *consciousness* of certain hereditary reflexes taking place within us—supposedly

involving the internal secretory glands and the related vegetative nervous system). *Dominant Symptoms*—Phobias, sense of inadequacy, anxiety, fear in general.

CASE 1. R. O., male, age 36 years, married.

F. H. Father was subject to fits of depression. One of father's sisters committed suicide.

P. H. Diphtheria and typhoid in childhood. Malaria at 23 years. This was followed by a severe nervous disturbance during which he was for one year in a private sanitarium and then took a trip around the world with his father.

From childhood he had been subject to terrors by night and by day—and, like so many children, he told no one of them—e. g., he would, when a child, sit for hours upon the stairs after being sent to bed waiting for the family to retire. He did this so as to see the lights down stairs and hear the voices of the family. When they moved to retire he would scramble into bed and then go to sleep. He continued this sort of thing for years. He remembers one occasion when a story terrified him and he became livid and sat staring for a long time. He states that he became able to handle his own fears fairly well after he grew up. He received a good education and made an exceptional success in banking business.

Present condition began after a recent financial panic during which he worried excessively. He lost sleep and became depressed. His old fears lighted up and he believed he was the cause of his depositors losing their money—this in the face of the fact that his bank was entirely solvent. It became necessary for him to give up his work for a time, as he had become unable to concentrate his thoughts or to form correct judgments.

His dominant symptoms, when first seen by me, were the obsessions of jumping into the water or under passing trains; claustrophobia; fear of driving over a high bridge; sense of self-depreciation and personality shrinkage; poverty of psychic tonus.

P. E. No pathology shown by laboratory tests or brought to light by careful physical examination. There was a functional faulty elimination of intestines and evidence of "sluggish liver."

Treatment—Training Camp Method.

Result—Cure in three months. He became so well that he returned to active business and for years took his place in public and private enterprises. With such a constitutional heritage as this patient possessed, one would rather expect a recurrence in some form at some future date.

This man belongs to a group of patients in which the symptoms were as severe in their way as one sees in many cases of true psychosis. I have repeatedly seen him drive over a high viaduct bridge that was a pet aversion of his. On each occasion he would hide his face in his hands in abject fear and break out into profuse perspiration. At times he would weep. His psychic tonus became so lowered that there existed for a time partial mental clouding which prevented him from writing or reading—he could not concentrate his mind upon anything that required extra effort. His one thought was the intense mental pain he suffered. These are patients who really experience agony of mind. Their one question is, "Will this cloud ever be lifted?

Can I ever again feel as do others?" This sounds very much like what one sees in psychosis. Indeed, it would be surprisingly difficult to answer off hand the question, "What is the difference between many phases of the severe types of psychasthenia and certain true psychotic episodes?"

These patients require all the therapeutic measures at our disposal, in order to bring them back to psychic integrity. This necessitates a true spiritual and mental renovation which involves the eradication of poisonous fears, debilitating phobias and confusing doubts; the renewing of the soil of the mind for the purpose of implanting normal ideas; the nurturing these to the point where new mental habits are formed and the vicious methods of ideation put aside. Then, at last, the hardening process of making the rehabilitated energy-making apparatus function sufficiently long to insure by repeated acts the normal habit and thus its more or less permanent action as a smoothly running machine. The Training Camp of professional pugilists and Amateur Athletic teams do just this for the normal. I have attempted to adapt the method to psychoneurotic.

CASE 2. C. H., 23 years, male, single.

F. H. Father an invalid with chronic heart disease and asthma. Mother and two sisters neurotic—both the latter of the hyper-thyroid type.

P. H. From childhood has been temperamentally reticent, diffident and retiring. Coming to adolescence his ambitions excelled his ability to compete with his fellows. This made him introspective and aggravated his sense of inferiority. At school he did well, specializing in electric engineering. He states that all his life he seemed just to fall short of the ability to "put over" himself. This chagrined him very much, but he could not explain it. For a time he grew fast—this was almost a bony over-growth implicating his hands and face as well as the long bones. He developed a distressing keratoderma of the palmar surfaces of the hands. He was able to enter the U. S. Army service during the war and did his work satisfactorily. Unfortunately he became entangled in a matter that touched his pride and emotional sphere to the extent of bringing back in a wave that overwhelmed him all the suppressed and hidden ideas that were wont to harass him before. It seemed to be proven to him that he really was right to feel unequal to compete with his fellows. This idea enlarged and he developed intense psychic hyper-irritability, characterized by fears, anxiety and self-depreciation. His physical condition became affected and he lost weight and developed neurasthenic symptoms also. His keratoderma became really distressing and added to his feeling of shame. He will talk for hours about his obsessions and fears.

Present condition is distressing and alarming. His family fear psychosis.

P. E. Evidences of old pluriglandular disturbance—pituitary and thyroid. Patient is 15 pounds underweight. Skin is dry and harsh. Hands are very large and palmar surfaces horny and leaky. Facies anxious. Mentally he is depressed, retiring, introspective and shy. He believes he has consistently made a failure of life—not for lack of trying. He has certain ideas regarding the exciting episodes that are obsessive in character. They dominate his life completely.

Treatment—Training Camp Method.

Result—Entire absence of symptoms (including the keratoderma) after four months. The change in this man's personality and character were almost unbelievable. For the first time in his life he can look his fellow man in the eye without fear or any ideas of inadequacy. He has regained his initiative and his place in life as a worker. As he describes it,

"It is good to feel able to get into the game and not to sit on the side-lines."

II. Neurasthenia—Definition: Hyper or hypo irritability, especially of the sensori-motor or the vegetative nervous systems or both, characterized in the former especially by fatigability and in the latter by more or less violent dysfunction of the various organs which are administered by the vegetative system. The lowered tone of the psychic sphere in these cases may be described qualitatively in terms of fatigue. *Dominant Symptom*—Fatigability.

CASE 1. Mrs. M. K., age 25 years.

F. H. Heredity good.

P. H. Entirely well up to five years ago, when she was married. Her first child was born ten months later. After that she began to develop symptoms of fatigue and came to California to recuperate. Upon her return home she had an attack of tonsillitis—"quinsy"—and diphtheria. Was much debilitated. She then developed pain in the left knee. Came again to California. Upon her return she suffered an attack of pleurisy with effusion. A little later she exhibited numbers of purplish, painful noduli, mostly on the legs. They lasted six weeks and disappeared slowly.

Two years ago (previous to my seeing her) she had tonsillitis again. Three months later her second child was born. Three months later, while on a four days' trip, during which she was subjected to intense heat, she became "hysterical." Five months later she suffered a three weeks' frank neurasthenic attack. Immediately following she had tonsillitis and was much run down. She had been under excellent medical care during all of these episodes. No T. B. bac. had ever been found in her sputum—though the attack of pleurisy was most suspicious. The tonsils should, of course, have been removed.

P. I. Patient first seen about a year and a half after the last attack of tonsillitis. Chief complaint is intense fatigability. She finds it difficult to walk one block or go up a flight of steps. She cannot dress her hair because of fatigue. She experiences the visual disturbance, seen at times in neurasthenics, of seeing only half an object—this will only last a few moments or a few minutes at a time. She had had a thorough physical examination by a surgeon and an internist a short time previous to her first visit to me and no pathology was found. My own physical examination elicited nothing new. No stigmata of hysteria were observed. She was much emaciated and weighed 113 pounds. Her muscles were soft and flabby.

Her mental condition is excellent—no phobias, no excessive anxiety or dread, no emotional imbalance. She had been told to "forget it," to "get some new interest in life," to "take a lot of exercise," and so on. She is a very intelligent woman and stated that her family and children gave her enough enthusiastic interest in life, but she found it difficult to tolerate the advice to "forget it" and to "throw it off" and "make the effort to take exercise," when she could not dress her own hair and could scarcely brush her own teeth because of fatigue.

Treatment—First: Complete rest treatment for six weeks. Second: Modified rest with beginning out-of-bed exercises. Third: Training Camp routine.

During the first period she received passive exercises and massage with overfeeding. During the second period the exercise was increased. Then followed the full Training Camp routine. Result—after three months she was without symptoms. She had gained twenty-three pounds, could walk ten miles without fatigue and do all the training routine without distress. I saw her at intervals since then and she has remained perfectly well through several years. I do not know of any recurrence of symptoms.

III. Hysteria—Definition: Hyper or hypo irritability of the psychic and sensory motor spheres with dysfunctions in these spheres, characterized by abnormal psychogenic dissociations and associations. (This is offered as a fairly good working formulation.)

Freud writes, "The characteristic factor of hysteria is to convert the psychic into the physical." Babinski has proposed the name "pithiatism" as a substitute for the name hysteria. It is a combination of two Greek words meaning "persuasion" and "cure." He offers the new name because, as he states, "A phenomenon is hysterical when it can be produced through suggestion and cured by persuasion."

The dominant symptoms of hysteria are dissociations and associations that are abnormal or pathological. For this reason the definition given above seems accurate enough to be acceptable and brief enough to be expedient—therefore more or less satisfactory.

There are normal as well as abnormal psychogenic dissociations that are constantly made use of, e. g., when a microscopist examines his specimen he may keep both eyes open and yet consciously see but one field—the stage of his microscope. He consciously or unconsciously dissociates one field of vision. The same thing happens when the expert wing shot shoots with both eyes open—as he sights along the gun barrel he at once dissociates all his visual fields, except what is really an almost tubular field that takes in his bird. One can readily conceive of a normal becoming an abnormal or pathological process—either in the sensory and motor spheres or both.

CASE 1. J. H., age 24, single, female.

F. H. Hereditary taint: Mother is extremely nervous and emotional; she has suffered several "nervous breakdowns"; two of her sisters have had psychasthenic attacks.

One brother is a confirmed invalid—had disease of spinal cord when a boy; he exhibits phobias and other psychasthenic symptoms.

P. H. Has always been strong and healthy physically. Her psychic hyper-irritability was demonstrated, however, in childhood by numerous childish obsessions. She has always been "nervous," imaginative, decidedly temperamental and a great reader. She never showed symptoms of tic, chorea or other neuroses. She has always been inclined to be athletic and never had any nervous breakdown.

P. I. About three months before I first saw her professionally she suffered with a severe coryza and later laryngitis. This continuing for some time she feared she might "strain her voice." The conversion of her fears into the subsequent dissociation became definite and fixed. She decided to remain quietly at home and not see people. This she did and began not to want to see people—which was quite different from her normal attitude. After two weeks she decided to have her ton-

sils and adenoids removed. This was done and for two weeks more she remained quiet and began to feel better. Then she went to a card party where she had to talk loudly. She says she felt her throat contract more and more as though she were talking against pressure. This frightened her and she wanted to leave. Thereafter she had the symptom of a tight band about the throat, plus asphonia. She has also had fits of crying. Her dominant symptom is aphonia of an hysterical nature.

Reflexes—tendon reflexes are exaggerated. No other symptoms of hysteria were noted in the history, but my recollection is that there was hypaesthesia of one eyeball and of the nasal mucous membrane on that side.

Treatment—Training Camp Method.

She was sent to one of the less frequent beaches with a "trainer," who was instructed as to the kinds of persuasion and suggestion to be employed. I saw her regularly, of course. The daily routine was prescribed in the form of a written schedule which indicated just the kind, amount and times for exercises, baths, rub-downs and rests. The outdoor exercises were regulated "road-work," medicine ball, rope-skipping and sea-bathing. The work in this case was strenuous from the start. Her day was mapped out for her and she lived "by the clock." No attention was paid to the aphonia in the way of formal treatment and no attention was allowed it except by myself when, by persuasion and suggestion, she would be lured away from standing guard over her throat and diverting into allowing it to behave automatically and unconsciously.

Progress was not rapid, but it was sure. It required four months to insure her against recurrence of abnormal dissociations. The latter part of that time was the "hardening" process of monotonously repeated, excitement-free, hum-drum normal life. Since then she has married most happily and has a family of her own. There has never been a recurrence.

This series of 310 cases were grouped as follows:

	Males	Females	Total
Psychasthenia	57	83	140
Neurasthenia	47	80	127
Hysteria	20	23	43
	—	—	—
Total	124	186	310

Thirty of these, nineteen women and eleven men, have been treated by the Training Camp Method, about 10 per cent of the series.

The results have been: 22 cures, 3 excellent, 3 improved, 1 probable cure, 1 treatment not completed. Total, 30.

My experience with it indicates most forcibly the necessity of it *whenever* it can be applied for three reasons especially—1, the permanency of cure; 2, the completeness of cure; 3, the short time required for cure as compared with other methods in similar cases.

DISCUSSION

HAROLD W. WRIGHT, M. D. (Flood Building, San Francisco)—Dr. Orbison's paper indicates that rest is not the only need of the neurasthenic or other type of functional nervous disorder. We are too prone to tell people that they should rest or have a change and leave them unsupervised to dwell on their symptoms and become

more introspective instead of diverting their attention to something objective which at the same time can be used as a method of physical upbuilding. This is particularly of use when the regimen involves doing something competitively after a period of gradual physical upbuilding, e. g., competitive sports and competitive team play. The neurasthenic or other type of neurotic who has become discouraged and diffident and has lost faith in himself as a normally efficient working member of society (and most of these cases are of that sort) requires something to bring back his self-respect and sense of ability to accomplish things. The latter is the reason for any form of occupational therapy. Occupational therapy should not be just a time killer, but should have the elements of interest, physical hardening and zest of accomplishment of something hitherto not believed possible by the patient. While it is true that we cannot afford to neglect mental analysis and the psychological causes of functional nervous disorders so that the patient may learn how to avoid recurrences, it is also of equal importance not to neglect physical re-education and upbuilding and always keep in mind that any patient is a unified personality when well, and has become disharmonized in his entire organism when nervously ill.

As regards the term "neurasthenia," one would hesitate to discard it even though it is often misapplied. It is an accurate descriptive term for those patients who are asthenic following some prior illness of a toxic, infective nature or following prolonged states of anxiety with ensuing disturbance of the functions of the digestive or circulatory or endocrine organs. Perhaps one could criticize the immediate resort to the training camp method in the literal "neurasthenic" until sufficient rest and upbuilding of nutrition had been accomplished by milder methods.

After all is said one must conclude that the personal influence of the physician upon his patient is the most important factor of all in the therapeutic management of such patients.

H. DOUGLAS EATON, M. D. (1136 West Sixth Street, Los Angeles)—In the absence of conclusive facts, theories and theorists flourish. In no realm is this more true than in that of the psychoneuroses. The literature is full of widely differing explanations of the genesis of neurasthenia and its sisters, psychasthenia and hysteria, all of which are as yet unproved. For this reason we are all prone, whatever our specialty, to treat the psychoneuroses and to treat them on the basis of our own pet theory of their etiology and pathology. Is it any wonder that we lose many of our patients to the cultists?

For the above reason it is a pleasure to read Orbison's sane description of these conditions and his clear-cut views as to their therapy. Whatever our views as to the etiology and pathology of the psychoneuroses, certainly present day scientific knowledge demonstrates the value of training in their care and cure.

Before the war, I spent some years working with the psychoneuroses and aided in the development of the so-called re-educational method, now flourishing under Austen Fox Riggs, at Stockbridge, Massachusetts. Our patients were trained mentally and physically. Obviously, one must start with the patient as he is. The malnourished patient needs more rest than exercise, the athlete—and there are neurasthenic, psychasthenic and hysterical athletes—needs more exercise than rest. The objective is the same and eventually we attempt to reach the level of physical and mental normality for that individual. All such training should be founded on the laws of physiology and psychology; the patient's understanding of the method is essential to success or at least to permanent success.

The individual physician's technique, as Dr. Wright suggests, is of great importance, but it is equally important that the technique be founded on a rational conception of the disorders treated.

Orbison's conclusions are in accordance with my own experience in fifteen hundred cases, namely that the psychoneuroses are definite disease conditions without demonstrable pathology; and that approximately 80 per cent go on to cure as the result of physical and mental training administered by competent hands.

MILTON B. LENNON, M. D. (380 Post Street, San Francisco)—As Orbison says, a careful classification of the psychoneuroses is important: We recall years ago when the diagnosis of neurasthenia was as common as it is today relatively rare. The same pertains with psychasthenia. Hysteria, perhaps, is now more frequently recognized than it was a decade ago. With the development of our knowledge, the glandular discrepancies, toxic and infectious conditions, the so-called constitutional inferiorities and mild psychic state, have claimed many patients who formerly were designated as psychasthenic or neurasthenic. It has been the observation of many of us that such classification had better be made with great reserve. A mild manic-depressive state with complete recovery and a later turbulent episode will often point out an error in diagnosis. An early encephalitis may run on for months with all the marks of a neurasthenia, before any defining symptoms supervene. The same can be said of other toxic conditions. These, it is true, can activate a neurasthenia, but the fatigability that they present does not constitute a neurasthenia. The psychoneuroses—if they represent anything—represent definite types of personality. They are an expression of the inherent, inborn nature of given groups of individuals. Under obvious stresses—either mental or physical—symptoms may arise which are distressing, even to incapacity: Others, however, have no such obvious symptoms and can only be reached by careful analysis.

If we bear this in mind we must be very chary of using the term "cure" in any patient with a psychoneurosis; much less can we use the term "permanent cure." Quite plainly can we get rid of distressing symptoms and, perhaps, that is as much as can be asked. The method may be in any of the accredited ways which will do for the happiness and efficiency of the individual.

Doctor Orbison's method is particularly efficacious, since it implies the co-operation of doctor, patient and trainer. It spells out-of-doors, well-regulated exercise and a direction toward healthy habits. It has the advantage of restoring the patient with a laudable degree of rapidity.

The personal equation of the doctor, however, must not be overlooked. Undoubtedly, this has played a large part in the obtaining of such excellent results.

DOCTOR ORBISON (closing)—The discussions of my paper by Doctors Wright, Eaton and Lennon have, in themselves, a remarkably ponderable value—coming, as they do, from neuro-psychiatrists eminently qualified by education and experience to express critical judgments upon the subject under discussion.

In fact they bring out exactly the values of the training camp method and make a better summing up of those values qualitatively than I could expect to do. For example, Dr. Wright has crystallized one whole phase of the subject in a single sentence when he says, "Occupational therapy should not be just a time-killer, but should have the elements of interest, physical hardening and zest of accomplishment of something hitherto not believed possible by the patient."

Again, Doctor Eaton, from a very large experience, is able to state the formulations that: "Obviously one must start with the patient as he is"; we attempt to reach the level of physical and mental normality for that individual. All such training should be founded upon the laws of physiology and psychology, "plus the patient's intelligent co-operation." I know of Doctor Eaton's admirable work at Stockbridge and the notable results obtained.

Doctor Lennon, with his well-known accuracy in analysis, sums up admirably when he says, "The psychoneuroses, if they represent anything, represent definite types of personality. They are an expression of the inherent, inborn nature of given groups of individuals."

I can do no better in closing this discussion than by quoting these careful and experienced neuro-psychiatrists. That they indorse what has seemed to me very simple, but common sense, definite method of treating the psychoneuroses, and concur in its efficacy is very much appreciated, as is the quality of their illuminating discussion.

CORONARY OBSTRUCTION

By JAMES F. CHURCHILL, M. D., San Diego

Sudden obstruction of a coronary vessel is ordinarily due to a thrombus, but an embolus is occasionally found.

Treatment consists in absolute rest in bed, morphin for relief of the pain and the use of digitalis.

Vasodilators are contra-indicated, since there is already a fall in blood pressure.

DISCUSSION by William J. Kerr, San Francisco; F. F. Gundrum, Sacramento; Egerton Crispin, Los Angeles; Franklin R. Nuzum, Santa Barbara.

OBSTRUCTION of the coronary arteries has long been regarded as one of the most serious of cardiac accidents. Indeed, until as recently as 1881 it was considered a fatal one. In that year Cohnheim published his conclusions that the coronaries were end arteries and that occlusion of one of them or one of the larger branches was followed by death within a few moments. This work confirmed that of earlier writers, but did not long remain unchallenged. Numerous workers from 1888 to 1910 published the results of animal experiments, in which death was delayed for some time, and even recovery was noted in a few instances. Clinical observations with necropsy findings also began to be reported during this period, furnishing proof that patients can and do survive for varying lengths of time obstruction of fairly large branches of the coronary vessels.

The object of this review of the subject is to emphasize the relative frequency of coronary occlusion, to point out the variations in the clinical picture, and to discuss some points in differential diagnosis. Immediate recognition and treatment of this condition may, in certain instances, mean much to the patient.

Sudden obstruction of a coronary vessel is ordinarily due to a thrombus, but an embolus is occasionally found. Either artery or any one of their branches may be involved, the most common site being the ramus descendens of the left. That the coronaries are not end arteries, as was formerly taught, was definitely proven by Fred M. Smith, whose excellent work on coronary anastomosis was published in 1918. After infusing the coronary vessels, Smith injected them with a suspension of barium and made stereoscopic films of the hearts, showing in this way not only the presence of actual anastomoses, but also the variation in the size and numbers of these in different hearts.

The result of an obstruction depends upon the size of the vessel affected, the number and size of the anastomoses and the previous pathological state of the myocardium.

In discussing the symptomatology of this affection, one cannot do better than to adopt the classification made by Herrick in his two classical papers on this subject, published in 1912 and 1919.

1. Cases of instantaneous death in which there is no death struggle.

2. Cases with very severe symptoms, usually of typical anginal character, in which death occurs in from a few minutes to a few hours.

3. Cases with symptoms severe enough to be recognized as serious and probably of cardiac origin, in

which death may be delayed for days and recovery eventually occur.

4. A group in which the cardiac symptoms are very mild and in which the diagnosis can only be suspected, or made in retrospect, from the autopsy findings. It is the third group which will be chiefly considered in this paper.

SYMPTOMATOLOGY

The subjects of this affection are those in which angina is commonly encountered that is, men past 50 years of age, though a few verified cases have been reported in the thirties. Those who have had previous anginal attacks will usually describe the seizure as similar, but more severe and more prolonged. The pain may be substernal or radiate to the arms or to the abdomen. Its intensity may be of any degree, though usually very severe.

Symptoms of collapse quickly follow the onset. The pulse is usually weak and rapid and may become irregular, premature systoles being the most common type of arrhythmia. The heart tones are faint, and there is almost always a rapid fall in blood pressure. The face is usually ashen. Profuse perspiration is common. Dyspnoea is not often noted, though it may occur and be accompanied by the appearance of many bubbling rales and the expectoration of frothy, pink sputum, indicative of pulmonary edema. It has been suggested that this edema may occur when the left, and not the right, ventricle is affected.

Nausea and vomiting are not uncommon, and when associated with severe abdominal pain may be very confusing and suggestive of an abdominal condition. Engorgement of the liver and edema of the lower extremities are described, due to a weakened myocardium; but these findings are less common than those mentioned above.

Extreme weakness is the rule, though some patients remain surprisingly strong and may insist upon walking about the room, going to the toilet, etc. The majority of patients prefer to lie flat in bed, but two of my own cases were apparently more comfortable when upright and persisted in sitting in a chair.

A pericardial rub may develop at any time after a few hours, and when found is of great diagnostic importance. It is commonly stated that the mind remains clear almost to the moment of death, and while these patients ordinarily realize the gravity of their condition the fear of death, so commonly described in angina, is noticeably absent.

DIAGNOSIS

The diagnostic points which have led me to suspect coronary occlusion are:

1. Severe persisting pain of anginal type, which is *not* relieved by vasodilators, but only by morphin.
2. Signs of shock as mentioned above, especially the rapid fall in blood pressure.
3. Weakening, irregular heart tones.
4. Pericardial rub.
5. Electrocardiographic findings.

A majority of the reported cases show in the electrocardiogram a sharply negative T wave and a decrease in the amplitude of the QRS group.

Unfortunately, the electrocardiograph is not portable, so that one is not often available as an aid in the diagnosis. However, when the findings above mentioned are obtained, they should be regarded as strongly supporting evidence of coronary obstruction.

DIFFERENTIAL DIAGNOSIS

The two conditions which commonly come in for consideration in the differential diagnosis are uncomplicated angina and acute lesions of the upper abdomen.

The former of these is relatively easy of differentiation, inasmuch as the pain in angina, while it may be as severe, is not so lasting and is usually relieved by nitroglycerin or amyl nitrite. Further, there are not present the marked signs of collapse, especially the weakened heart tones and rapid fall in blood pressure. Of course, those anginal attacks, which are immediately fatal, can only be differentiated at autopsy.

The second group, however, presents many difficulties, and an error may occasionally be unavoidable. Perforation of a gastric or duodenal ulcer, acute pancreatitis, mesenteric thrombosis, and biliary colic may be simulated by a coronary occlusion in every detail for a period of several hours. While the pain in coronary obstruction is more often substernal, it may be referred to the epigastrium, and when to this is added board-like rigidity of the upper abdomen, vomiting and signs of collapse, the patient presents a typical picture of perforation of a hollow viscus. The situation is particularly difficult if there chances to be a former history of digestive disturbances. Differential diagnosis may not be possible for several hours, and it may be necessary to await further developments before a final decision is made. Increasing weakness and rapidity of the heart, or the development of an arrhythmia or a pericardial rub on the one hand, or the appearance of further signs of an abdominal lesion on the other, will usually aid in the differentiation.

As stated before, cases of coronary obstruction show very great variation in their clinical pictures. The following three case histories serve to illustrate and emphasize this fact.

CASE 1—A man of 76 was seen in consultation after having been in intense agony for four hours. There was a history of previous anginal attacks. The pain was substernal, agonizing in character and did not radiate. No relief had been afforded by nitroglycerin, and morphin had been administered with partial, but not complete, relief. The heart tones were feeble. The blood pressure could not be taken on account of the restlessness of the patient. Death occurred about seven hours after the onset. Autopsy showed advanced sclerosis of the coronaries and a soft thrombus in the left main branch. A typical case of the pure anginal type in which a diagnosis may be made with considerable certainty.

CASE 2—A man of 78 who had been very active, a great traveler, and who prided himself on his good health. No history of previous angina or other cardiac symptoms. On the morning of the onset he felt some nausea while at his breakfast. He went at once to his room and vomited a small amount, after which he stated he felt relieved, but not entirely comfortable. There was no pain at this time, however. My associate saw this patient within an hour after the onset. When he entered the room the man set up on the bed to relate his history. At the end of about five minutes he uttered an exclamation, clasped his hands on his abdomen and fell back on the bed. He almost immediately vomited, but

experienced no relief from his intense pain, which he located in the epigastrium. His color became ashen, profuse perspiration appeared, his pulse became rapid and weak. It was learned that, a few months before, his systolic blood pressure had been 145. Four hours after the onset his pressure was 95-60, and he presented the typical picture of shock. While the abdominal pain and rigidity still persisted at this time the signs of cardiac disturbance were so marked that the possibility of a perforated ulcer was dismissed by the surgical consultant and myself. He lived twenty hours from the onset of his severe symptoms. At the end of fourteen hours general weakness was extreme, the heart was very rapid and irregular, and the systolic pressure had fallen to approximately 60, while the abdominal rigidity had disappeared. At the onset this case closely simulated the picture of rupture of a gastric or duodenal ulcer. Although an autopsy was not obtainable, those of us who watched the case felt that coronary obstruction was the only possible diagnosis.

CASE 3—Was a man of 72 who came to the office this winter on account of recurring discomfort under the upper sternum. This had been noted after exercise for about two months and was thought by the patient to be due to "gas." On this account he had developed a marked aerophagia. He was found to have an advanced arteriosclerosis and some increase in the cardiac outlines. The heart tones were clear. The blood pressure was 155-100. He was advised to remain quietly in his room for several days. The second morning after I was asked to see him on account of the same distress. It had come on at about 9 p. m., had been continuous, and he had spent a sleepless night in a chair. The pain was described both as a pressure and a dull pain under the middle third of the sternum; was apparently not very severe and did not radiate. His distress was increased by lying down. On that day the blood pressure was found to be 112-70. His color was grayish and he was in a profuse perspiration. The next morning a faint pericardial rub was heard in the third left interspace near the sternum. His condition remained practically unchanged and relief was only obtained by morphin. On the third day the pressure had dropped to 90-45. The heart was rapid, occasional premature systoles were noted, but there was no change in the heart outlines. He was a very uncontrollable patient and insisted upon going to the bathroom contrary to instructions. He died suddenly on the morning of the fifth day, after returning from the toilet. On the basis of his persistent cardiac pain, pericardial rub, fall in blood pressure, and disturbed rhythm, the diagnosis was made of obstruction of one of the coronary branches. Autopsy could not be obtained.

The point I wish to impress by these three case histories is that there is no single symptom complex typical of coronary thrombus. These three cases present entirely different clinical pictures of what I believe to have been the same pathological lesion.

TREATMENT

The treatment consists in absolute rest in bed, morphin for relief of the pain, and the use of digitalis. Vasodilators are contra-indicated, since there is already a fall in blood pressure. If the patient survives he should be kept in bed over a long period and treated as any other individual with grave myocardial disease.

Electric Building.

DISCUSSION

WILLIAM J. KERR (University of California Hospital, San Francisco)—It has been a pleasure to read Doctor Churchill's paper on "Coronary Obstruction." The description of the symptomatology and physical findings fits in very well with my own experience with this clinical entity. I think all of those who have handled patients with coronary disease have been impressed with the type of pain which the patients describe, being of an anginal type, but persistent and agonizing in character and not relieved by the ordinary vasodilators. Patients who

present the more severe forms of coronary disease, with the associated myocardial changes, give a very striking picture of shock with fall in blood pressure, pallor and profuse sweating. The changes in the heart sounds are also very striking, with marked weakening of the tone of the first sound. The pericardial rub, which Doctor Churchill mentions, is not very frequently observed, but quite a percentage of cases show at necropsy pericardial involvement. Electrocardiograph findings are not constant, but usually show evidence of disturbance of the conduction system in the ventricles and abnormal T waves. The gastro-intestinal symptoms may be very prominent and suggest conditions in the abdomen of a very severe type and may even result in surgical measures, which naturally are of no value and may result fatally.

It was of interest to review the pathological findings in such cases and to learn that many patients show evidence of previous coronary occlusion with fibrosis of heart muscle resulting from this occlusion. This is ample evidence that patients may go through mild attacks of coronary occlusion and recover in many instances without having experienced any symptoms in the past history which would lead one to make such a diagnosis.

I quite agree with Churchill in regard to the treatment in these cases. Rest is the most important single factor with relief from pain by the use of opiates. A long period of rest is absolutely indicated. There is great danger of embolism as a result of mural thrombosis.

F. F. GUNDRUM, M. D. (Capital National Bank Building, Sacramento)—Doctor Churchill's paper brings back to our attention a medical accident which, though not extremely common, is, nevertheless, possibly considerably less rare than we ordinarily suppose. It is not always met with in old men, but may occur in women, and even in comparatively young women. I have attended a woman who died of coronary occlusion at the age of 42. The diagnosis was confirmed by autopsy. The source of the thrombus was not determined. It is of first importance that coronary occlusion be not mistaken for some of the acute surgical accidents of the upper abdomen. This mistake is less apt to occur if opportunity for a case history presents itself. The history taking may be difficult at a time when the patient is extremely uncomfortable and sick and the family much excited and anxious. Hasty surgery has here such melancholy results, however, that time spent upon a thorough investigation into the patient's previous health is well spent. There is also very rarely a true muscle spasm of the abdominal wall, which is so frequently present after perforation of a viscus high up in the abdomen. I agree with Churchill that there are possibly more sufferers from coronary occlusion than are so diagnosed and particularly there are a fair number whose lesion is sufficiently limited that they recover to a fair amount of activity for a time.

EGERTON CRISPIN, M. D. (Pacific Mutual Building, Los Angeles)—Doctor Churchill's paper is a well prepared presentation of a subject that must frequently be brought before the profession in order than anginal symptoms may be more often clinically segregated into relationship with the probable pathologic origin. The established proof that coronary arteries are not end arteries, the recent clinical observations of the surgeons, after cutting the superior cardiac nerve for the relief of spasmodic type of anginal pains, and the correlation of careful autopsy findings with the clinical observations of pain attacks, have helped in gathering together a group of symptoms that strongly suggest coronary obstruction as their cause.

Nearly all observers agree in the main symptoms; particularly the prolonged type of pain; falling pressure; absence of relief from vaso-dilators and the need for morphia. The type of person in whom the attack occurs and the probability of sclerosis in the aorta and in the coronaries, help in suggesting the possible origin of pain. More frequently will the type of pain from coronary involvement occur in epigastrium. Where it occurs sub-sternal the radiation to extremities is less often present. The person with spasmodic type of angina may be gravely ill while under the strain of the fear, or emotion, or anger, that brought on the attack, but feel quite himself the next day. The patient with pain from coronary obstruction is an ill man for whom effort must

be suspended. The infarct or fibrosis may only be put to test with caution until myocardial integrity has been established at effort levels.

Rather typical of the obstructions in group classed as Number 3 by Doctor Churchill, is that these folks may have comparative comfort when effort is within myocardial circulatory limits, and how sure distress comes when these limits are exceeded. With this in mind and impressed upon patients having had symptoms of obstruction, possibly to some extent attacks may be averted. Comparatively one effort level might be cared for with the limited blood of a partially occluded vessel, but all symptoms of obstruction develop if increased effort made demands on coronaries that could not be supplied. This borne in mind may permit some patients with this disease to live longer with some comfort.

FRANKLIN R. NUZUM, M. D. (Santa Barbara)—A complication of coronary obstruction not mentioned in Doctor Churchill's excellent paper is rupture of the heart. This accident has been considered as of rare occurrence, but in certain types of service, such as coroners' examinations and in insane asylums, frequent instances of ruptured heart wall are coming to light. They are noted particularly in coroners' services because sudden death follows the rupture. They are noted in insane asylums because the life of such an individual tends toward the pathologic processes which are found in coronary obstruction and infarction of the myocardium.

I have had personal experience with five instances of ruptured heart, three of which occurred in general hospital practice. The pathology back of each of these instances, and back of some 250 instances that I have found in the literature, is primarily an occlusion of one of the large branches of either the right or left coronary artery, resulting in infarction of the muscle wall. By far the large majority of instances have occurred in the anterior wall of the left ventricle at or near the apex. This area is supplied by the descending branch of the left coronary artery, and an occlusion of this branch or of the arteries supplying the affected area is found when carefully looked for. Rupture of the heart never occurs in a normal muscle wall, and likewise rupture through an old healed infarct has not been recorded.

Death usually follows shortly after the rupture, so that therapy is not of avail, but in going over the history, occasionally a diagnosis of a former occlusion of a coronary artery can be determined. In some instances this preceded by days or weeks the rupture of the heart wall.

Many instances of rupture of the heart wall undoubtedly occur in general hospital practice, which at present are not being diagnosed. A familiarity with the subject of coronary occlusion and an increasing desire on the part of physicians to obtain post mortem examinations routinely will bring to light many such examples.

The importance of absolute rest at the time the diagnosis of coronary occlusion is made, as suggested by Churchill, is most important in preventing rupture of the area of myomalacia cordis, which follows the infarction.

The Spinal Fluid in the New-born, With Especial References to Intracranial Hemorrhages—A study of the spinal fluid of 423 new-born negroes was made by M. Hines Roberts, Atlanta, Georgia (Journal A. M. A.). Each of these fluids contained a yellow pigment, bilirubin, which persisted at least until the ninth day, and was intensified if jaundice occurred. It cleared by the fourth week. The intensity of pigmentation was closely related to the physical development of the infant. Sixty cases, or 14.1 per cent, showed the presence of intracranial hemorrhage, two due to hemorrhagic disease, and fifty-eight to trauma. Abnormal labors or operative procedures tend to increase the incidence of intracranial hemorrhage. Prematurity is a definite etiologic factor. Only twenty-six of the sixty cases presented symptoms attributable to intracranial hemorrhage. Fifty-four of the sixty children have been followed; twelve are dead, ten because of hemorrhage, two as the result of some intercurrent infection. Forty-two children are known to be alive, only two of whom show symptoms due to hemorrhage. The remaining forty seem perfectly normal.

TUBERCULOSIS OF THE SEMINAL TRACT

(From the Department of Urology, Stanford University Medical School)

By JAMES R. DILLON, M. D., San Francisco

The only hope of radical cure or complete arrestation of the disease is by the radical operation—that is, excision of the tuberculous seminal tract.

If the patient with unilateral epididymitis is seen early enough there may be hope of removing the entire tuberculous tract while it is still limited to one side, and saving for him the opposite seminal tract.

DISCUSSION by Martin Molony, San Francisco; R. L. Schulz, Los Angeles; Floyd F. Hatch, Salt Lake City.

GENITAL TUBERCULOSIS is such a progressive affection, that any method, however radical, which offers a better chance of recovery is worth serious consideration. At the present time conservative treatment by epididymectomy holds the majority opinion because of the generally accepted belief that the primary focus is in the epididymis and that from this the disease quickly spreads to involve the vesicle and prostate, and by removing the epididymis or testicle the secondary focus will subside and improve the chances for the escape of the opposite side. That such a result is not always obtained and that our attempts to cure genital tuberculosis by epididymectomy leave much to be desired is shown by the published statistics of many urologists.

Barney reported the end results of seventy-one cases, stating that of sixty-nine operated on, but twenty-six were seen after unilateral epididymectomy without involvement of the opposite side; twenty-three returned with infection of the second epididymis, and twenty were examined after bilateral operations. Young reports, out of sixty-three patients, only twenty-seven are known to be or have been alive three years or more since admission. Eighteen were not heard from. He further states that the urinary tract was not involved in thirty-nine cases and as these were fairly early cases of tuberculosis of the seminal tract, the result obtained by epididymectomy or castration were very poor. Keyes reported relapse in fifty-three out of eighty-seven cases. The last six years at the Mayo clinic, Hunt reports forty-two out of sixty-six cases having bilateral disease; (twenty-four were bilateral on admittance, sixteen unilateral operations elsewhere and two have since developed opposite epididymitis). Barney reported definite involvement of the prostate and seminal vesicles in seventy-six out of one hundred and one cases examined. Hunt reported fifteen out of sixty-six, and Young 61 per cent bilateral seminal vesiculitis. Keyes states that every case carefully examined showed some congestion of the internal genitals, which he thinks is always tubercular, hence believes that tubercular epididymitis is always an index of general T. B. of the genital organs.

The various interpretations of digital examinations by different urologists offers a very unreliable basis for deciding the primary focus whether in the epididymis or in the upper genital organs, where practically all clinicians admit tuberculosis may be present, but impossible to detect, though the tubercular epididymis is definite. Also the autopsy records cannot offer complete proof because in the

vast majority of cases, by the time the patient dies, the genital tuberculosis is so extensive that its exact origin is entirely obscured. There are a few isolated cases reported in which only the epididymis, seminal vesicle or prostate were diseased, but the number is too small to draw conclusions from.

Though but fifty-four radical operations have been published in the American literature, forty-four of these having been done through the perineum by Whiteside, Young and Quinby, one cannot help but be impressed by the consistency in these reports of the extensive involvement of the seminal vesicles and vasa. The inadequacy of epididymo-vasectomy in the majority of cases of seminal tuberculosis was particularly impressed on me a few years ago by following four successive cases from unilateral epididymitis, to bilateral, then to prostatic and bladder symptoms, with perineal abscesses and fistulae in one and active pulmonary tuberculosis started in the other three.

The early methods of dealing with the condition was by complete castration. This procedure has been justly condemned, except when the testis is extensively diseased. A further step was taken by Barney and Cabot in removing most of the vas by making an additional small inguinal incision and pulling the vas up from the pelvis, leaving only the upper third of the vas. In 1918 Young presented a simplified technique for the entire excision of the seminal tract through scrotal and perineal prostatectomy incisions. In 1922 he reported fifteen cases, operated on during a period of seven years, "(in some of which the lungs were probably previously involved, and in five of which one kidney was tuberculous) and in which only one patient died of tuberculosis a year later, and the others are apparently completely arrested, shows the effectiveness of this radical operation." Quinby reported seven cases in 1918, which were followed for an average time of thirteen months and showed "an apparent return to complete health." None of his cases, however, "showed signs of active tuberculosis elsewhere in the body." In 1914 Whiteside reported twenty-two cases of radical operations which he had employed in "only the old and apparently hopeless cases," with a high mortality. In 1919 he reported more gratifying results "in several cases," but advised against radical operation in the presence of active pulmonary tuberculosis.

It is admitted that all the tuberculous process is not removed by epididymectomy and as long as tuberculous diseased organs are left, as the vas, vesicles and prostate, we have not reached a satisfactory solution of our problem. This is further proven by Barney's report on 113 cases operated on by epididymectomy and traced from one to twenty-five years in which 27 per cent died of tuberculosis. Of fifty-eight of these dying in the first six years, 41 per cent died of tuberculosis.

As Quinby states, "it may not be the opportunity of any of us to bring together an amount of operative material sufficient for complete proof, nevertheless, the continued efforts of many of us will bring the answer," and to that end I am presenting my series of cases.

CASE 1. J. E. McK., age 33, American, San Francisco Hospital. No. 54695. Aug. 20, 1921. Complaint:

Swollen testicle. Post History: Gonorrhea 1908, chancre 1918, dry cough for many years, constipation 2 years, "bleeding piles" for 6 years. Hard lump in right testicle for 8 years with pain in groin. For past 6 months has had discharge from testicle.

Present Illness—Right testicle swollen and painful, last few weeks sinuses discharging more. Examination: Thin man in distress. Aug. 26, 1921, chest exam. (Dr. W. R. P. Clark) slight old T. B. lesion right apex. No activity noted. Fleuroscopic negative. Heart and abdomen negative. Right epididymis enlarged, irregular and hard with two small discharging sinuses; right testis also hard and nodular; right vas thickened and granular. Left testicle and vas normal. Prostate granular consistency, indurated toward base; both vesicles infiltrated and enlarged. Cystoscopic examination Aug. 23, 1921: Bladder wall and ureteral orifices appeared normal; ureters easily catheterized; urine from kidneys and bladder was clear, but G. P. reported positive Oct. 14, 1921. Function normal.

Diagnosis—T. B. epididymitis, right; T. B. prostatitis and vesiculitis.

Operation—Sept. 30, 1921. Nitrous oxide and oxygen-ether anesthetic. Double vesiculectomy; varumontanum was caseous and came away with vesicles, leaving a hole in the urethra allowing urine to escape; artial prostatectomy; right vasectomy; removed ampulla of left vas; right epididymectomy; resected right testis. Suprapubic cystotomy done because of opening in prostatic urethra.

Pathology—Tuberculous right epididymitis, deferentitis and vesiculitis also left seminal vesicle and left ampulla.—(F. E. Blaisdell.)

Oct. 15, 1921, complained of pain in left testicle; examination showed small nodule size of pea in lower pole. Oct. 18, 1921, operation, left epididymectomy and vasectomy under local and gas and oxygen.

Pathology—Tuberculosis lower pole epididymis and tuberculous deferentitis. (Further study of the left ampulla removed at the first operation showed tuberculosis throughout the length removed through the perineum, though there was no clinical evidence at that time in the cord or testicle.)

Nov. 18, 1921. He left the hospital against advice. Had been given tuberculin for a month previous and was in good condition, except for a slight discharging perineal sinus, which closed soon after. He was seen two months ago and stated he had been cystoscoped by Major Fox of the Letterman General Hospital and told there was no T. B. left, and that Guinea pigs inoculated with the urine were negative. He is perfectly well and gained from 105 to 125 pounds in weight.

CASE 2. D. P., Mexican, age 29. San Francisco Hospital No. 66878, May 4, 1923.

Complaint—Swelling and pain in left testicle.

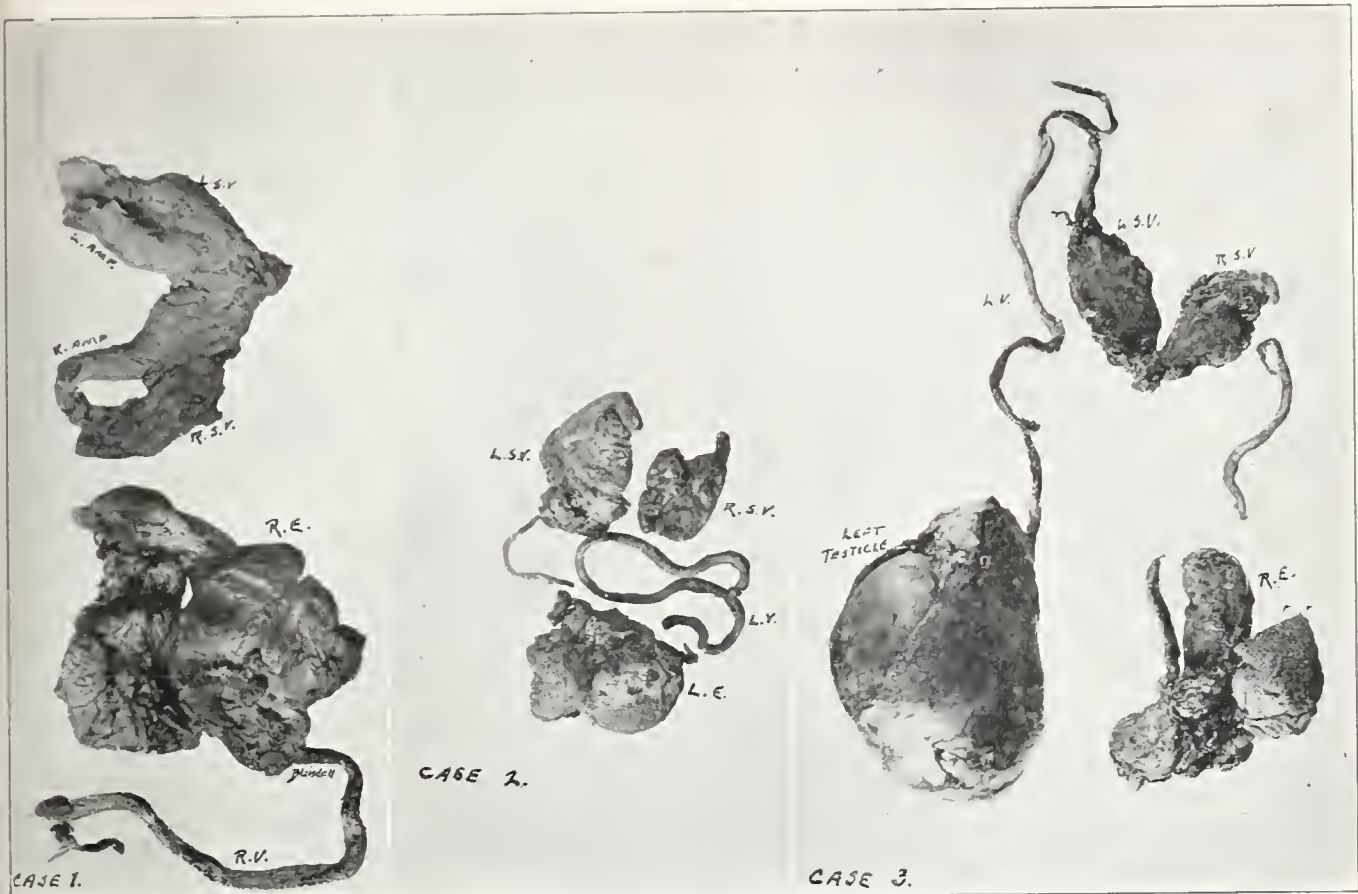
Past History—Three gonorrheal infections, 10 years, 3 years and 5 months previous. Cough with yellow expectoration and loss of twenty-five pounds in last year; shortness of breath for one year; hemoptysis twice six months ago. Night sweats for one month.

Present Illness—Started with acute gonorrhea five months previous; apparently cured in one month; two months ago left testicle swelled; subsided in two weeks and returned to work; swelled again one week ago and is very painful. Examination—Emaciated; harsh and moist rales at apices and right base. Increased vocal fremitus. Fleuroscopic examination of chest: Broncho bilateral pulmonary T. B., both lungs (Dr. W. R. P. Clark); heart and abdomen negative; right epididymis and testis normal; left epididymis greatly enlarged, nodular and fluctuant. Testis apparently normal; prostate showed hard nodule at left base; left vesicle greatly distended and fluctuant (three or four times normal size); right vesicular region and prostatic lobe felt normal to palpation. Urine negative, except for a few pus cells. Wasserman xxx. Sputum positive for T. B.

Diagnosis—Chronic suppurative epididymitis and vesiculitis tubercular. Pulmonary tuberculosis. Syphilis.

Operation May 10, 1923. Double vesiculectomy under spinal anaesthesia (Tropococaine 2 grains). Left vasectomy and epididymectomy, using a few cc. of 1 per cent Novocaine locally to finish.

Pathological Report—Left seminal vesiculitis tuberculous; right seminal vesicle, normal; left epididymitis,



Case 1.—Tuberculous Right Seminal Tract and Left Vesicle and Ampulla. (Left Epididymis and Vas Clinically Normal.)

Case 2.—Tuberculous Left Seminal Tract. (Right Seminal Vesicle and Ampulla Normal.)
Case 3.—Both Seminal Tracts Tuberculous Throughout.

tuberculous; left deferentitis, tuberculous.—(Dr. F. E. Blaisdell.)

June 15, 1923. Has improved and gained some weight. Perineal wound healed, but scrotal sinus draining. Transferred to T. B. Hospital.

June 26, 1923. Bleeding freely from nose. Hemoptysis at times, considerable cough. Pulmonary condition grew progressively worse and he died August 17, 1923, four months after operation.

CASE 3. L. P. Private case. Italian, Age 30, March 23, 1923.

Complaint—Swollen testicles. Past history: Occasional stomach attacks; gonorrhea 7 years previously.

Present Illness—Started four or five months ago with frequency of urination; three months ago left testicle swelled; two months ago right one swelled. Slight pain. Examination: Impotent for several months. Suppurative orchitis and epididymitis left testicle; right epididymitis with abscess; thickened and indurated vasa; left seminal vesicle thickened and sclerosed; right seminal vesicle thickened, larger but more fluctuant than left; prostate nodular. Cystoscopic Examination: Kidneys catheterized and found apparently normal. Marked trigonitis and congestion of bladder mucosa over vesicular regions; congested prostatic urethra. No evidence of active pulmonary lesion. Heart and abdomen negative.

Diagnosis—Left tubercular orchitis, epididymitis, deferentitis, vesiculitis; right epididymitis, deferentitis, vesiculitis; tuberculous prostatitis and trigonitis.

Operation—April 16, 1923, at St. Francis Hospital. Double vesiculectomy and partial prostatectomy; double vasectomy; left orchidectomy; right epididymectomy.

Pathological Report—Tuberculous orchitis, epididymitis, vesiculitis and deferentitis.—(Dr. F. E. Blaisdell.)

Discharged from the hospital May 5, 1923, with a small perineal sinus discharging a little pus. Improved greatly in health and gained weight until "stomach" began to bother him four months later which was treated by his family doctor. Cystoscoped Sept. 20, 1923, and kidneys found normal. Operated on by Dr. J. F. Cowan for ruptured gall bladder Sept. 23, 1923, and died next day. No evidence seen at operation of tuberculosis

of peritoneum or abdominal viscera as far as could be inspected.

Pathological Report on Gall Bladder—Chronic Cholecystitis with perforation. No evidence of tuberculosis in sections examined.—(Dr. F. E. Blaisdell.)

CASE 4. J. V. Private case, American, age 34. Stanford University Hospital Record 34703. Complaint: Abscess in left groin.

Past History—Always well until one year previously, left testicle swelled without apparent cause. Castration done, but permanent sinus persisted, opening and closing at times with abscess formation. Examination: Small abscess in left inguinal region. Left testicle absent. Right testicle normal. Prostate and right vesicular regions normal. Left seminal vesicle and vas greatly thickened and indurated. Urine clear with few pus cells in centrifuged sediment. No acid-fast bacilli seen. No active pulmonary lesions. Heart and abdomen negative.

Diagnosis—Left T. B. vesiculitis and deferentitis. Treatment: Incised abscess and drained ten days. Nov. 21, 1923: Left vesiculectomy and vasectomy through perineal and inguinal incisions. Dec 8, 1923, wound healed.

Pathological Report—Chronic tuberculous vesiculitis and deferentitis.—(Dr. F. E. Blaisdell.)

This patient was seen one month ago, "feeling fine and gained twenty pounds since the operation."

CASE 5. S. G., Greek, age 29. Private case of Dr. A. Roncovieri (Industrial Accident), Feb. 12, 1924.

Complaint—Pain in right groin.

Past History—Epididymectomy two years previously; questionable tuberculosis.

Present History—Felt all right until an injury four months ago, followed by a hernia in the right side. Right inguinal herniotomy done three months ago. Six weeks ago right testis became inflamed, abscessed and was removed. Sinus in scrotum still draining.

Examination—Tender hard mass in right inguinal region, extending from upper part of scrotum into inguinal canal. Rectal examination shows the right seminal vesicle and vas markedly tender and infiltrated to the size of two fingers. Left testicle, cord, left seminal vesicle,

and prostate normal palpation. Cystoscopic Examination: Kidneys, bladder and urine normal.

Diagnosis—Tuberculous, right deferentitis and right vesiculitis.

Operation at Stanford University Hospital Feb. 14, 1924. Right vasectomy and right vesiculectomy through inguinal and perineal prostatectomy incisions.

Pathological Report—Tuberculous seminal vesiculitis and deferentitis.—(Dr. F. E. Blaisdell.)

March 6, 1924, Dismissed from hospital. March 21, 1924, sinus healed.

April 24, 1924, last examination. No evidence of involvement of left side. Patient gained weight and been working a month on a ranch.

Considering the microscopical pathology, we find complete and total destruction of the entire intrinsic structure of the seminal vesicle and ampulla of the vas on the side of the epididymitis. The mid portion of the vas showed the least destruction, generally a cellular infiltration with scattered giant cells and an occasional area of caseation. The lesion in the lower portion next to the epididymis was as extensive as the ampulla generally. The lower pole of the epididymis was the most frequently involved, showing generally complete destruction, while the upper and mid parts presented many normal areas.

In case 1 the left epididymitis was certainly secondary to the vesiculitis and infection of the left ampulla as shown by the development of the epididymitis two weeks after the diseased vesicle and ampulla were removed, leaving the upper end of the vas still containing T. B. lesions. Also the first appearance of the infection in the lower pole is fairly conclusive evidence of the extension from the central organs by the lymphatics down the cord.

In case 2 the left vesicular lesion was just as destructive as the epididymal, though the epididymitis was but two months old, also the upper and lower ends of the vas were extensively involved, while the upper pole of the epididymis showed normal areas. His right seminal vesicle and ampulla were microscopically normal and even though he died of extensive pulmonary tuberculosis four months later, the right epididymis and vas remained normal, again showing the strong probability of primary vesicular infection.

Case 3 shows conclusively primary prostate and vesicular infection by the epididymitis being preceded by a month or two of bladder neck symptoms with normal kidneys before and after the perineal operation.

Cases 4 and 5 prove that all cases of tuberculous deferentitis and vesiculitis do not abate on epididymectomy or castration, and speak conclusively for the early radical operation.

Tuberculin was used for relatively short periods of time in the first three cases and was undoubtedly effective. Directions in general T. B. hygiene were given in all cases. Spinal and local anaesthesia worked very well in the second case and should be used in all cases of doubtful pulmonary conditions. Sterility should not enter the question of doing the radical operation, as practically all cases of tuberculous epididymitis, whether unilateral or bilateral, are reported as sterile (another point showing the primary, or very early involvement of the vesicles or vasa). As to impotence, the first and third cases were so before the operation, while the fourth and fifth unilateral cases were not materially affected.



Case 5.—Tuberculous Right Seminal Vesiculitis and Deferentitis.

The first patient has recovered his sexual capacity to a satisfactory degree. Though too short a time has elapsed since the operations to draw conclusions as to recurrence of tuberculosis in them, certainly a more hopeful outlook is given them by the more complete removal of diseased organs.

CONCLUSIONS

The above case reports, operative findings, and pathological examinations indicate the probable primary tuberculous lesion of the seminal tract to be most often in the pelvic genital organs.

The globus minor of the epididymis is generally next attacked.

The only hope of radical cure or complete arrestation of the disease is by the radical operation—that is, excision of the tuberculous seminal tract.

A better educated examining finger will detect more involvement of the prostate and vesicles.

If the patient with unilateral epididymitis is seen early enough there may be hope of removing the entire tuberculous tract while it is still limited to one side, and saving for him the opposite seminal tract.

(I wish to express my appreciation of the kind assistance given me by Doctor F. E. Blaisdell in photographing the excised organs and in studying the pathology.)

490 Post Street.

DISCUSSION

MARTIN MOLONY, M. D. (1054 Sutter Street, San Francisco)—Doctor Dillon is to be congratulated on bringing forward the question of the cure or arrest of genital tuberculosis by radical operation. This subject has been the cause of much discussion with production of numerous statistics. A correct knowledge of the disease: How it originates and how it spreads, is the first essential to a successful attempt at extirpation.

Tubercle bacilli do not always indicate their presence by the production of a tuberculous lesion: moreover tracing the paths taken by tuberculous infection when it has gained entrance into the body is especially difficult.

To treat tuberculosis of the epididymis or any other

portion of the uro-genital tract as if it were a separate pathological entity would be entirely irrational. Tuberculosis of the testicle is, in the great majority of cases, but an indication of disease in the uro-genital tract at large and showing a tendency to become generalized. Any separation of uro-genital tuberculosis into anatomical divisions is artificial and merely for convenience sake. Tuberculosis of the testicle or any portion of the uro-genital tract is almost always secondary to tuberculosis of the lungs or lymphatic glands and is rarely the sole manifestation of tuberculosis in the body. Tuberculosis of the epididymis is rarely the primary lesion in the uro-genital tract: Infection of the testicle takes place in tuberculosis as in gonorrhea by means of the cord and not by the blood stream. It is extremely rare to find tuberculosis of the epididymis without finding some indication of disease of the prostate or vesicles. Prostatic tuberculosis, on the contrary, is frequently found without any lesion in the testicle.

Tuberculous disease of the testicle is analogous to acute infections extending to the urethra, tuberculous epididymitis has no analogy to the haemotogenous orchitis of mumps. The prostate, therefore, with its surrounding network of lymphatics, plays an extremely important role in the development of tuberculosis of the testicle. It is the market square for distributing tuberculosis to the seminal vesicles and testicle just as it distributes gonococcal and pyogenic infections. Post-mortem statistics and laboratory experiments show that such is the case. Tuberculosis of the genitals is found very commonly associated with tuberculosis of the kidney. When nephrectomy is successfully performed in those cases of uni-lateral tuberculosis of the kidney, improvement in the genital disease invariably follows. Removal of the epididymis, prostate and vesicles is a severe operation and may have serious consequences upon the general condition of a patient with tubercular disease. The field of operation is liable to be flooded with tubercle bacilli and we know instances where rapid tuberculosis followed operation resulting in the death of the patient.

The removal of a tubercular tonsil in a case of renal tuberculosis produced an acute exacerbation of the renal disease and death followed. Radical operation on a rectal fistula produced an acute outbreak of tuberculosis of the lungs with death. Many instances can be cited where extension of the tuberculosis followed operative procedures.

Heroic operations for the removal of genital tuberculosis have not given satisfactory results and have been abandoned by most surgeons.

Genital tuberculosis is a comparatively mild form of tuberculosis and is not of itself dangerous to life. The chief danger is involvement of the urinary organs. Dietetic, hygienic and tuberculin treatments are often successful. Surgery should be limited to drainage and treatment of abscesses and sinuses.

R. L. SCHULZ, M. D. (Story Building, Los Angeles)—Different tissues present different degrees of susceptibility and regeneration following infection with the tubercle bacillus.

We know that tuberculosis of the kidney is not arrested until complete destruction of the kidney has taken place. The ureter and bladder become involved secondarily and if the lesions have not become too extensive, healing takes place after the source of infection in the kidney has been removed. The reactions to tuberculosis differ in kidney on the one hand and in the ureter and bladder on the other. The kidney is composed of a soft, richly cellular epithelial tissue with comparatively little connective tissue, its resistance to tuberculous ulceration is practically nil. The ureter and bladder are composed chiefly of connective tissue in which the resistance to tubercle infection and tendency to repair is good. There is also a good tendency toward repair of tuberculosis in bony and lung tissue, if the lesion has not become too extensive and if the proper hygiene is followed.

A similar condition exists in the genital tract. The seminal vesicle and epididymis have no resistance to tubercle infection. The vas seems to have better resistance, the lesions are not so extensive in the earlier stage. The vas seems to react something like the ureter in regard to tuberculosis. The relative proportion of epi-

thelial tissue in the seminal vesicles and epididymis is greater than in the vas or ureter. Perhaps it is because of this that these tissues are more susceptible. At any rate, we know that spontaneous healing of these organs does not occur without their complete destruction as in the kidney and there is greater probability of extension of the process to neighboring tissues.

From this point of view, the principles upon which this operation is based are fundamentally correct and any procedure less than that cannot be expected to result in a cure. The radical operation removes those portions that are diseased and not capable of spontaneous healing. Thus it gives the other organs, whose resistance is better, a chance to recover.

It is important to consider the general physical condition of the patient, particularly with reference to tuberculosis elsewhere, kidneys, lungs and bones. We should not be arbitrary, but by careful observation determine if the patient has sufficient vitality to recover after a radical operation or whether the progress is so rapid that recovery is not to be expected. I would consider the slowly progressive cases, otherwise in good physical condition, more suited for this operation, particularly where there is good tendency toward fibrosis of the tissues.

If a patient's general condition is such that he could not stand the radical operation, epididymectomy and implantation of the free end of the vas into the skin of the inguinal region so as to provide drainage might be tried. I have seen wonderful improvement in an otherwise hopeless case where the vas was drained for a long time. If the patient's general condition can be improved, the radical operation can be done with greater safety.

FLOYD F. HATCH, M. D. (Deseret Bank Bldg., Salt Lake City, Utah)—It is my opinion that radical removal of large portions of the genital tract in cases of local tubercular infections of the tract is not wholly justifiable except in certain instances. The patients are often in poor physical condition, the operative mortality is high and statistics show that a reasonably large percentage recover with operations of a palliative nature, when accompanied by proper general tuberculosis regime.

As genital tuberculosis is frequently but a local manifestation of a general tubercular infection, a remnant left in the genital tract does not of necessity do every patient positive harm; while a formidable operation may so reduce vitality as to make the patient an easy prey to generalized tuberculosis or a secondary infection.

I consider the radical operation suitable only in cases where recovery does not follow persistent and conservative medical and surgical treatment.

Doctor Dillon's carefully prepared data will add to the accumulating fund of reliable information and aid us in more clearly defining the justifiable attitude in treatment of tuberculosis of the genital tract.

Doctor Dillon (closing)—I feel very grateful to Doctors Molony, Schulz and Hatch for their very able and valuable discussions which cover practically all the important points on the treatment and management of seminal tuberculosis. It is quite true that genital tuberculosis is a secondary infection, but in a large number of cases there are no demonstrable primary foci. If we can develop an operation which will completely remove the entire secondary genital focus, consisting of chronic abscesses of the vesicles in most cases, we can offer those patients a better chance for a complete cure of their primary focus and a longer lease of life, under proper anti-tubercular hygiene.

The chief handicap to a more widespread use of the radical operation is the difficulty of the operative technique. Perineal surgery is attended by a relatively low operative mortality record, and in trained hands operative accidents are becoming rare, so that the surgeon is gaining more confidence in his ability to save and prolong lives with a minimum risk of bad functional results.

"The real master," says J. E. Sweet in an interesting definition of research (Ohio Med. Jour.), is the man who has the proper balance between science and art, the man who really knows what constitutes medical research. Medical research is composed of only two things—a point of view and time to think."

THE IMPORTANCE OF PROGNOSIS IN SOME ACUTE ABDOMINAL SURGICAL CONDITIONS *

By R. E. SKEEL, M. D., Los Angeles

Prognosis under various forms of surgical treatment is of great importance to the patient and the surgeon, but of more importance to the patient is the prognosis if no operation is performed—what will be the outcome and what can he expect before a natural termination is effected either by cure, permanent disability or death?

The surgeon's satisfaction over a technically accurate and perfectly completed operative manipulation is not likely to be shared by the patient's friends or the public at large if the patient dies, and it behooves us always to look beyond the general diagnosis and its implication of an operation, to the question of prognosis in which it has well been said that experience is fallacious and judgment difficult.

As prognosis depends upon a minute differential diagnosis, anything which contributes to an accurate pathological diagnosis contributes likewise to an accurate prognosis and here lies one of the drawbacks in the otherwise excellent movement known as hospital standardization. It is unfortunate that some term other than "standard" was not devised to meet this hospital reform movement, for standardization means standing still on our present knowledge, the limitations of which we all acknowledge.

THE short paper which I have the honor of presenting to you is a plea for greater consideration of prognosis in certain acute surgical diseases, prognosis in this connection meaning the course and natural termination of the disease without treatment other than nature provides.

Medical literature abounds in the consideration of disease processes under the headings of etiology, pathology, symptoms and diagnosis, prognosis and treatment. Hints or statements regarding prognosis are often found under other headings, but when discussed separately writers frequently deal with prognosis as influenced by various forms of treatment, not the uninterfered with natural termination of the disease process.

Prognosis under various forms of surgical treatment is of great importance to the patient and the surgeon, but of more importance to the patient is the prognosis if no operation is performed. What will be the outcome and what can he expect before a natural termination is effected either by cure, permanent disability or death? Together with the prognosis under surgical treatment, this is what the patient must know before he decides between letting nature take her course or submitting to operative procedures, for after all it is the patient who must decide, unless by specific request he passes to the surgeon the responsibility of decision. In this connection, one always recalls Kocher's famous dictum when discussing the subject of "Gall-stones: Do They Belong to the Physician or the Surgeon?" Kocher's answer was that they belonged to neither; they belonged to the patient, and if he chose to drink Carlsbad water and keep his gall-stones it was no one's business but his own.

It is axiomatic that no prognosis can be given until a diagnosis is made, but with present-day facilities a *general* diagnosis is almost always possible, while prognosis tarries far in the rear because

a more minute pathological diagnosis is not at hand. Operative procedures are likely to be advised on the basis of this *general* diagnosis alone, whereas, excepting only such conditions as carcinoma, intestinal strangulation and visceral perforation, they should be advised on the basis of the prognosis in the *individual* case, and in this connection it is interesting to observe that our advice is likely to be based on the absence rather than the presence of prognostic knowledge, as illustrated by the following examples:

ACUTE APPENDICITIS

Even in an audience composed of a distinguished aggregation of surgeons, how many know the prognosis of absolutely untreated appendicitis? A surgeon of vast experience and more than local reputation, in a personal conversation, made the positive assertion that every one of his operated patients with acute appendicitis would have died had they not been operated upon, that the conditions revealed when the abdomen was opened proved that a fatality was imminent and recovery impossible. When this man said to his patient with acute appendicitis that he must submit to operation or die, he was perfectly honest but profoundly mistaken. The opinion was in error, inasmuch as it was based solely on operated patients, since he did a referred practice and never knew how many recovered spontaneously or under some form of expectant treatment.

Twenty-five years ago I was proud of the fact that I had only a 15 per cent death rate in a fair series of operated patients with acute appendicitis, but this mortality was based on neglected, delayed cases; all, either with general peritonitis or localized abscess, which had not yet ruptured into the intestine. In other words, there was a salvaging of most of the 85 per cent instead of a loss of 15 per cent, but even some of these conceivably could have recovered without operation.

At this time I was much intrigued by acute appendicitis, for the early operation was not favored by all surgeons and was decidedly opposed by most physicians, so I pounced with avidity upon a hospital report issued by one of the smaller Vienna institutions that accepted male patients only, and in which operation for acute appendicitis never was performed. I came upon this report by accident while browsing around the library of the old Krankenhaus, and it showed a mortality rate for acute appendicitis, unoperated, of exactly zero. Like many other things European, however, there had crept into these statistics a trifling sophistry, for there had been exactly fifteen deaths from acute peritonitis in men. Allowing that one or two of these were perforating peptic ulcers, it seems rational to think that 15 per cent might be a fair prognostic rate to put upon acute appendicitis, without operation, but even this seems extravagantly high when one considers the great number of patients reporting one, two, or three previous attacks of appendicitis from which they had recovered. As a matter of fact, we don't know the spontaneous death rate of uninterfered with appendicitis, nor have we as yet any exact data to guide us in the individual case with which we may be confronted. In early cases, therefore, we advise operation, because of the practically uniform

* Presented at the General Sessions of the C. M. A. at the Yosemite meeting, May, 1925.

recovery rate and our ignorance of what will happen if operation is done. There are other weighty reasons, such as cutting short the period of pain and disability and the removal of the diseased organ, but, on the whole, if operation presented more deaths than a let-alone policy, the patient might be quite willing to suffer longer and carry his potential assassin in his abdomen.

TUBAL PREGNANCY

What is the prognosis of tubal pregnancy? How many surgeons ever have seen a death from tubal pregnancy if no operation was performed? I suppose that all coroner's physicians in large cities have seen some instances, but I have not.

Of course, we understand that an explanation is found in that even the most rabid anti-medical faddist relents at the last moment and calls medical or surgical aid, so that operation is done on most patients before death ensues—but just how often would death ensue? That some die is certain, but a prognosis, based on the old idea that a large vessel is bleeding and must be tied, else the patient will die, is entirely fallacious. That rupture of a tube at the uterine horn might cause sudden death from hemorrhage is conceivable, that tubal abortion would have the same result is equally conceivable and that death might follow repeated chorionic erosion through the tubal peritoneum, if the foetus lived, is quite possible. All patients with sudden hemorrhage into the closed abdomen suffer as much from peritoneal shock as from blood loss, just as patients with duodenal or gastric perforation suffer shock from extravasation into the abdominal cavity with no hemorrhage whatsoever.

Again, one operates in tubal pregnancy because he is ignorant of the exact pathology in the *individual* case and, therefore, is in total darkness as to the prognosis.

That the influence of prognostic information is of great importance and that we should arrive at the most definite possible knowledge in order to do satisfactory work, is revealed in the changed attitude regarding the treatment of acute pelvic inflammation. Under Lawson Tait's teaching, an acute salpingitis meant that that tube must come out at once, and even my revered teacher, Joseph Price, held to this opinion to the last.

With a clearer conception of the pathology of acute pelvic inflammation, we know that acute gonorrheal salpingitis in the adult is without mortality, but the operation therefor is sometimes fatal. Operations, therefore, is delayed to the cold stage, when it not only is safer but more conservative as regards the other pelvic organs which are but temporarily involved.

Could we attain to the same degree of diagnostic differentiation in acute cholecystitis, acute appendicitis and tubal pregnancy, that we have in acute salpingitis, some of these cases would be left to the cold stage and operated upon with more safety and greater satisfaction.

In criticism of the foregoing, it can be said that it is elementary, which it certainly is, merely a primer of surgical philosophy. However, the reasons for presenting it seem to me sufficiently good to justify a few moments' time.

First. Just as the bulk of all obstetric work is done by the general practitioner instead of the obstetric specialist, so I am convinced the major part of all surgery is done by the general practitioner surgeon, and not the surgical specialist.

If this be true, the occasional surgeon must operate from the background of surgical authority as given in surgical literature, both textbook and periodical, and not upon the basis of his own knowledge acquired through research and extensive personal experience.

When surgical authority says operate at once for intestinal strangulation or perforation of the stomach or duodenum, the advice is absolutely sound because the patient otherwise is doomed, and even the most imperfect operative procedure may save life.

When the same authority says to do an immediate cholecystectomy for acute cholecystitis, an appendectomy for acute appendicitis or salpingectomy for tubal pregnancy, his advice is sound only if the disease is in its incipency or his advice is to the surgical specialists only, for *pari passu with the incidence of complications the operative prognosis increases in gravity*, whereas the disease prognosis remains exactly as it was at the outset. An urgent plea for early operation to be sure, but also a plea not to convert a possible natural recovery into an operative death.

Second. The technique of the average operating-room personnel and the technique of the occasional operator is likely to be founded upon a preponderance of experience with chronic disease. This includes profound anesthesia followed by field preparation, pedantic manual and instrument manipulation, meticulous asepsis and academic wound closure.

Unless the surgeon can change the pace of himself and his operating personnel, do his preparation before anesthesia, use local to shorten the time of general anesthesia if the latter is necessary, get into the abdomen, do only the absolutely necessary work, then get out with simple suturing methods, he has no right to operate upon these late cases. Acute cholecystitis *may* subside, large intraperitoneal abscesses due to appendicitis sometimes ruptures into the gut, the ovum dies or syncope stops the bleeding of many ectopics. Their prognosis untreated is not absolutely bad, but the prognosis of any of them after a formal deliberate operation, as for the disease in its early stages, is inexpressibly fatal.

The surgeon's satisfaction over a technically accurate and perfectly completed operative manipulation is not likely to be shared by the patient's friends or the public at large if the patient dies, and it behooves us always to look beyond the general diagnosis and its implication of an operation, to the question of prognosis, in which it has well been said that experience is fallacious and judgment difficult.

Third. The profession of medicine and surgery is under assault by all the under-educated vicious systems of cultism and quackery in existence, and it behooves all writers on surgical subjects to be discreet in their utterances, which go to the entire profession and often to the public, as well as the surgi-

cal specialist. It also behooves the individual who meets with a surgical condition to express himself clearly on the diagnosis and prognosis. After all, any profession will survive only as it meets with general public approval, and public opinion is based more largely upon the parallelism between the doctor's prognosis and the actual outcome than any other one factor.

As prognosis depends upon a minute differential diagnosis, anything which contributes to an accurate pathological diagnosis contributes, likewise, to an accurate prognosis, and here lies one of the drawbacks in the otherwise excellent movement known as hospital standardization. It is unfortunate that some term other than "standard" was not devised to meet this hospital reform movement, for *standardization* means standing still with our present knowledge, the limitation of which we all acknowledge.

It is unfortunate, too, that in accordance with the plan of this standardization, that man whose pre and post-operative diagnoses most frequently agree should be regarded as the most competent, because in the diagnosis of abdominal disease this tends to the use of those all inclusive terms "acute abdomen," a philological monstrosity, and "pelvic" or "abdominal tumor," so that the poor diagnostician can cover his lack of knowledge, while the man who says perforated duodenal ulcer and finds a perforated gall-bladder is presumed to have made a mistake. In this respect the present method of handling standardization puts a premium on the sloppy diagnostician which must be obviated sooner or later by insistence upon an accurate pathological diagnosis, but meantime prognosis suffers, and as prognosis suffers so does our standing in the commonwealth.

2007 Wilshire Boulevard.

FACTORS INFLUENCING THE MORBIDITY AND MORTALITY OF EXOPHTHALMIC GOITER

By JOHN HUNT SHEPHARD, M. D., *San Jose*

I wish to plead for a more careful classification of thyroid enlargements; to divide them into their pathological and also their clinical groups. To diagnose hyperthyroidism before exophthalmos and cardiac degeneration appear. For the present, to operate early. To carefully supervise the post-operative life of these patients, and, for the rank and file of us, to follow the paths proven to lead to the best results, leaving for those especially qualified and equipped the privilege and responsibility of experimenting with new methods.

I, unhesitatingly, state that I look forward to the time when thyroidectomy will not be the treatment for this disease as it is irrational to destroy a portion of any factory in order to curtail its output, but in the light of our present knowledge greater success is obtained by a properly performed thyroidectomy than by any other treatment.

DISCUSSED by C. A. Dukes, *Oakland*; J. H. Pettis, *Fresno*; C. G. Toland, *Los Angeles*; Vinton A. Muller, *Reno, Nevada*, and J. Wallace, *Salt Lake City, Utah*.

ALTHOUGH the literature is surcharged with reports on the morbidity and mortality of goiter, it is characterized by a paucity of definite information. The great majority of the reports are markedly lacking in a careful differentiation of the various types of thyroid enlargement, the duration of symptoms, and the degree of intoxication. In

studying these reports, one cannot help but feel that some have been diluted, so to speak, by combining the non-toxic group which have a very low mortality, with the toxic group which carry a high percentage of unfavorable results. In 1923, Pemberton published a most carefully classified report of 1296 patients operated upon for goiter in 1922. Of these 1296 patients, 633 had exophthalmic goiter. There was performed upon these 633 patients 1093 operations, with eleven deaths, a mortality rate per operation of 1.01 per cent, and per patient of 1.73 per cent. Six of the eleven deaths followed what might be called preliminary surgical treatment, i. e., ligation of the thyroid vessels and hot water and novocain injections. That it was considered necessary to perform 1093 operations on 633 patients, is evidence of the large number of highly toxic patients in this group. During the same period, 663 patients with non-toxic adenomata were operated upon with one death, a mortality rate of 0.15 per cent. If the two classes are combined, we find twelve deaths in 1296 patients, a mortality rate of .93 per cent, a figure which looks well in print, but which would be without meaning. This report of Pemberton's gives us a standard for comparison, and if his mortality rates are to be lowered it will be accomplished in the pre-operative and post-operative care and consideration given goiter patients.

It seems proper to ask why was it necessary to perform 1093 operations on 633 exophthalmic goiter patients? I believe the answer is, late diagnosis and later, submission to operation. In the early stage of Graves' disease the patient's ability to withstand surgical intervention is on a par with the patient having a non-toxic adenoma, and if we are to improve our results we must learn to recognize the disease before all the classical signs, as exophthalmos, tremor, tachycardia, and thyroid enlargement make their appearance. Exophthalmos rarely appears earlier than three months after definite disturbance of health, and in approximately 20 per cent of the patients never appears. Enlargement of the thyroid may be so slight as to easily escape detection, the characteristic tremor may be late in appearing or may be modified by some concomitant disease, and tachycardia may not be pronounced in patients with a B. M. R. as high as a plus 30. If we consider exophthalmic goiter as an acute intoxication, exerting its chief influence upon the energy production of the individual cells of the body, we will be able to make an earlier diagnosis, and the extreme picture of Graves' disease will become as rare as an appendiceal abscess. The first symptom of this intoxication is cerebral stimulation. The patient becomes more mentally alert; bodily movements quicken, and the daily capacity for work is often actually increased. This is soon followed by vaso-motor disturbance of the skin expressed by increased bodily warmth, perspiration and flushing, the result of an increasing radiation to compensate for the increased heat production. Tremor follows and the cerebral stimulation passes on to mental irritability. At this time the patient and her friends notice that she is nervous, and medical advice is usually sought. The blood pressures will show a little widening and, together with a slight or moderate acceleration of the pulse rate, indicates an in-

crease in the per minute output of the heart, made necessary to accommodate the increased cell metabolism which, in turn, is reflected in an increase in the B. M. R. Later, tachycardia, loss of strength and weight, in the face of a normal or increased food consumption, and cardiac insufficiency, as evidenced by exertion dyspnea follows in rapid succession, while bilateral exophthalmos adds its final touches to the picture.

The conception that exophthalmic goiter is an intoxication should be definitely impressed upon those responsible for the patient's welfare. The patient herself is irresponsible. She needs daily reassurance and positive firm opinions. Left to herself she wanders from one doctor to another, while the thyroid intoxication continues to increase and produce irreparable changes in vital organs. No matter what form of treatment is instituted, confinement to bed is essential, as by so doing the heart is relieved of that extra work required by activity over rest. The too prevalent custom of office-treating these patients cannot be too strongly condemned.

In the determination of their B. M. R., the load which these patients are carrying is weighed with the same degree of accuracy that we weigh a load of coal. But the size of the load is not the only factor to be considered. We must determine the ease with which the patient is carrying her load. An overload of 30 per cent may mean more to one patient than a 60 per cent does to another. It is essential to know the approximate date of the onset of symptom; whether or not there have been previous periods of marked hyperthyroidism, and of particular importance as to whether or not the intoxication is on the increase or receding. The cardiac reserve, which practically means the patient's ability to carry her load, plus the additional strain of any operative procedure, can best be judged by a study of the relationship existing between the pulse rate, the pulse pressure, and the B. M. R. A relatively low pulse rate with a relatively high pulse pressure and a given B. M. R. speaks for a better cardiac reserve than a relatively high pulse rate and relatively low pulse pressure with the same B. M. R. In the first instance the heart is accomplishing its task of furnishing an increased per-minute output by increasing the output of each beat, while in the second instance it is maintaining the increased per-minute output by increasing the number of beats per minute.

Next to the cardiac reserve the nervous stability of the individual is of prime importance. Apart from the restlessness, irritability and spasmodic crying, the variation in the pulse rate during the daily visitation deserves careful consideration. It is interesting and enlightening to use a pulse-computing watch, and note the variation in the pulse rate taken without, and then with the patient's knowledge that her pulse is being counted. Frequently, a variation of twenty to forty beats is noted, and whenever the variation under this test is over twenty beats, the patient is a poor risk for any extensive operative interference.

Since these patients are producing an excessive amount of heat they require an increased amount of water, and attention should be given the daily total output of urine and sufficient fluids adminis-

tered to maintain an approximately normal amount. To accomplish this may require the intake of three to four quarts of fluids daily. If the patient can or will not take that amount, then normal salt solution should be given per rectum.

Kendall and his co-workers were able to produce a modification of thyroxin, which contained but two iodine radicles; thyroxin proper contains three. The physiological effect of this compound was markedly different from the true thyroxin. This experimental work supported a belief which Plummer had held for some time, i. e.: That in exophthalmic goiter there is not only an increase in the quantity, but also a change in the quality of the thyroid hormone, and in March of 1922 he began administering iodine in the form of Lugol's solution to his exophthalmic goiter patients. No single discovery has been so valuable in the pre-operative treatment of this disease. Patients in an acute thyrotoxic crisis, unable to retain anything in their stomach will, after three to six doses of 40 min. of Lugol's solution per rectum, retain nourishment. Its effect upon the B. M. R. is marked. When given in 10 min. doses three times daily for ten days the B. M. R. will drop 15 to 40 points, and the patient's condition correspondingly improves. Under the routine use of this drug the necessity for preliminary ligations is reduced over half. Also under its use the vascularity of the gland is greatly diminished, its friability decreased, and a thyroidectomy made much easier.

The operative technique is so well standardized that the only question that arises is, will the patient stand a primary thyroidectomy, or shall some preliminary surgical procedure be employed? Upon the proper decision of this question rests the surgeon's mortality rate, and experience in evaluating the patient's cardiac and nervous reserve is essential for a correct answer. Doubt will often arise in the mind of the most experienced, and under such circumstance it is safest to employ the next less severe procedure. If doubtful as to the patient's ability to withstand the strain of a thyroidectomy, ligate a superior vessel; if only a mild or no reaction follows, then a thyroidectomy is safe a week later; if a severe reaction follows the ligation, then a week later do another ligation; and if a severe reaction follows the second, wait six to eight weeks before performing the thyroidectomy. Death following a thyroidectomy performed eight weeks following a double ligation is very rare.

The post-operative care and supervision of these patients is too frequently delegated to the other fellow. Immediately after returning the patient to bed from the operating-room she should be given a hypodermic injection of morphine, the dose depending upon the size of the patient, and as soon as she is quiet enough to permit proctolysis of 10 per cent glucose in a 5 per cent sodii bicarbonate solution should be started and continued until enough water is being taken per mouth to hold the urinary secretion up to normal. If for any reason proctolysis is not possible, then hypodermoclysis should be resorted to and never lose sight of the fact that these patients are burning at an abnormal rate, and water is as essential to them as it is to a racing automobile. During the first twenty-four to forty-

eight hours a small dose of morphine every six hours or oftener permits rest obtained in no other way. As soon as the stomach will tolerate the drug, Lugol's solution should be started and continued for three to four weeks. Metabolic studies show that within the first eighteen days the B. M. R. drops a little over one-half of what it was immediately before thyroidectomy. From this period the drop is slower and often the normal rate is not reached for three to six months. It must be remembered that the cells of these patients have been submitted to a heavy task, and six months should be allowed for their convalescence and no patient discharged as cured until their B. M. R. has returned to normal. The necessity for this prolonged post-operative rest and study is best explained to the patient and her family before any operative procedure is undertaken, otherwise they often feel that the surgeon has failed to accomplish what he expected and is trying to complete his work with medical treatment which might have been successful without surgery. We have even gone so far along this line as to refuse to operate until exacting a definite promise from the husband that he will provide competent help for his wife for at least six months. Some improve more rapidly if sent from home, while others are favorably influenced by home surroundings. Careful supervision of the post-operative life is essential if we are to secure the maximum results. Some have criticized us, arguing that since we ask so much medical support for our surgical work in obtaining a cure from exophthalmic goiter that surgery should not be a part of the treatment. I unhesitatingly state that I look forward to the time when thyroidectomy will not be the treatment for this disease, as it is irrational to destroy a portion of any factory in order to curtail its output, but in the light of our present knowledge greater success is obtained by a properly performed thyroidectomy than by any other treatment.

In conclusion, I wish to plead for a more careful classification of thyroid enlargements; to divide them into their pathological and also their clinical groups. To diagnose hyperthyroidism before exophthalmos and cardiac degeneration appear. For the present, to operate early. To carefully supervise the post-operative life of these patients, and for the rank and file of us to follow the paths proven to lead to the best results, leaving for those especially qualified and equipped the privilege and responsibility of experimenting with new methods.

Twohy Building.

DISCUSSION

C. A. DUKES, M. D. (Central Bank Building, Oakland)—To discuss a well prepared paper, to the facts of which we thoroughly agree, reminds me of the radio and its amplifications. Possibly, I can take some of the low tones of this paper and amplify them so that the emphasis would create a greater appreciation of the facts. The systematic manner in which Doctor Shepard has provided his argument of the factors involved, "The morbidity and mortality of exophthalmic goiter," impresses me as rational.

1. Education of the patient. It seems to me that too little attention is paid to the prevention of goiter. The young girl, and for that matter, the young man, should be taught to appreciate some of the consequences of the thyroid gland.

2. Shepard accentuates the importance of the relation-

ship between the physician and the surgeon. The pre-operative and post-operative treatment should be a close alliance of the physician and surgeon. Many, who have made an extensive study of the surgery of goiter, have called our attention to the necessity of a close study of the nervous economy and of the heart, and have pointed out to us how essential it is that the various steps should be carefully observed in the various types of goiter, particularly exophthalmic goiter, early and late. I have been particularly impressed with the details of Crile's method of safeguarding the heart and his particular care of the nervous economy. The infinite details which he gives to prevent shock are certainly all important influences in the morbidity and mortality of exophthalmic goiter. I particularly approve of post-operative supervision, the use of proctolysis, of glucose and soda and opiate; also, of the use of Lugol's solutions. Necessarily, the laboratory study, pre-operative, should be carefully observed.

Although I cannot be as hopeful of entire elimination of thyroidectomy as the author of this paper, I do believe that the long continued post-operative observation should be carried out by a physician who takes a particular interest in helping the surgeon cure this troublesome disease.

J. H. PETTIS, M. D. (Mattei Building, Fresno)—Doctor Shepard has so well summed up the toxic goiter question as we see it today and his views so nearly coincide with my own that I shall confine my brief discussion to on or two points which seem to me to be important.

Many of the mild hyperthyroid patients, with only a moderate increase in the metabolic rate, are found to have foci of infection, such as apical abscesses, infected tonsils. A considerable number of them are very definitely improved by the removal of these foci and I am convinced that not a few of them are permanently relieved of their symptoms by such treatment. Those patients who show only temporary improvement will come to operation in better condition for having had these foci eliminated.

In the severe thyrotoxic patient, partial removal of the gland is the only certain means of permanent improvement. I have seen a number of such who were markedly relieved by radium and x-ray. This improvement has been temporary. As a means of preparation for surgery, radium and x-ray treatment are comparable in value to polar ligation, but have the disadvantage that they increase the operative difficulties. Too, polar ligation, by the amount of reaction produced, gives us a fairly accurate index to the patient's ability to withstand lobectomy. By carefully following out the pre and post operative procedures so fully outlined by Shepard, many patients with beginning cardiac failure and even those with permanent irregularities can usually be carried through a skilfully performed lobectomy under local or gas oxygen anesthesia.

CLARENCE G. TOLAND, M. D. (523 West Sixth Street, Los Angeles)—Doctor Shepard's paper is one of great interest, both from the standpoint of the state in which we find our exophthalmic goiter patients and how we may reduce the mortality.

We believe that all cases of exophthalmic goiter are surgical at the present time, but they should be thoroughly studied before the time is set for the operation. Some of the patients may be ready in a very short time, while others will have to be under observation and carefully treated for many weeks before any type of operation may be safe.

We have had a great deal of satisfaction from the use of Lugol's solution as a preliminary treatment when associated with rest in bed, plenty of good food, and the elimination of coffee and tea. Lastly, these patients should be removed from the home surroundings and placed in the hospital where the operation is to be done.

Pemberton says, "There are three main factors that have helped to lower the operative mortality.

1. Pre-operative management; 2. Improvement in surgical technic; 3. The patients with exophthalmic goiter, coming to operation earlier, before visceral degeneration changes have taken place."

He further states, "Since the use of Lugol's solution as a preliminary treatment the number of primary ligations has been reduced 75 per cent."

There has been no great change in the operative tech-

nic. However, he believes that the surgeon has come to a better realization of the importance of nerve injuries, for instance, 95 per cent of the post-operative obstructive dyspneas are due to injuries of the recurrent laryngeal, while formerly we believed an injury to this nerve resulted in only cord paralysis.

He further states, "Since January, 1924, the operative mortality rate of exophthalmic goiter is 0.66 per cent. This is proof that iodine in the pre-operative treatment of exophthalmic goiter is of real value." Iodine treatment probably will not cure these cases without operation, however, we must remember there are a number of cases before the iodine period who recovered spontaneously.

We believe that some physiologic-chemist, who is associated with a physician, who understands exophthalmic goiter clinically, will give to the world some knowledge that will cure exophthalmic goiter without surgery. As we all know, there must be some sudden chemical change about which we know nothing, that we believe some day will be demonstrated to us.

VINTON A. MULLER, M. D. (Gray-Reid Building, Reno, Nevada)—Doctor Shephard covers the subject of Grave's disease in such an ideal manner in his paper and his views coincide to such an extent with my own, that in my discussion I shall simply attempt to elaborate on a few of the points brought out. In the beginning of his article, Shephard speaks of the need of careful differentiation of the various types of thyroid enlargement. Probably the most confusing type is adolescent goiter associated with tachycardia and increased nervousness with symmetrical swelling of the neck, especially if it is of the vasomotor type with thrills and bruits. The all-important factor of differentiation of this condition lies in the basal metabolic rate which is always increased in active Grave's disease, but is not increased and frequently may be below normal in the adolescent goiter herein mentioned. Adenoma, associated with hyperthyroidism, may be confusing at times, but should not be if one considers its nodular appearance, asymmetry, and the history of long-standing goiter with symptoms of hyperthyroidism appearing years after the first appearance of the goiter. These adenomas more definitely affect the cardio vascular system; they cause higher blood pressures, both systolic and diastolic, than are seen in Grave's disease. They leave one with definite hypertension. The basal metabolic rate is, as a rule, not as high in an adenoma associated with hyperthyroidism as it is in exophthalmic goiter.

I wish to emphasize how rapidly the beneficial influence of Lugol's solution passes upon withdrawal of the drug. When the maximum effect is obtained from its use, namely in about eight or ten days, and a ligation done at this time, abrupt withdrawal of the Lugol's solution after the ligation may precipitate a very severe reaction, whereupon the patient may not react to the second administration of the drug as quickly or as satisfactorily as she did primarily. Therefore, this drug should be continued after ligation or thyroidectomy, as before, and withdrawal effected gradually.

When ligating a superior vessel, it is not only important to identify the vessel, but one should include in the ligation a portion of the superior pole, as in this way, the sympathetic fibers entering the gland with the superior vessels are included. The reason for this is that the thyroid gland receives stimulation through these fibers.

In doing thyroidectomy it is important to thoroughly wash the field of operation with about 500 cc. of warm Ringer's solution before closing; this cleanses the wound of blood clots, debris, etc., and thereby relieves the patient of a certain amount of post-operative temperature and intoxication from absorption. These wounds do best if not drained. Four grammes of sodium bromide in starch water per rectum before awakening is of value in quieting the patient.

Lastly, I agree with Doctor Dukes that I can not be as hopeful as Doctor Shephard in the belief that thyroidectomy will eventually be entirely superseded by other treatment. Doctor Judd has quite recently reported 64 per cent of cures in 90 out of 100 operated cases of Grave's disease with 13 per cent markedly improved, and 5 per cent slightly improved after six years' time. Fifteen per cent of the series had died from various causes.

J. WALLACE, M. D. (Utah State Board of Health, Salt Lake City)—Doctor Shephard has succeeded in enumerating and emphasizing some very important factors in the morbidity and mortality of exophthalmic goiter, and in my opinion the views expressed by him are very much in accord with the now generally accepted thought regarding exophthalmic goiter. The value of educating the people, especially in goitrous areas, as to the means of preventing goiter and the necessity of seeking the best medical advice early, in the case of goiters that are becoming toxic, cannot be over-emphasized. An early diagnosis in these patients is just as important as the early diagnosis of a "lump" suspected of being cancerous. The early rest and freedom from worry Shephard insists on are also indispensable. The proper classification of the patient, not only as to her quantitative condition, but also as to qualitative, is highly important, for more and more, whatever may be the determining factor in producing exophthalmic goiter, we are coming to regard it as the outcome of what Worthin of Ann Arbor calls "an abnormal constitution." The patient must be studied not merely as one of a class, but as an individual. And it is Crile's pre-operative study of each patient, as well as his operative skill and technique, that has won him success in dealing with these toxic conditions. It is the duty of a surgeon to see that every other available helpful agency is used for these patients as well as the knife.

The unquestionable favorable results obtained in many places from the use of Lugol's solution as a part of the pre-operative treatment not only warrants its use for this purpose, but suggests that all goiters, whether simple or toxic, may start from a common cause, the one taking on the form of a deficiency, the other of a superfluity; a suggestion that receives further support from the fact that wherever in the country most simple goiter is found, there also we find most exophthalmic.

Many physicians will not agree that all patients showing signs of toxicity are subjects for operation, because some patients have recovered without operation. Over against this, there is to be balanced the injustice that may be done the patient by delay when ultimately operative interference may be necessary. If, however, patients could be seen by their physicians when the very first symptoms of toxicity that Shephard enumerated appear, his hopes for the abolition of thyroidectomy may be largely, if not wholly, fulfilled.

SOME PATHOLOGICAL CONDITIONS OF THE TONGUE *

By HOWARD MORROW, M. D., *San Francisco*, AND
LAURENCE TAUSSIG, M. D., *San Francisco*

Leukoplakia; cancer of the tongue; tuberculosis; syphilis.

DISCUSSION by Albert M. Meads, *Oakland*; Bertram Stone, *San Francisco*; Harry E. Alderson, *San Francisco*; Laurence Taussig.

ONE of the most common lesions of the tongue, and perhaps one of the least understood, is leukoplakia. This disease manifests itself clinically as a white patch of greater or less extent on the surface of the tongue or on the other mucous membranes of the mouth. It is accompanied by a thickening, varying from a scarcely perceptible elevation to a considerable warty excrescence. These lesions are of particular interest on account of the likelihood of malignant changes occurring if they are allowed to remain or are irritated by improper treatment.

Based on their clinical course, there are, in general, two types of leukoplakia. The one is relatively transitory and tends to clear rapidly without other treatment than a mild mouth wash plus the re-

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removal of the apparent cause. The other, similar in appearance and pathology, requires destructive therapy. Both types are usually the result of some sort of oft-repeated trauma, such as that produced by smoking or by the presence of a rough tooth, or they may be due to syphilis. It was formerly thought by most authorities that leukoplakia was practically always due to lues. This is generally conceded at the present time to be untrue. However, it is probably true that a syphilitic who smokes is more apt to develop these plaques than a non-syphilitic smoker, or than a syphilitic who does not smoke. Ragged teeth and ill-fitting plates occupy the same position as smoking as producers of chronic trauma of the buccal mucosa.

When a patient presents himself with leukoplakia, the first question asked is whether he smokes or not. It is well to note that if a person is susceptible to the formation of leukoplakia, a relatively mild tobacco habit may produce the needed trauma for the development of these plaques. If the patient smokes, he is urged to stop it entirely. The next point investigated is the condition of the teeth or plate. Here the services of a competent dentist are invaluable, though it is advisable to explain the type of examination and treatment desired. Finally, syphilis must be considered as an etiologic factor in every case. There is nothing about the appearance of the disease itself to suggest lues more in one case than in another, unless mucous patches, bald patches or scars are also present. A positive blood Wassermann reaction is helpful, but a negative report does not rule out lues. A history of a primary sore or of suspicious late symptoms may be obtained to help us. If there is any reason to suspect lues, anti-luetic medication should be given as a therapeutic test. In the very superficial leukoplakia a mouth wash of hyposulphite of soda solution may prove curative, particularly when combined with discontinuance of smoking or the removal of a bad tooth. In the moderately thickened type occurring in small localized areas, painting with supersaturated solutions of trichloroacetic acid at frequent intervals often clears the lesions. In the very thick or very extensive lesions, destructive measures alone are successful. Either radium, the actual cautery or some type of electrical destruction must be used. Of these, radium has proven most successful in our hands. Following any of these forms of treatment, however, the lesions may recur and may require repeated treatment.

The pathology of leukoplakia is similar to that of seborrheic or senile keratosis, namely, a hyperkeratosis with acanthosis, a thickening of the rete pegs, and a round cell infiltration. A certain amount of fibrosis may be present.

Carcinoma of the tongue is one of the more common forms of malignancy, and it is of interest on account of the varieties that occur and because of the frequent difficulty in making a diagnosis. Many still believe that the removal of a piece of any growth for microscopical examination is dangerous. We have agreed for some time, with the growing minority, that in these cases a biopsy never causes trouble, providing it is taken from the central portion of the growth, rather than from the border, and providing the least possible trauma is produced.

Nevertheless, we have hesitated to remove a specimen except when there was a doubt as to the diagnosis. Carcinoma of the tongue often arises on an old leukoplakia, on a luetic glossitis, or on a gumma of long standing. A pre-cancerous lesion does not always occur, however. In general, there are two clinical types of tongue cancer. The one is indurated and infiltrating, usually grows rapidly, metastasizes early and is resistant to therapy, though occasionally cured by radical surgery or by efficient radium treatment. The other is papillomatous, slow-growing, late in metastasizing, and is frequently curable by surgery, radium, or the actual cautery. The latter type, unfortunately, is far less frequent than the first. Pathologically, the indurating type is almost invariably a squamous-celled epithelioma, presenting the typical prickle cells invading the structure of the mucous membrane; usually, however, showing less pearl formation than is ordinarily seen in squamous-celled carcinoma of the glabrous skin or of the lip. The papillomatous carcinoma of the tongue is microscopically similar to a benign papilloma at the outer portions, the cells being arranged in regular finger-like formation, with few or no mitoses and little variation in the size and shape of the nuclei. Sooner or later, however, these papillomatous tumors invade the submucous tissue of the tongue, and the growth loses its relatively benign character. Clinically, the papillomatous carcinoma is readily recognized. It may infrequently be associated with leukoplakia. In recognizing the indurating type, it is necessary to differentiate it from a gumma and from a tuberculous ulcer. An ulcerating gumma of the tongue of long standing occasionally shows malignant changes, and this increases the difficulty of making a differential diagnosis. It sometimes happens that a patient presents an apparently typical long-standing syphilis of the tongue. His blood Wassermann is positive, and anti-luetic therapy causes marked improvement at once. However, further treatment results in less benefit, and we find that a carcinoma remains. Probably the most satisfactory procedure would be to take a specimen of the growth in every case, as well as a Wassermann or therapeutic test. It is well to remember that a negative pathological examination is not necessarily conclusive. It happens now and then that the biopsy is taken from a non-malignant area. This is likely to happen once in a while in taking relatively small biopsies from almost any tumor, and the likelihood is increased when we are dealing with a non-malignant granuloma that is just beginning to show malignant degeneration. When this happens, only the subsequent course puts us on the right track.

Tuberculosis of the tongue is a rare condition. This is particularly true of primary tuberculosis of the tongue. Tuberculosis of the tongue in patients with advanced generalized tuberculosis is usually readily recognized, as the physical examination gives a clue to the mouth condition. A tuberculous ulcer of the tongue in a patient who presents no other manifestations of tuberculosis must be differentiated from a primary syphilitic sore, an ulcerating gumma, a traumatic ulcer, and an epithelioma. A tuberculous ulcer is apt to be painful, comparatively superficial, irregular, undermined, and the neighboring

glands may be enlarged. All of these symptoms may be found in a primary lesion of syphilis, and the only positive method of making a diagnosis in such a case is by finding the spirochetes in a dark field preparation. These are the cases in which a biopsy is usually unsatisfactory, as the pathologist can seldom differentiate a tuberculous ulcer from a syphilitic ulcer. In sections, both show a predominating round-cell infiltration, with many endothelial cells. In a luetic lesion this infiltration is usually most marked about the blood vessels, but this is not always sufficiently marked to be a differentiating factor. In either case there may be numerous giant cells and in both cases they may be of similar type, with the nuclei arranged peripherally in a more or less definite horseshoe formation. These particular giant cells are more common to tuberculous lesions than to syphilis. In both lesions there is often more or less destruction, but we only see typical tubercles with caseation in advanced cases of tongue tuberculosis. The luetic lesion is apt to be more vascular than the tuberculous lesion. The rarer types of tuberculosis of the tongue are the deep nodular type and the papillary type. Biopsies in these types are contra-indicated, as the resulting ulcers are apt to be chronic and painful. Consequently, in differentiating syphilis and carcinoma from this type, it is preferable to use a therapeutic test.

A therapeutic test should never be given a patient with a suspected chancre of the tongue until repeated dark fields have been resorted to. An ulcerating gumma of the tongue is usually recognized, as the ulcer is deep, the neighboring glands not enlarged, the dark field examination is negative, and the ulcer will clear promptly under the usual anti-luetic therapy.

Fitzhugh Building.

DISCUSSION

ALBERT M. MEADS, M. D. (1706 Broadway, Oakland)—Such a paper as presented here by Dr. Morrow and Dr. Taussig calls our attention again to lesions of the tongue, and proves the value of reiteration. Tongue lesions are often overlooked or belittled until they have reached a stage beyond repair.

Many cases of leukoplakia, before the days of radium, passed from one office to another, with very little permanent improvement, finally degenerating into malignant growths. In these pre-cancerous lesions, gratifying results are now being obtained with radio-therapy. Tongue lesions of the malignant type once called for mutilating operations, with poor results. All of us now welcome the use of radium in these cases, as the results are at least as good, if not better, under such treatment. The limitations of the Wassermann test have been emphasized, and should be taken to heart. Often a therapeutic test clears up the lesion as well as the diagnosis.

Such a paper as this, drawn from a large clinical experience, should be, from time to time, accessible to the general medical reader, as well as to those interested in dermatology, in order that the patient may receive the benefit of an early diagnosis. I am glad of the opportunity of commenting on, if not adding to, this instructive article.

BERTRAM STONE, M. D. (Flood Building, San Francisco)—This article seems to cover the subject in a very comprehensible manner.

As noted and, I think worth repetition, leukoplakia of the tongue and other mucous membranes of the mouth are, from the standpoint of treatment, either very easily gotten rid of or only with great difficulty and by radical treatment used in a thorough manner—radium or the actual cautery. As one cannot always determine the actual difficulty confronting one, it is wise not to give too

positive and clear-cut a prognosis. In my practice, I have seen more cases in women and non-smokers than in men; which, however, only indicates the danger so frequently indulged in, of arriving at conclusions on small numbers of cases. Bad teeth and poorly finished plates have been the most frequent exciting causes, and proper dental treatment and oral hygiene have been all the therapy needed; this, of course, only refers to the more innocent type of cases.

The old idea of a syphilitic etiology in all cases, at one time held by all, and at present by many, is exploded. Many, with what seems good logic, claim that it has no relation whatsoever to leukoplakia, but the majority of evidence still seems to accord it a place in the etiology. Tobacco seems to have a real connection in its production. However, as leukoplakia is practically confined to the ages of 20 to 60, and is most frequently seen in men who usually smoke, but who seldom quit just because they are 60, one might wonder if, after all, it might not be a coincidence only.

Carcinoma of the tongue is such a distressing and serious condition and the surgical treatment so radical, disfiguring and disappointing in results, if radium can offer even as good results as surgery it should be the method of choice. A point well worth reiterating is that gumma and carcinoma are often combined, and one should not continue anti-luetic treatment for any great length of time unless the lesion rapidly disappears as a whole.

Tubercular ulcers of the tongue and lips may occur in patients in whom no evidence of tuberculosis can be found elsewhere, a point well worth stressing, being a fact not generally recognized. Pathological examination, possibly a therapeutic test and a remembrance of the above mentioned fact will usually make its nature evident in a short time, if not at once.

HARRY E. ALDERSON, M. D. (240 Stockton street, San Francisco)—The writers are to be commended for placing this important subject before the profession again, because early prompt treatment of these conditions is of such vital importance. Too often we see these lesions presenting advanced degenerative changes which might have been prevented had they been taken care of early. The fault usually lies with the patient, for he is inclined to temporize even when advised regarding his trouble, until pain or other symptoms finally make him submit to treatment.

The etiology of leukoplakia and carcinoma of the tongue have been covered by the writers. It is remarkable how many of our cases of malignancy of the tongue and buccal mucosa at Stanford are seen in patients with syphilis. We have seen carcinoma cases where arsphenamin treatment of the lues has been followed by acceleration of the growth of the carcinoma—possibly due to the stimulating effect of repeated doses of the arsenic. Also the administration of mercury is very apt to increase irritation in the mouth, which, of course, is bad for the carcinoma. Certainly, the sooner malignancy is recognized and radium and roentgen therapy or surgery (or all combined) are initiated, the better it is for the patient. I believe that it is a mistake to carry out long preliminary courses of anti-luetic treatment where malignancy is progressing rapidly.

The making of dark field examinations of material from the mouth has been mentioned. It must be said that the difficulties here are great. One cannot always differentiate between the treponema pallidum and the spirocheta dentium. Noguchi has said that he finds it impossible at times. Buccal lesions of all kinds teem with enormous numbers of spirochaetae of various types, and the sp. dentium is almost certain to be present. Fortunately, however, there are other diagnostic aids that may be utilized.

I have seen beautiful results from Taussig's treatment of carcinoma with radium. Had I early carcinoma of the tongue, I most certainly should have him implant the radium emanation tubes in the same, for in my opinion that is the best treatment to date.

LAURENCE TAUSSIG, M. D. (closing)—I should like to insist upon the fact that a therapeutic test in doubtful mouth cases does not mean the giving of a complete course of anti-luetic therapy. If the response to one or two injections of full doses of arsphenamin or neoarsphenamin does not amount to 50 per cent improve-

ment or more in two or three weeks, the test should be considered negative and further diagnostic aids should be used, especially a biopsy. Though agreeing with Doctor Alderson that a dark field examination of a tongue primary is not simple, we believe that one experienced in recognizing treponema pallidum would have little difficulty when the material is obtained from the depths of the lesion rather than from the surface.

HEAD PAINS OF OCULAR ORIGIN

By RODERIC O'CONNOR, M. D., San Francisco

This is the type of paper, and it is followed by the type of discussion that particularly pleases a medical editor. It contains messages of interest and importance to every physician, be he general practitioner or specialist.—EDITOR.

The percentage of all headaches due to ocular disturbances is difficult to determine. Estimates vary from 50 to 90 per cent, but probably 70 would be a fair one.

Many patients show, by ordinary tests, nothing wrong, and yet there is definite eye disability.

The frequency with which eyes are blinded by a failure to recognize this disease is a sufficient reason, in itself, to serve as a cause for prohibiting the examination of eyes by non-medical individuals.

Pains in the base of the skull and upper cervical region are frequently of ocular origin, the causes being those conditions that call for a change in the position of the head to compensate, such as oblique astigmatism, vertical deviations, cyclophoria, and the various forms of paralyses of the ocular muscles.

Proper use of well-proven methods should enable any ophthalmologist to determine whether or not the muscle imbalance is the cause of the symptoms.

The ophthalmologist who fails to prepare himself to handle properly this type of work or who goes a step farther and warns his patients against those who are prepared to do so is, in my opinion, not practicing his specialty fairly either to himself, his patients, or to those ophthalmologists who are seriously trying to help such patients.

DISCUSSION by Raymond J. Nutting, Oakland; J. O. Chiapella, Chico; George W. Jean, Santa Barbara; Hans Barkan, San Francisco.

IT IS the common belief among the general public, and not very uncommon even among medical men, that, if headaches or other symptoms of eyestrain are not relieved by glasses, nothing further can be done. It is only in this way that we can excuse the frequency with which medical men refer patients to opticians for ocular examination. In doing so they apparently forget that the examination of the ocular apparatus is as much a medical affair as one of the heart or lungs. To illustrate this point I might cite two cases occurring recently, both of whom had been under the care of opticians. One was a case of chronic glaucoma that had progressed so far that in one eye direct vision had been involved, and in the other the visual field had been reduced to within ten degrees of the fixation point. Both eyes required operation. The other case was one of tobacco amblyopia with a central scotoma so advanced that light perception was absent in that area. Like other such cases, the worse the vision became the more he smoked to pass away the time.

The percentage of all headaches due to ocular disturbances is difficult to determine. Estimates

vary from 50 to 90 per cent, but probably 70 would be a fair one. It is evident that the frequency with which the eyes are proven to be the cause will depend on the completeness of the ocular examination, the correct interpretation of findings, and the proper carrying out of the right treatment.

Many patients show, by ordinary tests, nothing wrong, and yet there is definite eye disability. Most of these, on more detailed study, turn out to be examples of hidden troubles of the extra-ocular muscles; some are instances of mild or beginning glaucoma; others have the source of a reflex eye disturbance in the intranasal or dental regions.

One of the patients cited above shows the importance of always having in mind the possibility of glaucoma. I am now studying another patient with marked asthenopia, in whom an accurate refraction and all possible muscle tests have given negative results. An atypical cupping of the disk led me to think of glaucoma. Pilocarpin was prescribed, and a definite improvement in symptoms resulted. After a week of such treatment, the ocular tension was found to be 30 mm. of Hg. in the right eye, and 18 in the left, the latter figure being normal. His vision and visual fields are normal, so if further study should prove the trouble to be glaucoma, the diagnosis will have been made at the right time.

The frequency with which eyes are blinded by a failure to recognize this disease is a sufficient reason, in itself, to serve as a cause for prohibiting the examination of eyes by non-medical individuals.

Many eye headaches are typically migraine, as far as the symptoms are concerned. The fact that it may be hereditary has no diagnostic significance as ocular defects are even oftener so. Neither does vomiting indicate true migraine, as nausea, with vomiting at times, is a rather common symptom of certain forms of eye troubles. I have frequently seen the scintillating scotoma of migraine (supposedly) disappear after relief of eyestrain.

Most patients are able to definitely relate their headaches to overwork of the eyes. Others cannot but state that the headache is present all day except on waking. Early morning headaches are more often nasal in origin. Women complain of shopping headaches. Many have them after riding on cars or autos or under other conditions where the eyes have to make frequent changes in position to follow moving objects. These are usually found to have disturbances in the extra-ocular muscles, the compensation for which is especially difficult when the eyes must follow moving objects. Rarely a patient will state that there is less discomfort in the near than the distant use of the eyes. One such patient of mine had a divergence of such a degree that, for distance, he could not avoid the desire for binocular vision, while for near the strain was so great that he simply allowed one eye to diverge. Such a case shows the importance of figuring out an apparently inconsistent symptom.

While the consideration of intracranial pressure is out of place, please remember that its diagnosis is often first made by the ophthalmologist while investigating headache. To show again the harm done by opticians, I wish to cite a case of brain tumor seen by me for Dr. Albert Rowe, in which headache and failing vision had been treated by an opti-

cian for several years. She had paid for many pairs of lenses. When she finally came under competent medical care the condition was so advanced that operation was done only as a forlorn hope.

Pains in the base of the skull and upper cervical region are frequently of ocular origin, the causes being those conditions that call for a change in the position of the head to compensate such as oblique astigmatism, vertical deviations, cyclophoria, and the various forms of paralyses of the ocular muscles.

We must, therefore, conclude:

1. That the ocular apparatus must be thoroughly studied in all cases of headache where the cause is not very evident.

2. That no physician should allow his treatment of a patient with headache to be influenced by the results of an ordinary refraction.

Headache, as you all know, is a pain felt in the dural terminals of the trigeminus, the dural branches of the upper cervicals, and the recurrent dural branch of the vagus. Of these, the trigeminus is by far the most important. Anatomy teaches that the centers of the third, fourth, fifth, sixth, and seventh cranial nerves form a closely related group, all interconnected, and that the fifth is the sensory nerve for the area supplied by the others as motor nerves. Therefore, it is in the reflex arc of these four nerves, three of which are motor nerves for the ocular muscles. Moreover, there are communicating branches from its ophthalmic division to the oculo-motor nerves, these being the nerves of ordinary sensation to the ocular muscles. Therefore, we have three possible explanations for reflex ocular headaches:

1. Pure overwork of the oculo-motor centers, with overflow of the irritation to the nearby fifth center.

2. Direct irritation of the sensory terminals in the overworked muscle, which irritation is referred back to the fifth center.

3. Direct irritation of these sensory terminals by fatigue toxins generated in the overacting muscles.

However the fifth nerve center is irritated, this is projected out to its dural terminals to be interpreted as a headache.

In connection with the ocular conditions to be described, it is important to remember the following well-established points in muscle-nerve physiology.

1. All muscle tissue has a tremendous reserve power which cannot be elicited by *normal action* of the nerve cells, therefore it can never become exhausted as a result of such action. This is shown by the fact that muscles can be electrically stimulated to powerful contractions after the power of voluntary contraction is lost by exercise.

2. Nerve cells tire comparatively rapidly on continued action, but recuperate rapidly as compared with muscle tissue which, once thoroughly exhausted, takes a long time to rebuild itself. In this way the muscles are protected and are always in condition to respond to *normal impulses*.

3. Intermittent action of muscles, allowing proper intervals for rest, results in growth with a corresponding increase in endurance.

4. *Continuous or too frequent contraction causes rapid fatigue.*

Aside from glaucoma, which has already been mentioned, and certain acute inflammatory conditions of the eyes, I wish to consider the following ocular causes of headaches:

A. PUPILLARY ASTHENOPIA—This is due to overstimulation of the pupillo-constrictor mechanism by excessive glare. It is rather common in the tropics and desert regions. At times it results from excessive artificial illumination when there is exposure to the direct glare of high-power electric lights. Photophobia occurring under ordinary conditions often disappears when errors in refraction or muscle balances are corrected. Therefore, tinted lenses are not in order, simply because the patient may complain of a sensitiveness to light. The real cause should be searched for. Normally, the pupils contract with accommodation and convergence. An undue contraction of the pupil, made necessary by glare, may throw this associated action out of balance.

B. REFRACTIVE ERRORS—1. *Hyperopia*. In this condition the accommodation is in action even for distance; therefore, the ciliary muscle is at work whenever the eye is open. The normal relation between the accommodation and convergence is altered by the necessary increase of the accommodative effort over the convergent. So when corrective lenses are given to relieve the ciliary muscle, this acquired habit must be broken. As long as it persists the patient will complain of his glasses.

2. *Myopia*. Myopic eyes are lazy, the accommodation never being necessary except within the focal point. If this happens to be that of the reading distance (thirteen inches) the only exertion will be one of convergence. When the correction is given to permit clear distant vision, the eyes are forced to work as much as the normal. For this reason myopes often complain bitterly that they feel much worse with the glasses, in spite of the good vision.

3. *Astigmatism*. The oblique forms are especially important as objects are twisted. This twist is compensated by action of the oblique muscles to rotate the eye about its antero-posterior axis or by head tilting, or by both. Glasses render this unnecessary, but the habit persists and causes trouble till the eyes learn to let the lenses do the work. In certain cases of very high astigmatism the mechanical disadvantage in the lens correction are so great that they cannot be worn. In some of these, operative measures are worth while. I have recently had such a case where an astigmatism of nine diopters was reduced to four by a thorough cauterization of the cornea at right angles to the direction of the defect. The vision, as corrected, improved from 20/100 to 20/30.

4. *Anisometropia*. In this, the eyes differ so much in their refraction that satisfactory binocular action with the corrective lenses is often impossible. Occasionally, as mentioned under the preceding heading, the difference may be reduced to bearable limits. Rarely we see what appears to be an impossible situation. I have had such a one with one eye emmetropic, the other highly myopic. For some rea-

son she had severe headaches. I extracted the lens from the myopic eye by the needling method, reducing its error from minus 24 to minus 4 diopters, and improving the corrected vision from 20/70 to 20/30. The headache disappeared.

5. *Presbyopia*. In early presbyopia the symptoms are often disproportionately severe, due to the overaction of the ciliary muscle necessary to obtain the proper change of focus in the hardening lens. In this connection it must be remembered that we can use continuously only two-thirds of our total power of accommodation. Lenses usually give relief, but even here we are dogged by trouble in the form of bifocal glasses and the difficulty patients have in adjusting themselves thereto.

C. DISTURBANCES OF THE EXTRA-OCULAR MUSCLES.

Leaving out of consideration cases of actual strabismus and of paralysis, we have the following:

1. *Esophoria*, where the visual axes tend to converge and the corrective effort falls on the divergers. When of any amount, the strain is severe, as normally there is no great call for the divergers to work. In one case the symptoms were so severe from six degrees, that the boy had to give up his course in law. Non-operative treatment failed to secure the desired result, which was obtained by shortening of one externus.

2. *Exophoria*, where the visual axes tend to diverge, calling for correction by the convergers. A greater degree of exophoria can be borne, because the convergers can stand the strain of correction better.

3. *Cyclophoria*, when the vertical axis of the eye tilts in or out. The correction must be made by the oblique muscles.

4. *Hyperphoria*, when one visual axis is higher than the other. This condition causes symptoms out of all proportion to the amount as, in its correction, an entirely abnormal action of the muscles must be made. Normally, both eyes either look up or down, but here one must turn up while the other turns down, to bring both to the proper level. Dr. Stevens, who was one of our greatest authorities on the ocular muscles, estimated that one degree of vertical deviation caused symptoms as severe as fifteen of horizontal. I have seen cases of marked disability from one degree. Luckily, prism corrections are borne better in hyperphoria of low degree. Vertical deviations frequently cause head tilt in order to bring the eyes to a level and so save the ocular muscles. This tilt carries the corresponding shoulder down, which, in turn, might cause a curvature of the spine. All this in a purely mechanical way. Another common sign is an elevation of one eyebrow through the associated action of the frontalis, in the effort to hold the lower eye up.

In all the above-mentioned conditions, the corrective strain is present as long as the eyes are open, even though not in use for near, and therefore is an example of continuous exhausting work.

5. Insufficiency of convergence when the visual axes cannot be converged close enough to permit continued use of the eyes at the ordinary reading distance. It has been proven that one must be able

to converge the eyes easily to four inches from their centers in order to perform prolonged work at thirteen inches. In other words, at least two-thirds of the total power must be in reserve. In this connection the patient's occupation must be considered, for, even though he may give a normal test, he may have trouble if his work is done closer than thirteen inches. One case of mine that illustrates this was an old copper-plate engraver, who worked at a distance of about seven inches. He had been unable to work for several years, in spite of normal vision and an entire absence of trouble in reading. Previous examiners had overlooked the question of convergence strain, and all he needed was a pair of prism binocular magnifiers to enable him to get back to work. Frequently, in these cases the balance of the eyes for distance is normal, so all the symptoms are related to the near use of the eyes.

TREATMENT

1. *Glaucoma*—This is too large a subject. The important point is diagnosis. Miotics are then in order. If the tension and symptoms are controlled, well and good, but if not, operation must be performed.

2. Refractive errors call for lenses.

3. Imbalances of the extra-ocular muscles call for:

(a) Non-operative measures, such as lens correction, with exercises and possibly prisms in suitable cases.

(b) Operative measures. Until one is converted to the belief that true imbalances are anatomic in origin, he will not have the faith to learn the right surgical methods available for their relief and the methods of diagnosis needed to determine the place at which to apply the surgical work. We all know the bad effects, mechanically and symptomatically, that follow an operation incorrectly done or placed. Why not acknowledge the probability of developmental and acquired anomalies similar in effect? When one does not believe that the basis of true muscular imbalance is an anatomic defect in power or attachment to the globe, he is likely to feel that operative work on the muscles is working at the wrong place and so fall into the common practice of "do nothing," which means, very often, prolonged and unnecessary suffering for the victim.

In this connection I wish to emphasize that the object of an operation is primarily to relieve symptoms. *Proper use of well-proven methods should enable any ophthalmologist to determine whether or not the muscle imbalance is the cause of the symptoms.* If the discomfort and disability, so proven to be due to the muscle imbalance, cannot be relieved by non-operative measures, what else is left? It is ridiculous to lay down on the job and wait for a miracle. *The ophthalmologist who fails to prepare himself to handle properly this type of work or who goes a step farther and warns his patients against those who are prepared to do so is, in my opinion, not practicing his specialty fairly either to himself, his patients, or to those ophthalmologists who are seriously trying to help such patients.*

There are two general types of operations: (a) Tenotomies; (b) shortenings.

(a) Tenotomies must necessarily be done on the muscle not primarily at fault. To illustrate: Suppose a case of vertical deviation with the left eye higher because the right superior rectus is paretic. Should we tenotomize the left superior rectus, and so have two paretic muscles, or should we shorten the right superior rectus and so approach equality in strength? An answer is hardly necessary, provided the operator knows how to shorten a muscle in a safe way.

(b) Shortenings can be done in many ways, but of them all the "tuck" and an operation devised by myself are the *safest, in that no harm can result*. In the tuck, sutures are used to hold the shortening, while in my operation none are necessary, strips of the tendon being looped about strands of shortening material laid transversely to the tendon. I got the idea from the method of shortening saddle girths used by cavalrymen in our military service, and have used girths so shortened for years. A model is being passed around with the central third shortened in this way to show, by the slack in the lateral portions, the actual amount of shortening. Any force short of actual breaking of the strands can be withstood. In the ocular tendons this relieves the operator of any fear of loss in effect through slipping of stitches along the parallel fibers of the tendon. This method is so safe that I can, without fear of causing harm, operate on deviations of low degree and on little children for strabismus as early as the fourth year.

There is an ocular condition causing headaches that seems to be immune to treatment, that is direct treatment, called retinal asthenopia. This is similar to neurasthenia in general. However, I find that the more I go into my cases, hunting for hidden muscular defects, the less frequent becomes my diagnosis of this trouble.

The frequency of the above described conditions is great, and the troubles they cause are apparently disproportionate until one remembers the mechanisms involved. In children they often cause marked "nervousness" and backwardness in studies.

Finally, I wish to repeat for emphasis: The automatic correction of these imbalances means a continuous action during the waking hours of the nerve centers and muscles involved. This, as shown by the established facts of muscle-nerve physiology, is productive of the direct and remote symptoms of fatigue.

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DISCUSSION

RAYMOND J. NUTTING, M. D. (Medical Building, Oakland) — Doctor O'Connor has thoroughly gone into the cause from every angle, and it is as it should be, because too many medical men today are not thoroughly examining their patients, and we all know the result. I certainly agree with him in regard to too many medical men referring their patients to opticians every time they complain of poor vision. I have had two patients in the last month who are nearly blind as the result of glaucoma. The first was getting electric treatments and muscle exercises by an optometrist, with the vision getting worse all the time, while the second was getting her glasses changed about every month, and as a result losing both vision and money.

We know that ocular disturbances cause a good many headaches, but should remember that refractive errors, by themselves, do not by any means cause all the trouble, as so many men would have us believe. For the refractive errors, astigmatism is the most common cause, with hyperopia next, and myopia by itself very seldom.

We should never overlook the fact that we should take a careful history of every patient examined and rule out any other cause of the headache for which the patient seeks relief. Also at the same time we should always remember that any direct or indirect irritation of the fifth nerve is the seat of the trouble. Next, as mentioned before, a very thorough medical eye examination should be made. By that I do not mean simply taking the patient's vision and fitting him with lenses, but, in addition, a very careful study of the extra-ocular muscles, the visual fields and, of course, the external and internal examination of the eye itself with the proper instruments; at the same time thinking of the eye as an essential part of the body, and not as a little kingdom all by itself.

One will be surprised in the large number of patients who are having trouble as the result of muscle imbalance, and of this group the vertical deviations give us a greater amount of symptoms. As to the method of correcting these muscular anomalies, I thoroughly agree with O'Connor that the weak muscle should be made stronger by a shortening operation. Cutting a strong muscle always looks to me as if we are not giving our patient a fair deal, as we too often feel it is the easiest way out of the difficulty for the doctor himself but not for the patient, as too often happens. I have had the opportunity of seeing O'Connor operate on several muscle cases, and it is a pleasure to see him work. The operation which he has worked out for shortening a muscle is very clever and, furthermore, you get results when it is done properly on the correct muscle. This is the reason, to my mind, why O'Connor gets results and other men do not when attempting the same operation. In closing let me again emphasize: Study your patient carefully, always keeping in mind the oath of Hippocrates, which a good many of us forget at times.

J. O. CHIAPELLA, M. D. (Chiapella Building, Chico, California) — It is my firm belief that 80 to 90 per cent of head pains are of ocular origin, and that the ophthalmologist who thoroughly examines his patient for refractive errors will arrive at a similar conclusion. It all depends upon how thorough your examinations are—how much patience you possess to see that your examination is thorough.

Doctor O'Connor's statement relative to medical men referring patients to opticians strikes a popular chord, and I regret to say that the medical man who does it oftentimes is the type who treats a case of glaucoma as an iritis and prescribes atropine, with disastrous results, or thinks a chronic case of trachoma is a conjunctivitis and recommends argyrol with consequent argyrosis, not realizing that argyrol is a silver salt.

Head pains due to nasal disturbances are usually so localized as to site as to suggest the possible origin; or the history, especially of morning or lower half headache, completes the picture, and you can go astray *very* seldom.

I'm very much interested in his operative work on the extra-ocular muscles, knowing from experience that they frequently are the source of disturbance and are often overlooked in examinations, either from thoughtlessness or through not giving them their proper value. Hyperphoria, I find, respond most readily to prism correction, giving complete comfort, as a rule, and usually a grateful patient.

Pupillary asthenopia is of frequent occurrence in the Sacramento Valley and is due to the excessive glare of our summer sun, and while I recommend Crookes lens oftentimes to my patient, I do it more because it is expected of me rather than any particular belief in the virtue ascribed to them; the correction of the proper refractive error or muscular imbalance will do more to clear up the condition than the wearing of Crookes lens.

Finally, it will be a genuine pleasure to me to see O'Connor's work on some of the muscular anomalies he has mentioned; it is a field that is wide, and the way to it has been closed to the many men who are practicing ophthalmology and I find myself one of that greater number, but I expect to avail myself of the opportunity of overcoming my lack of knowledge and skill in that direction.

I cannot too highly compliment Doctor O'Connor on the thoroughness with which he has covered his subject, for his paper is one of genuine practical interest to any ophthalmologist who really has the interest of his patient at heart. His conclusions can hardly be questioned.

GEORGE W. JEAN, M. D. (Santa Barbara, California) —

Doctor O'Connor's paper is timely, in that it calls attention to the necessity of an early diagnosis in glaucoma and warns physicians of the fallacy of believing lenses a cure-all and an end-all for headaches of ocular origin. It is hard to believe that any ophthalmologist today, in searching for the cause of his patient's headaches, stops with the mere examination for lenses, yet it is true that ophthalmology suffers from the widespread idea that headaches are mostly refractive, from which arises the confusion of an ophthalmologist with a refracting optician (or his glorified successor, the optometrist) in the minds of the people and unfortunately, at times, in the minds of physicians. Yet it is also true that many an eye has been rescued from hopeless blindness because the average individual has a fixed belief that if he suffers from headaches his eyes should be examined. That he does not always make a wise choice, is unfortunately true. Every ophthalmologist has seen cases of glaucoma treated all too long by someone for neuralgia, migraine, or what-not. Headaches due to muscle or refractive errors are deplorable enough if not relieved, but the most tragic cases of all are the glaucomas. O'Connor's experience has been fortunate in relieving that frequent form of headache associated with zigzag flashes of light—the so-called scintillating scotoma. I have never helped a single case either by any glasses or any treatment, and my consultants have likewise failed.

HANS BARKAN, M. D. (516 Sutter Street, San Francisco)
—Doctor O'Connor's paper puts the issue squarely up to the medical man. There is no excuse for his ever sending a patient with headaches to an optician. I have, as have all other ophthalmologists, seen enough people who were beyond medical aid due to the fact that they received unnecessary expensive glasses from an optician when the diagnosis of impending blindness, due to glaucoma or other causes, would have been made by an ophthalmologist at a time when there was still some hope.

I have not been as fortunate in curing true migraine by glasses. I do not believe that the real "familial" headache, accompanied by nausea and scintillating scotomata, can be cured by glasses. If these patients have errors of refraction they can be made more comfortable, but in my experience the attacks continue, although in some cases somewhat less pronounced.

I admire the clear and concise, yet comprehensive, fashion in which O'Connor has presented the very complex subject of muscular imbalance and its treatment. I agree with him on the main essentials. He has, however, not discussed the importance of that class of patient who improves so markedly in symptoms or loses them entirely if relieved of nervous strain and overwork—of that class in which the symptoms occur after some debilitating sickness, loss of weight, etc., and disappear when the patients are again in good health. In these people the muscular imbalance is there, whether they have symptoms or not. They have no symptoms if they feel well. That has always led me to doubt that all imbalance is anatomic in origin. The symptoms in most cases are, to my mind, caused to the greatest extent by insufficient ability to enervate properly, and for this reason, while operating these conditions in cases where one can ease up on the enervation by making the muscles stronger, I am not as inclined to call as many cases operative in character as is Dr. O'Connor. There is no doubt that true imbalances, where the defect is anatomic, exist. I have seen the improper insertion, or the atrophic or hyperthropic muscle. These cases are the ones that promise most by operation, either by Dr. O'Connor's excellent method, as used by him, or by some other good method at the hands of a man practiced in it.

DOCTOR O'CONNOR (closing) — Drs. Jean and Barkan bring up the question that instances of true migraine are never helped by any eye treatment. If they will re-read that paragraph they will find that I qualify by using the word "supposedly." I am perfectly willing to make the diagnosis as I did in my cholera work in the Philippines—those that died were cholera; those that survived were not. At any rate, patients with those symptoms were often relieved. There must be a cause for what is called true migraine, and it is barely possible that it may be in the ocular apparatus.

Those who do not study out their obscure cases by prolonged monocular occlusion, in order to obtain the true muscle balance after complete relaxation of the extraocular muscles, have no idea what they overlook and are

not really qualified to properly appreciate this subject. That they "take no stock in it" does not alter the facts. It might be well to quote here the opening paragraphs from my paper on this subject in the October, 1924, number of the British Journal of Ophthalmology.

"The object of this paper is to emphasize the following points:

1. A hidden vertical deviation is the commonest cause of persistence of asthenopic symptoms after accurate correction of a refractive error and any apparent muscle imbalance.

2. A complete and accurate diagnosis of muscle imbalance, in kind and degree, can be made only by the aid of prolonged monocular occlusion. This procedure is the same to the extra-ocular muscles as mydriasis is to the intraocular and its importance can be upheld by the same line of reasoning. As absolute proof of this statement it might be well to take out from the table the twenty-three cases that showed exactly normal muscle balance before patching. In these cases the final tests, as regards vertical deviations only, were as follows (in prism degrees): 1 to 2 degrees, eight cases; 2 to 3 degrees, five cases; 4 to 5 degrees, two cases; 6 to 7 degrees, one case; 7 to 8 degrees, one case.

3. Nearly all cases of vertical deviation have a parietic foundation."

After nearly six years' experience with monocular occlusion, I can state positively that I would feel perfectly helpless without it in the study of those obscure cases that "go the rounds," many of whom are emmetropic and many more, as shown in the above quotation, show normal muscle balance. On the surface, in such cases, the eyes could not have been at fault and yet the prism correction, of the deviation found, gave relief.

In Doctor Barkan's comment on the muscle conditions I think he has put the cart before the horse. My whole paper argues that the symptoms are the result of overwork of the innervational circuit, but maintains that it is the anatomic changes that make this overwork necessary. At any rate, it is perfectly certain that if non-operative treatment fails to help these cases, altering the anatomic conditions is the only way out. I freely admit that we find many cases of marked muscle imbalance and no symptoms the same, as we find marked refractive errors and no symptoms. In such cases anything that reduces the general endurance is apt to reduce the local. It is for this reason that people often date the occurrence of cross-eye to some general disease like measles or whooping cough, thinking the disease is the actual cause.

In all my writings I have emphasized the importance of operating to relieve symptoms, not merely to alter measurements. For this reason I take great pains, by monocular occlusion and in other ways, to prove that the muscle imbalance found is the cause of the symptoms. Only in that way can I persuade myself that the symptoms will be relieved when the imbalance is corrected.

The fact remains that there are many cases of muscle imbalance that are not relieved by any or all of the non-operative methods of treatment. If the advisor of such a patient is not prepared to perform a safe operation on the muscle at fault, what is he going to do about it? Some years ago Doctor Barkan admitted to me that he would give up in a case of 12 to 14 degrees vertical deviation. If he had more confidence in operative work he would not have to give up. I have corrected many such cases from 5 to 40 degrees. The lower cases were most comfortable with prisms, but preferred operation to wearing glasses.

In handling cases of muscle trouble we must keep in mind that people want to use their eyes. The securing of relative comfort by not using them is a poor way out of the difficulty. Witness the patient mentioned in the body of the paper who had to give up his course in law because his previous advisors failed to perform the right operation. I am not satisfied unless I succeed in obtaining comfort in all uses of the eyes. Needless to say I am not always satisfied, but my "batting average" increases in proportion to my ability to make an accurate diagnosis so that the right treatment can be applied at the right place.

Finally, I wish to thank the discussors for their very kind and complimentary consideration of my paper.

THE TREATMENT OF CHRONIC ARTHRITIS

By LEONARD W. ELY, M. D., *San Francisco*

In the first place I have never seen a case of arthritis which was not caused by infection or by trauma, or rather I have never seen any evidence of the operation of any other cause. This gives us our first classification into traumatic and infectious arthritis.

IT WOULD be hard to find a subject in medicine about which more diverse ideas are held than the one which I have chosen. Those who regard an arthritis simply as a swollen joint, without appreciating what is going on inside of it, usually fall back upon pure empiricism, and drug their intelligence with such terms as "disturbed metabolism," "uric acid diathesis," "pars minoris resistentiae," and the like. Their treatment changes from month to month. This represents an anomaly in modern medicine, but is common practice. Usually what is practiced today is thrown away tomorrow. The things which last are established by patient investigation and the accumulation of concrete facts. The interpretation of these facts is sometimes a matter of personal opinion, and must be proved out by clinical investigation.

Some years ago, spurred thereto by the barrenness of results under older methods of handling cases of arthritis, I began to collect specimens of diseased joints, to study them in the laboratory, to compare my findings with the clinical history, and to try out in the clinic the conclusions based on my laboratory findings. It has been an illuminating and profitable experience for me, has brought order out of chaos, and has saved me the trouble of investigating for myself every new and fantastic therapeutic claim that has been made upon the sole authority of its originator's clinical opinion.

Not to be verbose, let me set forth a few of my findings, and their application: In the first place, I have never seen a case of arthritis which was not caused by infection or by trauma, or rather I have never seen any evidence of the operation of any other cause. This gives us our first classification into traumatic and infectious arthritis.

Traumatic arthritis—The joint is lined by two tissues—the synovial membrane and the cartilage. To traumatize it we must injure one of these two tissues, or both. It is doubtful if an isolated injury of the articular cartilage ever occurs, without damage to the underlying bone, though the intra-articular cartilages themselves may be torn. If it does occur, it is without effect on the other joint tissues.¹ If the ligament is torn with its subjacent synovial membrane, we have a sprain. The same thing occurs when the intra-articular cartilage is torn. If an injury damages the bone under the articular cartilage, we have an intra-articular fracture. I think perhaps some confusion has arisen from our looseness in the employment of terms. We speak of traumatizing a joint, without any definite idea of what we mean.

The effects of a sprain, not repeated, are over in a short time. The treatment of a sprain does not concern us here. With an intra-articular fracture, the resulting arthritis is probably caused by the effusion of blood into the joint, and, if accurate adjustment of the fractured surfaces be obtained, subsides slowly. If any deformity persists, then the joint is to be viewed as a damaged machine, easily sprained, and often the seat of an arthritis, unless it be kept quiet.

While more or less difference of opinion exists as to details, the treatment of these traumatic arthritides is fairly standard. It is when we come to the class of cases not caused by a frank injury of the bone or the synovial membrane, that we embark upon a sea of confusion. Examining specimens in the laboratory, I find that they all fall into one of two great groups or types, and in order not to describe them by names that next week must, with increasing knowledge, be thrown overboard, I call them Types 1 and 2. This classification can be carried into the clinic, and can be made to work. It is a help in treatment rather than a hindrance. Many classifications have been proposed, some so complicated that they can hardly be remembered by anyone but their author. Type 1 are, as a rule, the more active inflammations. They are characterized, primarily, by a proliferative inflammation in the bone-marrow or in the synovial membrane, or in both. They are recognized clinically by the absence of any spurring or lipping, as revealed by the x-rays. In Type 2 cases, these bony spurs are present.

The cases in Type 1 are the frankly infectious cases, and include the bacterial arthritides. Among them are tuberculosis, syphilitic and typhoid arthritis, coccidioidal granuloma, and the arthritis presumably caused by the diplo-streptococcus domiciled in the deep urethra or in the tonsils.

As the fundamental pathological feature of all these cases is the same, it follows that the clinical picture and symptomatology of them are alike. Each of them has its peculiar features which enable us to make a fairly accurate guess of its nature, but an exact differentiation can be made only by the identification of the causal organism. To enter into the details of the differential diagnosis would take us too far afield. Only their treatment can be discussed here. This classification includes those arthritides due to a so-called focal infection. The presence of a primary focus is admitted by practically everyone in the case of tuberculous and syphilitic arthritis, though some deny the influence of the diplo-streptococci domiciled in the tonsil and deep urethra in the other cases. It follows, therefore, that there is at least an approach to unanimity in the treatment of the first class, and great difference of practice in the second.

TREATMENT OF CASES OF THE FIRST TYPE

Tuberculous Arthritis—Uncomplicated tuberculosis of a joint is in itself a comparatively harmless though severe disease, and is strictly confined to the synovial membrane and bone marrow, damaging the other tissues in and about the joint only by interfering with their nutrition. Its presence, however, shows the presence of a primary focus elsewhere in the body, as well as a lessened consti-

¹ Ely & Cowan, *Bone vs. Joint Studies*. 1. Stanford University, 1916. Published by the University.

tutional resistance to tuberculosis. As far as the patient is concerned, the final outcome will depend upon his resistance to tuberculosis. When a secondary infection is added, tissues other than the synovial membrane and lymphoid marrow become vulnerable, and instead of a strictly localized, comparatively harmless disease, we have a widespread and very serious one, with all the dangers of a pus infection added. The presence of lymphoid marrow and synovial membrane in and about the joint is dependent upon function. When function is removed from the joint these tissues tend to disappear. When they disappear the disease dies out. From these facts we draw the three primary rules for the treatment of tuberculous arthritis: (1) Deprive the joint of function. (2) Avoid secondary infection. (3) Build up the patient's nutrition and his resistance to disease.

Coccidioidal Granuloma—The treatment of this form of arthritis is very much the same as that of tuberculosis, but not nearly so satisfactory. The outcome is almost invariably fatal.

Syphilitic Arthritis—The treatment is the same as that of syphilis of any organ, and consists of neoarsphenamin, mercury, and the iodides. Operation should be sedulously avoided on account of the almost invariable tendency of the wound to break down and become secondarily infected. Secondary infection makes the treatment much more difficult. Parenthetically, the necessity of ruling out syphilis in the treatment of any case of first type arthritis, especially in the operative treatment, should be urged. To discover afterwards that one has been operating unnecessarily upon a syphilitic joint, is always humiliating. I know of but one safe way to rule out syphilis, and that is by a course of anti-syphilitic treatment.

Typhoid Arthritis—Little need be said of the treatment of these cases. They are to be handled on general principles. Apparently, most of them recover with treatment or without it.

OTHER CASES IN TYPE 1

Because the cause of these cases never has been proved, great difference of opinion prevails as to their nature and as to their treatment. From some of them pure cultures have been obtained of a bacterial organism, variously named diplococcus, diplostreptococcus, streptococcus viridans, etc. From many of them all attempts to obtain cultures have been in vain. They are usually multiarticular. I think that most of them are caused by bacterial organisms domiciled in some other organ, and brought secondarily to the joints, fed to the joints, so to speak. This belief rests not only on the fact of their frequent cure after the removal of the primary focus, but also, and principally, on the practically identical changes in the morbid anatomy of these joints and in that of those arthritides known to be caused by bacterial organisms.

Following out this theory, our best results have been obtained by the removal of the presumptive focus. In no instance that I remember have we found this focus elsewhere than in the tonsil or in the deep urethra. I think that infection in the alveolar process of the jaws is never responsible for this

form of arthritis, but always for the second type. When the presumptive focus is removed many of these cases recover, with other treatment or without it. Those of them which did not, I had grown accustomed to regard as practically hopeless, but Dr. Barrow of Los Angeles has almost cured one of my apparently hopeless cases by eradicating intestinal parasites, and his success has opened up a new field which we are cultivating, with promising results. Ordinarily, one or two recoveries are a poor foundation on which to build a line of treatment, but those of you who have had the opportunity to treat patients with this form of multiarticular inflammation know that they do not recover spontaneously. They may have remissions and temporary improvement, but when they become bedridden they stay so.

TREATMENT OF THE SECOND TYPE OF ARTHRITIS

I have published so much on this type of arthritis in the past few years that I shall merely give my results to date. This is the form of arthritis characterized by the presence of bony and cartilaginous outgrowths in the region of the attachment of the capsule. It is variously named by different writers as hypertrophic arthritis, degenerative arthritis, osteoarthritis, arthritis deformans.

Further investigation has confirmed the belief that the prime pathological feature of this form of arthritis is an aseptic necrosis in the bone in the region of the joint. All the other pathological features are secondary to this. The presence of these necrotic areas can often be detected in the x-ray films, if it is sought. All the morbid changes in the bone and marrow are so different from those caused by bacteria that it is impossible to believe that bacteria cause the disease, and yet when one studies specimens in the laboratory, one cannot but be positive that the changes in them could be caused only by a living organism. This is the chief reason for my firm conviction that some form of animal parasite is responsible for the disease, and the probable culprits are the intestinal protozoa. It must be confessed that up to date we have no reliable proof of their presence in the bones. The evidence is purely circumstantial. I believe that the amoeba or a similar organism is responsible for these aseptic areas in the bones, for the same reason that if I should see a little pile of dirt in the field with a depression in the center of it, I should think that a gopher was responsible for it. This is just the sort of lesion that the protozoa might be expected to cause if they gained access to the bone-marrow.

With the co-operation of Doctor Harry Wyckoff of the Stanford Laboratory, a routine examination of the stools of our patients suffering from this form of arthritis has been conducted. Parasites have been found in about 30 per cent of the cases. Amoeba coli has been found most frequently; giardia, chilomastix, histolytica, and trichomona less frequently.

As heretofore noted, infection in the alveolar process of the jaw is present in an overwhelming proportion of these cases. The rational theory of the pathogenesis of the disease would be that some form of protozoon, possibly harmless while domiciled in the gastro-intestinal canal, gains access

to the circulation through the diseased bone at the roots of dead teeth. It is then carried to the bone marrow, and causes necrosis. Perhaps we shall find that the so-called harmless amoeba gingivalis is to blame. I strongly suspect that this is the case.

In the orthopedic clinic at Stanford we have conducted the treatment of these cases according to this line of reasoning, and our results have been, on the whole, good. The first step in the treatment is to remove all dead teeth, which serve to keep open the door in the bone of the jaws. Next we institute a search for intestinal parasites. If they be found, the patient receives the full parasiticide treatment, namely, neoarsphenamine, emetin and ipecac; if not, then emetin and ipecac are administered without the neoarsphenamin. A short time ago we set aside one day in the week in the clinic for the special treatment of patients suffering with second type arthritis.

The problem of the treatment of an inflammation in a joint should be approached in the same manner as that of the treatment of any other organ, but, strange to say, it rarely is. This is the main burden of my thesis. The intelligent medical man, when called on to treat an inflammation in the lungs, does not waste time talking about disturbed metabolism, the rheumatic diathesis, or mysterious humors floating in the blood. He does not try gland therapy, rub things on the skin, or primarily administer drugs internally. He tries, first of all, by clinical examination and laboratory tests, to establish to his own satisfaction two things: First, what is going on in the lungs (the pathology), and second, the cause of the inflammation. I submit that the same procedure is necessary in treating inflammation of the joints. Anything else is pure empiricism.

Stanford University Hospital.

OBSTETRICS THE STRONGHOLD OF MEDICINE TODAY *

By G. C. H. MCPHEETERS, M. D., Fresno

A plea for better, more detailed, more efficient service to every pregnant woman. This attention should begin with the little child, include the young girl at puberty, the adolescent girl before marriage, the young married woman before pregnancy, and extend throughout each pregnancy. This I conceive to be the true scope of obstetrics today.

The non-medical public will appreciate the full scope of obstetrics only and when we, as a profession, all practice real obstetrics.

DISCUSSION by A. Huffaker, Carson City, Nevada; John Tees, Reno, Nevada; Thomas A. Card, Riverside, and William A. Beattie, Sacramento.

INTRODUCTION

IT IS the purpose of this paper to present what the writer considers the broader scope of obstetrics today, as distinct from the midwifery of the past, and to outline methods which every physician may employ in the movement for better obstetrics. Mere attendance at a birth, together with one or two postpartum visits, is no longer acceptable to the public we serve. The better classes of intelli-

gent people, such as we all delight to call our patients, have learned to demand care from the physician during pregnancy. They also expect better care during confinement than midwives can give, and finally they demand postpartum care adequate to the needs of mother and baby. Patients, members of their families and neighbors are quick to check over the care given by their physician, especially so if disaster occurs during pregnancy, accident at delivery, or any unfortunate result during the puerperium. This checking of services rendered too frequently leads to censure of the attending physician, especially if his services have been thought to be half-hearted or careless. There is no class of medical work where the personal, whole-hearted attention and interest of the physician is demanded so fully as it is in obstetrics. Also there is no branch of practice where there are greater rewards for the physician's attention if he will but give it. Therefore, we owe it to our confinement patients and to the reputation of our profession of medicine to practice comprehensive obstetrics, not careless midwifery.

In this heyday of the charlatan and quack, who draw a large clientele even among former patients of the educated doctors of medicine, we are seeking means by which we may maintain the confidence of the public. This has been the subject of much serious discussion and some pessimistic writing of late years. It is the secondary purpose of this paper to present the thought that we as physicians may maintain the age-long confidence of the public in no more effective way than by the practice of thorough-going obstetrics. It is my firm belief that obstetrics is the stronghold of medicine.

PROBLEMS AND TASKS

Before stating my conception of the scope of modern obstetrics I wish to point out briefly our greatest problems and tasks. There is an annual maternal mortality of 15 to 21 thousand, and an infant mortality of about 200,000 each year in the United States, representing deaths of infants under 1 year old. It is reported by some statisticians that the United States ranks seventh among the nations in infant mortality rates, and seventeenth in the list of nations in maternal mortality rates. Some American authorities agree that very little improvement in maternal mortality rates has taken place in the United States in the last fifty years, in spite of increasing hospitalization of patients and increasing skill of obstetricians and other surgeons. Considerable improvement has taken place in infant mortality figures, due to better milk and medical attendance for infants and children. I believe the chief explanation for a high maternal and infant mortality in the United States is because the medical profession has not taught the public the value of prenatal care and adequate confinement care. Every physician should be a teacher within his circle of influence, instructing women that they must be physically fit before entering pregnancy, that they need a physician's care all during pregnancy, and that they should have careful supervision for themselves and their infants during the lying-in period and the months following. We should teach our patients that the birth of a baby is a major surgical operation as important as any, often more serious than many, and that

* Presented at the annual session of the Nevada Medical Association, Reno, September, 1924.

the results of a poorly conducted confinement often affect the health of the mother for the remainder of her life.

SCOPE OF MODERN OBSTETRICS

I will now outline what I believe to be the scope of modern obstetrics, as distinguished from the midwifery practiced in former generations and still being practiced by some physicians apparently indifferent to the valid claims of the pregnant patient. Obstetrics contemplates the woman when she was a little girl, since the health of the mature woman is often determined by the health of the little girl. Examples are legion, a few only are needed to make our point clear. The nephritis and pyelitis of infancy and childhood is now known to be far more common than was formerly suspected. This infection of the renal system in childhood often persists through adolescence and damages the female kidneys for life. We have the resulting nephritic type of gravida who, too often, comes to grief before term. Again, the tuberculous child becomes the tuberculous mother, who is a danger to herself, her child, and her husband. Again, we have the anemic, marasmic little girl with neglected focal infections who has imperfect, retarded physical development at puberty and during adolescence. This girl becomes the thin, nervous wife, eager to do her part as a mother, but doomed to failure so often, even with all the skilled aid we can give her. We physicians should teach the mothers who are rearing little girls the value of frequent examinations of their children, and the special problems incident to puberty in young girls.

Obstetrics today contemplates also the pre-nuptial examinations of all girls and women to determine their fitness for marriage. Some states require the physical examinations of both parties intending marriage. Physicians should instruct parents to appreciate the advantages of physical examinations, of their daughters especially, before marriage. At such examinations the careful physician can discover neglected foci of infection in teeth, tonsils, nasal sinuses, middle ear, cervical glands, cervix uteri, and anal margins. He can estimate anemia, discover bacilluria and pyuria. He can discover serious malpositions of the uterus, cysts of the ovaries, which sometimes exist before marriage, varicose veins, and contracted pelvis. He can demonstrate the daily afternoon temperature, which may mean incipient tuberculosis or pyelitis. Lastly, he can perform the Wassermann test, which should always be done before marriage.

Again, obstetrics today employs the thorough physical examination of all married women, before each pregnancy if possible, or at least early in every pregnancy for the same reasons that we examine the girl before marriage and for additional reasons. We should know whether the wife or expectant mother has acquired any foci of infection since her marriage, whether she is anemic and underweight, whether nausea of pregnancy exists, and whether syphilis or gonorrhoea is present. If not examined prior to their marriage, the examiner will find much to be done for about 75 per cent of all expectant mothers whom he examines.

Obstetrics further embraces the systematic pre-

natal care of every gravida who presents herself at any period of pregnancy. This care begins with the head-to-foot examination above spoken of, including blood and urine tests and pelvic measurements. A careful history and complete record of findings must be kept. Time should be taken at the patient's first visit to instruct her in caring for her person in any ways you see are needed. Tell her how to obtain the suitable publications of "prenatal care," "infant care," and "child care." Give each patient your own outline of instructions, plainly typed or mimeographed. These instructions should cover the hygiene of pregnancy, frequency of visits to your office, urine tests required, diet directions, and care of the excretory function. A list of danger signals should have a place in our written directions to an expectant mother, such as edema, scanty urine, fainting, dizziness, showing of water or blood, and the positive direction to notify you if any such occur.

Show the pregnant patient at her first visit that you really are deeply interested in her welfare, and then maintain that interest at the succeeding visits to office, or home. Encourage each patient to tell you how she feels. Symptoms she considers trivial may mean the pre-eclamptic state to your trained mind.

Prenatal care includes the eradication of all focal infections as far as possible, without regard to the presence of the pregnancy. Abscessed teeth should be extracted, infected tonsils removed, nasal catarrh actively treated, nasal sinuses drained, anemia corrected, lacerated, eroded cervixes treated, and bacilluria and pyuria relieved, even if cystoscope and ureteral catheter are needed to do so. As physicians we must use our influence to correct the ancient hearsay that a pregnant woman may not safely have done any treatments or operations needed.

Prenatal care embraces also the regulation of the patient's diet, especially during the latter half of pregnancy. Patients not instructed about diet often gain forty to sixty pounds during a pregnancy, and their babies often reach nine pounds or more at term. Babies of this size often cause dystocia, prolonged labor, inertia uteri, forceps delivery, perineal and cervical lacerations and Caesarean sections in women whose pelvic measurements are normal and who might have delivered an average-sized baby naturally. I do not contend that we can regulate the size of the baby at birth by diet directions in all patients. Large women with large husbands, and sometimes small women with large husbands will continue to produce large babies, in spite of diet regulations. In general, however, the healthy gravida should gain not to exceed thirty pounds while pregnant, and her baby should weigh seven and one-quarter to seven and one-half pounds at birth. Diet for the latter half of gestation should be poor in starches, sugars, and fats, while bulky with vegetables, fruits, milk, fresh fish, eggs, a little lean meat, and cheese. This diet relieves the bowels, kidneys, skin, and respiratory system of much work in elimination.

One of the refinements of prenatal care in recent years is the instruction of pregnant women in the care of the abdomen and breasts so as to preserve the contour and profile. The patient may prevent striae gravidarum by a simple system of daily mas-

sage of the skin of her abdomen.* Also proper massage of the breasts during pregnancy will preserve their contour throughout lactation. After the period of lactation is over, patients may so care for the breasts as to restore contour, firmness, and tone.

During the period of prenatal care the physician should discuss arrangements for the confinement. Make your patient see the importance of hospitals and lying-in homes as best for her and baby. If confinement must be in the patient's home, be sure proper arrangements can be made for delivery there. Above all, be sure your patient has a competent nurse, or experienced, reliable attendant. Do not be satisfied with confinements conducted in midwife style. Watch details and the delivery will be an orderly success, not a nightmare for the patient and a struggle for you.

Go to your patient promptly when she calls you. She may not need you, but your prompt response assures her of your continued interest. Examine the abdomen and make a rectal examination—never a vaginal examination—at this first visit. If the patient does not require your aid for some time, you may go away. But instruct the nurse or other attendant to summon you when pains are more severe, or when other evidences of second stage begin. Plan to be with the patient, actively assisting her during the last two hours of labor. The doctor who wishes to be called when the head is visible on the perineum and who rushes out (like a fireman, or police patrolman to his duty) to catch the baby and tie the cord is no better than a midwife. The ideal thing is for the physician to remain with the patient, assisting her during the whole labor. This is my practice.

Such service is remembered with gratitude by the patient as long as she lives. Such a patient will recommend her doctor to many of her neighbors, relatives, and friends. Patients who have profited most by your care will recommend you most often, and you in turn will profit most on account of those patients whom you have served the best.

Speaking of the confinement again, we should instruct the patient in the first stage of labor to avoid holding the breath and straining during uterine contractions. Patients use up their reserve strength in this way before the second stage begins. When we finally put them on the delivery table and instruct them to bear down with each contraction we find them weak, or perhaps we have an actual inertia uteri. Many such patients require forceps delivery who might have delivered naturally with better management from the start.

Patients in labor should be kept in bed, except those rare cases where uterine contractions cease when the patient is lying down. The position in bed should be flat on the back, with the knees drawn up and the feet apart so that the knees support each other naturally, or else with a thin pillow under the knees so that the lumbar curve of the spine flattens out on the mattress. The patient should be instructed to continue breathing during uterine con-

tractions and to relax muscles, letting the uterus alone contract. Patients who are highly nervous and unable to relax, and those who persist in straining during the first stage pains should receive codeine sulphate gr. $\frac{1}{2}$, or morphine sulphate gr. $\frac{1}{8}$ to quiet them. If these doses are not sufficient in any given case, we repeat either dose one hour later. Patients should void urine each hour during the first stage of labor. This reduces the number of parturients who have bruised, irritable bladders, and who may require the catheter after confinement.

We should not place our patients on the delivery table, as a rule, until rectal examination shows dilatation of the cervix is complete. Not until then do we offer any anesthetic, and then only do we permit the patient to hold the breath and bear down. Nearly all patients have sufficient reserve strength to complete their delivery naturally with proper assistance. After delivery we choose to give our patients obstetrical pituitrin $\frac{1}{2}$ cc. in the muscle of the front of the thigh. We believe this hastens separation of the placenta, and so contracts the uterus that we have diminished bleeding when the placenta is born. A second injection of 1 cc. pituitrin should be given deep in the thigh muscle one hour later, before we leave the patient. Ergotone may be used, but it is more irritating and less reliable.

Routine examination of the hearts of both mother and baby should be made one hour after the birth. Also after other routine attention to the infant we administer 5 cc. maternal blood subcutaneously in the abdominal or chest wall. This increases the coagulation time of the infant's blood and thus combats cerebral and other internal hemorrhages, if such exist. We repeat this injection of maternal blood if infant shows evidences of hemorrhage later on.

CONCLUSION

In conclusion, I will leave it to your calm consideration that there is no physician who enters the hearts of his patients so deeply as the physician who attends the parturient woman. Two lives are in his hands, and the happiness of every member of the family. He is loved and trusted and revered far more than the doctor who renders less intimate services, however important they may be. Pregnancy and confinement are the supreme adventure of a woman's life, and her personal physician is an important party in this adventure. For years mothers are saying by the scores, "Doctor Jones, do I know him? Why he was the doctor who brought little James into the world!" And years later they walk into your office like strangers and wait for an hour to see you. Upon being asked to come in they say, "Do you remember this little boy, doctor?" And here is James, 5 or 6 years old. You may have forgotten them, but they will never forget you!

In summarizing, I am pleading for better, more detailed, more efficient service to every pregnant woman. This attention should begin with the little child, include the young girl at puberty, the adolescent girl before marriage, the young married woman before her pregnancy, and extend throughout each pregnancy. This I conceive to be the true scope of obstetrics today. The non-medical public will appreciate the full scope of obstetrics only and when we as a profession all practice real obstetrics. Better

* McPheeters, G. Carl H., M. D. The Prevention of Striae Gravidarum, Diastasis of The Recti Muscles, Visceroptosis and Ptoxis of The Breasts in Pregnancy. American Journal of Obstetrics and Gynaecology, Vol IV, No. 2, August, 1922.

attention to obstetrics in our practice will cut down the serious maternal mortality and the appalling infant mortality which occurs yearly in the United States. Thereby we shall have more healthy mothers and better babies. Thereby the physician will profit more who better serves his patients. Thereby all physicians will endear themselves to the public, maintaining that confidence which the profession has always enjoyed. For these and many other reasons it will be found that obstetrics is indeed a stronghold of medicine today.

1021 Mattei Building.

DISCUSSION

A. HUFFAKER, M. D. (Carson City, Nevada)—I desire to compliment Doctor McPheeters upon his very valuable paper. It represents almost pioneer work in his line. Since the great majority of physicians practice obstetrics, a careful study of McPheeters' paper cannot fail to benefit them. It will give them ideals to which they may and should strive to attain. Though it might be conceivably difficult to secure the consent of people to some of the ideas suggested in the paper, especially that of pre-nuptial examination, it would be of great value, if such examinations could be made.

I feel that I have nothing of value to add. I commend the article highly to all physicians who practice general medicine, including obstetrics.

JOHN TEES, M. D. (Reno, Nevada)—I have read Doctor McPheeters' paper with both pleasure and profit. It is one of the most practical papers I have ever read. All I can add is to emphasize the importance of the prenatal care of the breasts and nipples, for, as a pediatrician, this point appeals to me strongly.

THOMAS A. CARD, M. D. (Glenwood Block, Riverside)—Doctor McPheeters has stressed several factors of vital importance to the general practitioner, who would give to his obstetrical patients scientific care. It is only as we follow a program of prenatal, natal and post-natal care, such as he has outlined, that we shall be able to reduce infant and maternal mortality. Too little emphasis has been placed on prenatal care in the past. More and more we are realizing that such care prevents weakened organs from breaking under the strain of pregnancy. That the patient in labor is entitled to skilled care goes without question. Accidents of labor are bound to happen and the presence of the obstetrician may mean the difference between a happy family and a tragedy.

While I agree with McPheeters that the use of morphine and its derivatives during labor may be of value, yet great care must be exercised that its administration does not come too close to the time of delivery. The use of nitrous oxide and oxygen during labor is to be commended. It may be safely used during the first stage as well as second stage. Nitrous oxide and oxygen has proved a boon to women in labor and in my opinion should be used more extensively.

WILLIAM A. BEATTIE, M. D. (Peoples Bank Building, Sacramento)—Doctor McPheeters' interesting paper may be read with profit by every physician. The importance of prenatal care, as he outlines it, cannot be overestimated. Every doctor, to whom an expectant mother has intrusted herself, should take time to carefully outline a detailed prenatal program.

I am also pleased to read that McPheeters has emphasized the fact that every delivery should be considered a major surgical procedure. With this conception in mind, every possible means of contamination or infection should be avoided. Most strongly do I emphasize the importance of making no vaginal examinations during the progress of labor. Rectal examinations are safe, and the necessary information as to the progress of labor can be as readily determined by this method as by the former.

In conclusion I wish to add that I believe it to be the important duty of every physician practicing obstetrics, to make a careful physical examination of the mother about six weeks after the delivery.

DOCTOR MCPHEETERS (closing)—I desire to thank Doc-

tors Huffaker, Tees, Card, and Beattie, respectively, for the very kind comments on my paper.

In reply to Card about the use of morphine and its derivatives during labor, I would state that I never use these during the last two hours of labor, but rather in the beginning when dilating pains are so distressing to the patient. The use of nitrous oxide and oxygen is ideal for delivery, but still impractical for most general practitioners.

I commend Beattie's point in making a physical examination of every mother about six weeks after delivery. This is my custom also. Much unnecessary invalidism results from cervical lacerations. Malposition of the uterus might be prevented, if each mother had such an examination.

In conclusion I would say that it is my firm belief if we will all practice better obstetrics the medical profession will retain its high place in the esteem of the public.

OPERATIVE TREATMENT OF ABNORMALITIES OF THE FIFTH LUMBAR VERTEBRA

By ALFRED EDWARD GALLANT, M. D., AND
WALTER C. S. KOEBIG, M. C., Los Angeles

DISCUSSION by E. W. Cleary, San Francisco; C. B. Bennett, Berkeley; S. Nicholas Jacobs, San Francisco; H. D. Barnard, Los Angeles.

MUCH has been written about the subject of low back pain, from various standpoints.

Our contribution is a presentation of certain observations relative to the occurrence of sacralized transverse processes of the fifth lumbar vertebra and the operative technique for the removal of the same. Every orthopedic surgeon is familiar with the occurrence of these abnormalities in the course of examinations of the low back and pelvis. It is an admitted fact that sacralization of the transverse processes of the fifth lumbar can be the source of many symptoms in the problem of low back pain, although the textbooks dealing with orthopedic and spinal surgery have treated the subject quite superficially. It is only during the last few years that any serious attention has been paid to the symptomatology and operative measures concerning lesions produced by these sacralized processes.

That this peculiar abnormality of the fifth lumbar vertebra is quite common was strongly emphasized by O'Reilly when he described the various shapes of these transverse processes. In a symposium on low back pain from an orthopedic, gynecological, urological, neurological, and anatomic viewpoints, Davis casually mentioned that it was possible for these abnormal processes to be the cause of pain. Galloway, in a discussion of a paper by Fasset, told of his experience with an operation on the transverse processes of the fifth lumbar vertebra. Wright reported unsatisfactory results following an operation for the removal of an impinging transverse process of the fifth lumbar vertebra. Goldthwait showed many variations of different vertebrae, but made no mention of sacralized transverse processes. Straub presented a very comprehensive list of the causes of backache and admits of the condition of sacralized transverse processes, placing them in the class of congenital anomalies, where they rightfully belong.

Benassi does not ascribe a congenital origin to these abnormal processes, but stresses the fact that possibly they may be due to lumbosacral rickets or to chronic inflammatory changes in the bony, articu-

lar and ligamentous structures already invaded by rickets, or that they may follow some traumatic condition producing pseudosacralization.

Bauman considers the presence of an abnormally shaped transverse process worthy of much consideration and to be the cause of pain in the lumbosacral region. He reported the results of twenty operated cases, nine of which were performed on the transverse processes of the fifth lumbar vertebra. Quoting from his paper: "These cases are presented to emphasize the frequency of transverse process lesions as a cause of definitely localized pain in the back, with accompanying lumbosacral neuritis." In this paper there is a photographic reproduction of a very beautiful dissection of the nerve and bony structure of the lumbosacral region, showing very clearly how a lesion in that region can produce pain when there is a disturbance due to fractures, arthritis, or other causes.

Willis presents a very interesting study of the subject of vertebral anomalies, but does not dwell very much on the sacralization of the fifth lumbar, although he discusses the removal of these processes with and without good results.

ETIOLOGY

Piersol attributes this abnormal condition to an excessive development of the costal element either on one side or the other. True as this statement may seem, the question why this abnormal development takes place still remains unanswered. There was no explanation of this phenomenon of sacralization in any of the papers examined.

We admit the congenital development of this abnormal condition and wish to offer an acquired cause which takes place later in life and may be due to pathological causes or fractures.

In reviewing the writings of the various authors mentioned, with the exception of Benassi, there does not seem to be a clear differentiation between an anatomic and a roentgenological classification of these abnormal processes.

Sacralization, according to Benassi, in an anatomic sense, is the existence of surface contact between the two or three bony structures, which will be later mentioned, is quite distinct from sacralization in roentgenographic or clinical parlance, i. e., abnormal narrowing of the iliolumbosacral space, with resultant formation of more or less complete supplemental foramen, and this latter type is designated by him as pseudosacralization. Benassi's classification is as follows:

1. True or complete sacralization in which there is articular contact on the surface or else complete bony fusion of the fifth lumbar with the sacrum and ilium, with the formation of a supplementary foramen.

2. Incomplete sacralization when the union occurs only with the sacrum.

3. Pseudosacralization, which means that there was originally a large process which later, due to pathological changes such as calcification or thickening of the ligamentous structures, irritative exostosis, trauma producing an osteoperiostitis, fracture, possible rotation of the fifth lumbar vertebra with the production of an irritative hypertrophy of the end of the transverse process or possible bursitis.

These sacralized processes may be either unilateral or bilateral. When we consider the etiology of the pain produced by these three divisions of sacralization, it will be necessary to consider the mechanism of the lumbosacral region in order to make our point clear. In viewing the lumbosacral region from an anteroposterior position, we are able to see the presence of these abnormal processes and their relationships; yet we think it better to consider this region laterally or in profile. You are all familiar with the shape of the lumbar curve and the relation of the fifth lumbar vertebra to the sacrum in this curve. We find that the fifth lumbar vertebra lies below the highest point on this curve which we placed between the third and fourth lumbar vertebrae. The body of the fifth lumbar vertebra points somewhat downward, and with any type of sacralization it is safe to assume that a lesion can be produced when there is a disturbance between either the fifth lumbar vertebra, sacrum or ilium, granting that with an incomplete sacralization of the fifth lumbar vertebra on one side or the other and with a rather high or prominent projection on the wing of the sacrum, it is possible to have a lesion produced when sufficient force causes that incomplete sacralization to change its relationship to the iliolumbosacral space, either by ligamentous strains or tears or fractures. In completely sacralized transverse processes trauma may play a part in fracturing one or both of these processes, and with the advent of callus formation the iliolumbosacral space may become narrow in its diameter, involving the ligamentous and nerve structures which are in close relationship to the parts affected. When there is a unilateral complete sacralization it is possible to disturb the sacroiliac joint on the opposite side, and we have seen several cases where this phenomenon has occurred. Such conditions as scoliosis, lordosis, congenital defects of the spinous processes of the fifth lumbar vertebra aid in producing a lesion when there is either a unilateral or bilateral sacralized transverse processes.

Of all the papers examined, Benassi is the only one who makes allusion to the iliolumbosacral space, which is a very important factor in this problem.

As a final consideration of the mechanism of the pain produced by this abnormality, Moore says it is due to the following:

1. Pressure on the soft parts (muscles or ligaments) between the transverse process and the ilium.
2. Irritation or arthritis of abnormal bursae or joints.
3. Strain of the sacroiliac and lumbosacral joints, due to leverage of the transverse process.
4. Stretching or pressure on the nerves of the lumbosacral plexus.

These reasons, as given by Moore, are perfectly logical and can be demonstrated in a study of the radiographs, in which there is sacralized transverse processes. Before turning to the discussion of the symptoms, we admit that it is possible to have sacralized transverse processes without symptoms, yet the symptomless conditions are, without doubt, potential elements in the production of lumbosacral pain if the relationship of the structures in this re-

gion are disturbed. Traumatism is an important factor in the history of these conditions. Many patients who come seeking relief from low back pain, lumbago, and sciatica give a history of gynecological and abdominal operations without relief of symptoms show these abnormalities when examined with the x-ray. There is no age limit specified by any writer when one can expect trouble from these abnormalities.

SYMPTOMATOLOGY

Gordon places lumbosacral pain as the most conspicuous symptom. This pain may be unilateral or bilateral. In unilateral cases it may sometimes be referred to the opposite side, but its greatest intensity is on the sacralized side. In bilateral cases the pain may extend to the knees or ankles, producing a terminal neuritis at the distal portion of the sciatic nerve. Changes in the standing or sitting postures may aggravate this pain. There is a characteristic attitude of standing and walking so that the patient may list to one side, similar to that posture sometimes found in sacroiliac disturbances. There may be an asymmetry in the sacro-iliac region and a possible scoliosis in the lumbosacral region when there is a unilateral transverse process. The lumbosacral pain may sometimes be chronic or intermittent and aggravated by such twisting movements, playing golf, or attempting to reach upward. This pain may follow the course of the anterior crural, obturator and superior gluteal nerves, or it may be confined locally to the region of the transverse process. There may be an atrophy of the muscles of the leg of the affected side in severe cases. The sacroiliac region may show no pain, but there may be definitely localized pain just about this region. Lastly, a history of lumbosacral pain at night, due to a neuritic or arthritic lesion in this region, may be elicited.

EXAMINATION OF THE PATIENT

The physical examination should be made with the patient stripped and careful attention paid to the movements of the spine in the region of the lower back, and also to the postural attitude of the patient. Anteroposterior stereoscopic and lateral roentgenograms of the lumbosacral and pelvic regions should be made.

DIFFERENTIAL DIAGNOSIS

Under the head of differential diagnosis, one must consider faulty posture, lumbar scoliosis, spondylolisthesis, osteoarthritis, lumbar Potts' disease, sacroiliac disturbances, flatfeet with secondary back strain, hyperthropic arthritis in the region of the hip-joint, and the presence of old fractures of the articular processes of the fifth lumbar vertebra.

Owing to the limited amount of time allowed, it will be necessary to cover a large amount of ground in a few words. The operation, as we have modified it, seems to present very few difficulties, and in our opinion is as safe as the ordinary abdominal operation. We have seen a large number of cases treated by conservative measures over periods of years, and we feel that the removal of the process is justifiable where these measures have failed to give relief.

The method of exposure must be determined from

information furnished by stereoscopic x-rays; this not being available, a number of oblique x-rays, taken from different angles, must be read.

There are several skin incisions advised by other men, but we feel, after trying modifications of them all, that an incision beginning one and one-half inches above the center of the crest of the ilium, curving backward at the same distance above the iliac crest and ending at the second prominence of the sacrum in the midline fulfils all requirements. The incision is carried through the superficial fascia, and the flap is laid back laterally by knife dissection. After controlling hemorrhage, which is easily done, an incision is made through the lumbar-poneurosis along the crest of the ilium down to the bone, from about two inches above the posterior-superior spine to one inch below it. The lumbar muscles are reflected subperiosteally until the transverse process is reached. The retractors are then inserted into the wound, and the transverse process is brought into the field by pushing the muscles toward the midline.

As will be seen from the slides presented, the operation is easier in the female type of pelvis than in the male type, because the transverse process of the fifth lumbar vertebra is more nearly on a level with the crest of the ilium and the space is greater. In the male type of pelvis, it is usually necessary to strip the gluteal muscles and remove a segment of bone two inches long by one inch wide from the ilium at level of the process, making the approach easier (after the manner described by Beveridge H. Moore, in "Joint and Bone Surgery," April, 1923). We have operated on one case where the pressure of the transverse process against the ilium was great enough to push this bone segment one-quarter inch, or more, laterally as soon as it was freed. The process having been exposed and the posterior border having been cleared of soft parts, the wound is packed with hot saline gauze to check the oozing.

Formerly, it was our custom to remove the transverse process subperiostially and then remove as much of the periosteum as possible afterwards. This was very difficult and was followed by untoward results in one case, the patient having a haematoma, which caused paralysis of the anterior crural nerve. Fortunately, this condition has almost entirely disappeared.

It was suggested by one of our associates that the transverse process be removed, together with the periosteum, by freeing the process from soft parts with the finger, while the hands of the assistant were held on the muscles of the thigh, to give warning when the nerves were being impinged upon. The slight pressure of a blunt instrument, or finger, on the nerve containing tissue will immediately stimulate the nerve and cause muscle contraction. In this way, our assistant can tell us exactly of any nerve impingement. Since we have adopted this method of procedure, we have had no trouble in removing the process, nor have we had any untoward results.

After the soft parts are carefully stripped from the periosteum with the finger, the iliolumbar ligaments attached to the front lower part of the process must be freed with scissors. In our opinion, this is the dangerous part of the operation, as it is in rela-

tion with the psoas major in front, and it is in this muscle, at varying depths, that the nerves and blood vessels most easily damaged run. We have found it advisable to put the finger down, above and in front of the process and, after freeing the soft parts in this location, to take a sharp osteotome and sever the process vertically in its mesial one-third. This must be done very carefully. Where the sacralization is of the true type, it is necessary to free either iliac or sacral attachments and then, with the careful use of the Mayo scissors, the iliolumbar ligament is severed after carefully testing each portion of the tissue with the blunt point of the scissors or Brisco coil.

Following the untoward result mentioned above, we became very cautious and decided that it might be possible, in some cases, to enlarge the iliolumbar sacral space in complete sacralization by simply chiseling off the lower border of the enlarged process and not removing the process. While the case thus operated upon has been entirely free from symptoms for over a year, x-rays taken at the present time are showing a bone regeneration, and we believe it will only be a matter of time until the symptoms again appear. It will be interesting to note at this particular time that this patient sustained an injury seven years ago while lifting cannon during one of the numerous Servian wars, and has had symptoms such as Dr. Gallant mentions ever since, although he was treated by several of the best orthopedic surgeons on the continent and in the United States. In addition to the above symptoms, he had a complete loss of sexual function. Following the operation, his pain entirely disappeared in four days and the sexual function has been slowly returning.

The closure is made by stitching the edges of the periosteum together over the crest of the ilium with No. 2 chromic catgut. Where a segment has been taken out of the ilium, it may be replaced. The skin is closed in the usual manner, with a drainage tube through the flap to prevent pressure from bleeding.

The after treatment consists of rest in bed. A plaster paris jacket, which is left on for two weeks, or the Bradford frame may be substituted if the patient is very heavy. Following this, a Taylor brace or leather corset is worn for four or five months, as a matter of protection. Physiotherapy is started as soon as possible. The last four patients we operated upon were able to leave the hospital, with a brace and walking, on the tenth day, free from all pain.

In conclusion, we would say that:

1. The incidence of sacralized transverse process of the fifth lumbar vertebra is more common than has been supposed.

2. It is possible to have a symptomless enlarged transverse process, or an enlarged transverse process may give symptoms early or late in life.

3. An enlarged transverse process may give no symptoms until a jolt, or other injury, is sustained.

4. Changes in the relationship of sacralized transverse process can produce pain which has been incorrectly diagnosed.

5. After conservative measures have failed, we

feel that removal of the transverse process is justifiable.

6. The technique described should give uniformly good results if carefully carried out, and the diagnosis is correct.

7. Pain disappears almost immediately following the operation, and the scoliosis, if present, in about six months.

8. We are as yet unable to draw definite conclusions as to the final outcome. The first case we operated—two and a half years ago—has remained symptomless, and the others, done at intervals, with the exception of the one in which we had the untoward result, are apparently cured. A longer period of observation is necessary to determine the final outcome.

Van Nuys Building.

DISCUSSION

E. W. CLEARY, M. D. (177 Post Street, San Francisco)—We are much indebted to Doctors Gallant and Koebig for presenting to us so ably the results of their study and experience in cases of low back pain associated with abnormalities of the fifth lumbar vertebra.

It is evident that they have been at great pains to perfect the technique of operation for removal of a sacralized transverse process and have carefully selected their cases for operation. These factors, no doubt, account for the encouraging results they have obtained.

I have seen so many cases of pain and soreness in the lumbo-sacral region in which the x-rays revealed no abnormalities of bone structure and, on the other hand, have happened upon so many instances of definite bony anomalies, in this region, in individuals who have never had a symptom or a sign of low back pain, that I have found it difficult to convince myself that the anomalous process is often the cause of the pain. It is, perhaps, for this reason that, although I have seen and have treated, conservatively, a number of cases of lumbo-sacral pain associated with anomalous transverse processes, I have not accumulated a series of operated cases.

The disability from lumbo-sacral pain is so considerable and the conservative treatment often so slow in accomplishing even indifferent results, that an operation which promises prompt and complete relief, even in a small percentage of such cases, is received with enthusiasm.

The dangers are that possible complications, through injury of important structures lying adjacent to the operative field, may be held too lightly, and that cases for operation may not always be selected with the wisdom that is indicated by the results reported in this article.

C. B. BENNETT, M. D. (1122 University Avenue, Berkeley)—The subject of the proper treatment of lower back pains is extremely important as the condition is one of our commonest ills and often one of our difficult problems. Any contribution to our knowledge, therefore, is certainly welcome. Since the lower lumbar region is quite flexible and at the same time must sustain the entire weight of the upper part of the body together with any object carried in hands or on back, it is easy to realize how slight anatomic variations, congenital or acquired, might cause considerable disability, especially as use of this part of the body is required in practically every form of activity. The importance of variations in the transverse processes of the fifth lumbar vertebra in scoliosis, back strains, sciatic nerve pains, etc., is well known. The application of body casts, back splints, corsets, adhesive strappings, together with diathermy, etc., have proven of great service, and many cases of back pains, even in the presence of sacralized fifth lumbar vertebrae have obtained complete relief by simply the correction of faulty posture. However tempting a surgical operation may appear, I think that a thorough trial of the established procedures by those competent in orthopedic work should first be attempted, as the vast majority of cases can thus be relieved. Those who, however, are not thus helped,

must of necessity turn to more radical means. I have had no personal experience with the operation mentioned here, but am much impressed with the excellent results reported, and can only hope that like results may be obtained by those following the technic given.

S. NICHOLAS JACOBS, M. D. (209 Post Street, San Francisco)—There is no doubt of the increasing importance as to the proper handling of cases showing abnormalities of the fifth lumbar vertebra and particularly those cases with sacralization, either unilateral or bilateral, showing symptoms. That it is a rather common condition, which heretofore has been quite generally overlooked, especially in those presenting themselves with symptoms of lower back strain, is well shown by the answers to several questions which I put to Doctor Howard Ruggles.

He informs me that of all cases roentgenologically examined in their offices in which the lower spine appeared, regardless of the purpose for which the examination was made, over 10 per cent showed sacralization of the fifth lumbar vertebra, either partial or complete. Furthermore, about one-half of the cases showing sacralization are so-called "pick-ups," that is, accidental discovery of the condition during routine examination, and comprise many who have not shown any symptoms referable to the lower spine. He has found sacralization quite commonly present in children as well as in adults, the youngest at three years of age and with no evidence roentgenologically in these children of a previously existing rickets, which might be considered as an etiological factor in the production of sacralization as has been claimed by some authors.

He has also found the sacralization as common or even more so in those other than working people, in whom we would more naturally expect to find, because of the nature of their work, chronic inflammatory changes in the lower spine; and this does not bear out the theory of the etiology, as claimed by other authors, as being associated with chronic inflammatory changes in the bony and articular surfaces of the lower spine.

Taking the above into consideration, it leaves little doubt as to the congenital origin of these abnormal transverse processes.

As to the indications for operation, time alone will tell us in just which type of cases we can expect relief of symptoms by operation. I wish particularly to emphasize the fact that in the presence of sacralization on one side, which produces fixation, there results an abnormal mobility on the opposite side and an abnormal susceptibility to injury which is very often the cause of a stubborn sciatica. In these cases removal of the sacralized transverse process relieves symptoms by re-establishing mobility.

H. D. BARNARD, M. D. (2417 South Hope Street, Los Angeles)—Anyone who is called upon to struggle with the problems concerned in obtaining benefit in the treatment of patients suffering with low back pain will watch with interest the results obtained by the operative treatment of abnormalities of the fifth lumbar. The very complicated nature of the etiology of these low back syndromes and the exact role which is played by these so-called sacralized conditions of the last lumbar vertebra make the treatment far from an exact science in my judgment. Definite proof as to whether these sacralized fifth lumbar are entirely causative, or only contributory, or only predisposing; whether pain is produced by inflammatory reaction as result of trauma; just what the element of nerve pressure is; just what cases develop the inflammatory bursitis between the iliac crest and the transverse processes; what the relation is between a stabilized transverse process on one side, and the normal mechanism concerned in the joint action on the other; the relationship, if any, of the forward displacements of the fifth lumbar which are being demonstrated with much more frequency; whether these abnormalities of the fifth lumbar cause sacro-lumbar trouble or sacro-iliac, or a combination of both—even these are not all of the questions which must be answered more definitely before this surgical procedure can be put on a clear-cut status where the indications and contra-indications will be generally accepted. The percentage of cases is comparatively low where it is possible to accurately diagnose the exact location of the cause of the low back pain or sciatic irritation, whether it be sacro-iliac or sacro-lum-

bar, or a combination of both, either with or without the so-called sacralization of the fifth lumbar, partial or complete. The points of differential diagnosis, while comparatively definite as described by certain authors in the literature, are far from infallible. Certain cases obviously localized beyond a question of a doubt in the sacro-iliac joint, have, in our experience, done nicely after the arthrodesis operation described by Smith-Petersen. Likewise fusion of the last lumbar to the sacrum in certain types of lumbo-sacral trouble has proven equally satisfactory in our hands.

To just what extent the resection of the transverse process of the fifth lumbar will stand the acid test of time is highly problematical in my judgment. This doubt is only made more profound when we consider the disconcerting data which each of us must encounter in our actual experiences of the variable results, both successful and otherwise, which accompany the different types of treatment for these low back conditions, a certain percentage of which must fall into the class of abnormalities of the fifth lumbar under special consideration in the above papers.

DOCTOR GALLANT (closing)—In reviewing the criticisms of the men who were kind enough to discuss this paper, we admit that this operative procedure, for the correction of the conditions under consideration, is a difficult one and should only be done in properly selected places. We feel that after all conservative measures having been tried for a sufficient length of time and failing to obtain satisfactory results that such operative measures are justifiable. We are well aware that dire results can easily follow surgical measures, particularly in the region of the fifth lumbar vertebra and sacrum and feel certain that if the technique described in this article is carefully followed the results ought to be good. We know that it is a big problem and a difficult one, especially from an industrial standpoint, and if a small percentage of cases can be relieved we still feel justified in resecting these transverse processes. We know of one instance at the Los Angeles General Hospital in which all conservative measures were employed and failed to obtain good results. This patient had a unilateral transverse process resected and four days afterward was absolutely free of pain and able to walk about the ward. His post-operative recovery was uneventful and to date has had no return of symptoms. In closing, we wish to express our thanks to the men who have so kindly discussed this paper.

FUNCTIONAL TESTS OF HEARING

By ISAAC H. JONES, M. D., Los Angeles
AND VERN O. KNUDSEN, Ph.D., Los Angeles

A discussion of present methods and the announcement of the success of the more recent Audio-Amplifier.

DISCUSSION by Frank A. Burton, San Diego; W. E. Waddell, Los Angeles; Anna B. Lefler, Los Angeles; H. G. Merrill, Provo, Utah.

IT SEEMS to me that we have a unanimous opinion on one subject—our dissatisfaction with the functional tests of hearing. It may be urged that we could do better work in our auditory tests if we were to make full use of our present available methods of testing. However, the fact remains that the records of our work in daily practice are apt to show very meager data. Perhaps this is due, not so much to a lack of interest, as a lack of the time which is necessary in order to go through with various tests.

Our present available tests include the conversational voice, the whisper, the ticking of a watch, tuning-forks of different tones, and the Galton whistle. Of these commonly employed tests, those which most nearly approach accuracy are certain tests made with the tuning-forks. These include:

(1) The determination of the relation of air-con-

duction to bone-conduction; (2) the test of the relation of bone-conduction to normal; and (3) the Weber test.

Although these tests give valuable information, there are disturbing factors. It requires so much time to wait until the tuning-fork has ceased to vibrate—only to find out that the patient did not understand what we were doing and making it necessary to repeat the procedure. In addition, all tuning-forks are of different physical characteristics; no comparison can be made from time to time unless the same examiner re-examines with the same tuning-forks; even then tuning-fork tests are subject to uncertainties which arise from one's inability to strike the tuning-fork each time with an equal blow.

Most of the tests are at best extremely crude and inexact. Tests made with the ticking of the watch or with the whisper or conversational voice are even more uncertain than the tuning-fork tests.

We all recognize the many limitations as outlined above. We might perhaps summarize our dissatisfaction as follows:

1. It requires a great deal of time and patience to conduct complete functional tests of hearing with the present methods. It would be highly desirable if one could attain simplicity and speed as well as accuracy. Only too frequently the busy practitioner finds himself making only a cursory examination.

2. Because of the lack of precision in these tests it is difficult to determine the effect of any treatment that we might undertake. After a removal of tonsils, or after a submucous resection of the septum, or after prolonged treatment of the eustachian tube by inflation or the bougie, we are naturally concerned to know whether the patient's hearing is impaired. We need a "yardstick" of measurement. I think that we have all felt at times that our main standard has been the temperament of disposition of the patient. If the patient is an optimist he will tell us that he is much improved. If he is a pessimist he will tell you that he is no better or worse. Even in prolonged observation of a deaf patient, unless gross changes occur, either for the better or for the worse, it is difficult to draw any exact conclusions as to the status of the hearing defect.

3. We all deplore the absence of any standard method of recording the results of the measurements made by the tuning-fork or other present tests. Custom has already standardized the vestibular tests, even though they are so very recent. By following the same technique, the physician may compare his vestibular findings with those of another examiner in another city on a different date. It is quite a contrast when we receive a letter from some other otologist regarding the tests of hearing that he has made. At times we wonder if there are not almost as many methods of recording functional tests of hearing as there are otologists.

4. Present methods do not furnish a basis for prescribing the type of artificial aid for hearing to meet the needs of any given individual.

Recent attempts have been made to overcome these serious inadequacies. This has been made possible because of the vacuum tube or Audion bulb. It has two principal uses: as an oscillator and as an amplifier.

Its use as an oscillator is the basis of the audiometer. Much work has been done in the perfecting of audiometers, particularly by the splendid work of research engineers of the Western Electric Company. With the audiometer it is possible to test the patient for representative tones throughout the entire range of audibility. These tones may then be reduced in loudness to the point of minimal audibility. This provides an exact quantitative measurement of the patient's auditory acuity, in comparison with an established normal. In addition, the results of such an examination can be charted with precision. Such charts show the quantitative defect for all tones throughout the range of hearing.

The other feature of the Audion bulb, the amplification of sounds, such as the conversational voice, has been utilized in an instrument designed by Professor Knudsen and the writer. For want of a better name we have called it the "audio-amplifier." This instrument consists of a speech amplifier, a device for quantitative tests of bone-conduction, a noise apparatus and an audiometer. The main feature of the instrument is that it makes double use of the same apparatus. There are two Audion bulbs. By turning a key in one direction, these two vacuum tubes are used as amplifiers for the conversational or whispered voice. Between the second bulb and the ear of the patient there is a volume control. By throwing the key in the opposite direction, the first bulb is then used to produce oscillatory currents. These oscillatory currents are carried through the second bulb, which serves as an amplifier, and then through the same volume control to the ear of the patient.

The amplifier makes a direct test of the sensitivity of the cochlea very quickly. It is possible to make a differential diagnosis between perceptive and obstructive lesions, and also to make an approximate quantitative measurement of the auditory acuity of each ear. This test is very simple and requires only one or two minutes for its completion. The examiner simply speaks a few words into the input of the amplifier and then adjusts the nature of the amplification until the speech sounds are best heard by the patient. He then reduces the loudness, by the volume control, until the patient can no longer understand the conversation. The degree of the hearing defect is then indicated by the dial on the volume control.

In testing for hysterical hearing disturbances or malingering, the conversational voice can be suddenly directed from one ear to the other by an electric switch.

In presenting this instrument for your consideration, Professor Knudsen and I will be very appreciative of any criticisms. Personally, I want to take this opportunity of expressing appreciation to Professor Knudsen for the many months of work that he has devoted to this subject. So far as I am personally concerned, the instrument that he has made meets practically every need that I can think of in daily routine practice. I rather expect the principal use of this instrument in my hands will be the amplifier portion—simply putting the receiver to the ears of the patient, carrying on a short conversation, and determining whether it is obstructive or perceptive deafness and the rough quantitative meas-

urement of the percentage of hearing defect in each ear. Not only is it helpful to be able to do this in a minute or two, but we find that the patient responds with more interest to conversation than to the mere production of certain tones. On the other hand, it is a great satisfaction to have, in the audiometer portion, an instrument that is capable of making very precise and exhaustive tests in selected cases.

CONSIDERATIONS FROM THE STANDPOINT OF PHYSICS

By VERN O. KNUDSEN, Ph.D.

University of California, Southern Branch, Department of Physics

Hearing Impairments—Hearing impairments are classified by otologists under two general types: conductive and perceptive.

Conductive impairments result from changes in the external and middle ears which diminish the transmission efficiency of the conductive mechanism. These impairments, in general, consist of an obstruction in the external auditory canal or a fixation of one or more of the moving parts in the middle ear.

From the standpoint of physics, it is a simple problem to pre-determine what the physical characteristics of these obstructions or fixations will be. An obstruction in the external auditory canal closes the "door" to the middle and internal ears. Experience, supported by physical measurements, demonstrates that shutting the door to the music room will diminish, nearly equally, tones of all pitch which enter an adjacent room. One would predict, therefore, that such obstructive deafness should be characterized physically by a uniform diminution of the hearing acuity for tones of low, medium or high pitch. Precise audiometric measurements confirm this prediction.

The physical characteristics of fixation impairments are not so simply explained as those for obstructive impairments. In order to appreciate the physical characteristics of an impairment of fixation it will be necessary to keep in mind two factors: First, tones of low pitch must possess much more sound energy than tones of high pitch to elicit sensations of equal loudness. Thus, a tone of 64 double vibrations per second must possess 10,000 times as much energy as a tone of 1024 double vibrations per second if the two are to produce equal loudness sensations in a normal ear. Second, tones of low pitch must have much greater amplitudes of vibration than tones of high pitch if the two are to possess equal amounts of sound energy. Thus, a tone of 64 double vibrations per second must have an amplitude 256 times as great as a tone of 1024 double vibrations per second for the two tones to possess equal amounts of sound energy. Both of these factors conspire to require gross movements of the conductive mechanism of the middle ear for tones of low pitch and only infinitesimal movements for tones of high pitch. Thus, if the two tones considered above are to produce equal loudness sensations, the 64 d. v. tone will require displacements of the stapes 25,600 times greater than those for the 1024 d. v. tone. One would predict, therefore, that fixation deafness should be characterized phy-

sically by a great diminution of the hearing acuity for tones of low pitch, and by only a very slight diminution for the tones of high pitch. Precise audiometric measurements also confirm this prediction.

Perceptive impairments of the most common type result from changes within the cochlea or eighth nerve. On the basis of any resonance theory of audition (and it seems to the writer that a resonance theory is the only tenable one) those portions of the tectorial or bassilar membranes which respond to tones of high pitch will be the most delicate parts of the vibrating structure, and will also be subject to greater tension than those portions which respond to tones of low pitch. It is reasonable to expect, therefore, that pathologic changes within the cochlea should produce greater destruction among the delicate and tightly stretched portions of the vibrating structure than among the relatively gross and slightly stretched portions. Hence, one would predict that perceptive deafness of the type here described should be characterized physically by a great diminution of the hearing acuity for tones of high pitch and by a lesser diminution for the tones of low pitch. This prediction is also confirmed by precise audiometric measurements.

From the above physical considerations there are three outstanding types of deafness, each of which possesses definite and distinct physical characteristics. To summarize, obstructive deafness is characterized by a diminution of the hearing acuity for tones of all pitch, fixation deafness is characterized by a great diminution for tones of low pitch and only a slight diminution for tones of high pitch, and perceptive deafness is characterized by a very great diminution for tones of high pitch and a lesser diminution for tones of low pitch.

Conductive impairments produce partial deafness because insufficient sound energy reaches the cochlea. Perceptive impairments produce partial or total deafness because the sensitiveness of the receptive apparatus within the cochlea has been dulled. Appropriate amplification of speech or music will restore hearing for those who have conductive impairments, whereas the amplification of speech or music will in general only overwork the already weakened receptive apparatus of the cochlea for those who have advanced perceptive impairments. For those who have only a slight perceptive impairment, it is probable that appropriate amplification may improve normal hearing.

The above considerations constitute the basis upon which the amplifier portion of the audio-amplifier is designed. The amplifier is designed to give (1) uniform amplification of all the frequency components of the conversational voice, (2) great amplification of the low frequency components of the conversational voice with only slight amplification of the high frequency components, and (3) great amplification of the high frequency components of the conversational voice with a lesser amplification of the low frequency components. These three types of amplification are the types required to correct obstructive, fixation, and, in some instances, perceptive impairments, respectively.

For convenience of notation and description, these three types of amplification will be called (1) "uni-

form amplification," meaning that tones of all pitch are amplified equally, (2) "*low pass amplification*," meaning that the tones of low pitch are given a large amplification, and as we go up the scale of pitch the amplification becomes increasingly less and less, and (3) "*high pass amplification*," meaning that the tones of high pitch are given a large amplification, and as we go down the scale of pitch the amplification becomes increasingly less and less.

These three types of amplification are attained by introducing what is known as a corrective circuit between the two stages of the vacuum-tube amplifier. This corrective circuit consists of an inductance, a capacitance, and a resistance. These are so arranged that, by throwing a key in one direction, the capacitance and resistance are connected in series across the input of the second vacuum tube. This provides a *low-pass* amplification. By throwing the key in the opposite direction, the inductance and resistance are connected in series across the input of the second vacuum tube. This provides a *high-pass* amplification. By leaving the key in the neutral position the corrective circuit is out, and in this manner *uniform* amplification is obtained.

The selective amplification we have just described, and the physical characteristics of the three types of hearing impairments described above, suggest the use of selective amplifiers for correcting hearing defects. Dr. Jones and the writer are at present working on the design of an artificial aid to hearing, the "magnaphone," which is based upon this principle of selective amplification. The audio-amplifier is used for "writing the prescription" for the magnaphone for each individual patient. The audiometer portion of the instrument is used for charting precisely the acuity of hearing for each ear. These charts then indicate the amount and nature of the amplification necessary to restore the patient's hearing to normal, provided the defect is of a correctible type. Then, by use of the amplifier portion of the audio-amplifier, the patient can be shown right at the time of examination what help he may expect from the use of such an instrument.

These developments, and the developments of our co-workers in this field, give a hope, therefore, of placing the prescribing of artificial aids to hearing upon the same scientific basis as the grinding of lenses for the correction of defects of vision.

1920 Wilshire Boulevard.

DISCUSSION

FRANK ALBERT BURTON, M. D. (Watts Building, San Diego)—For several years there has been a felt need for standardization in functional ear-testing. Every aurist who has done conscientious work has been impressed with the crying need for improvement in this connection. Several times during recent years the matter has been under discussion at meetings of the American Academy of O. O. and L., the Triological Society and other leading organizations.

Any effort at improvement in functional ear-testing has among its main objectives that of precision, speed, simplicity and a uniformity of technique. The Audio-Amplifier seems to adapt itself to the felt need without excessive expense when the use of the instrument is taken into account.

W. E. WADDELL, M. D. (Pacific Mutual Building, Los Angeles)—Our deepest interest and sympathy, and justly so, goes out toward the totally deaf child, yet today this child is educated by sign and oral methods that he may acquire knowledge and impart his ideas to others; also,

that he may care for himself as well as those dependent upon him; thus, so educated, he grows up without a definite knowledge of the lost sense and leads a comparatively happy and contented life.

We have about us the great army of men and women who have received an education and are following a vocation that requires the sense of hearing, who, finding their hearing impaired (this condition growing worse from month to month, unfitting them for business and social life), demand from us, as physicians, interest and help. This class of patients have gone from one physician to another. The examination is made by forks, whistle, etc., the treatments are given and if the patient is an optimist he says he is better and he may be, yet he is in a state of doubt when the next examination is made as to the result, on account of the apparent uncertainty of the many tests he has gone through in the hands of different physicians, all giving different results. Thus a standardized instrument of precision in functional ear-testing will be a great step forward in giving to these people the much sought for relief.

After advice has been acted upon in regard to diet and care of the body, after focal infections are cleared up and local treatments indicated are carried out, then, if upon the second test with this instrument of precision, the patient finds that he has improved 10, 20 or more per cent, he then has courage, something hard to impart to these patients; he also *knows* that he hears better. If he goes to another reputable aurist to check up, he finds the same result.

If after following the advice and treatment, the Audio-Amplifier shows no improvement, then, as Professor Knudsen says in his paper, "By the help of the Audio-Amplifier, we write the prescription for a Magnaphone that will fit the patient."

Functional ear-testing must be standardized, if we, as physicians, expect to give those partially deaf the relief and comfort that the teachers are giving to those totally deaf. The Audio-Amplifier, I believe, will meet this demand.

ANNA B. LEFLER, M. D. (605 Story Building, Los Angeles)—The preface to Doctor Jones' book on "Vertigo" states: "The studies in this book were originally undertaken at the suggestion of Doctor Weisenburg." This early disposition of Doctor Jones to collaborate in associated lines of work has resulted in much of practical value. He and Professor Knudsen are modest in their statements regarding the Audio-Amplifier; but great ease and satisfaction are gained by its use in testing. To be able to answer in conversational tones the questions of a deaf patient is a marked relief in a busy day. Of much more importance is the chance for standardized records with the increased interest this will afford the problems of deafness. Malignancy may cost more in physical pain and life than deafness, but the latter takes the greater toll in social and economic values.

H. G. MERRILL (35 East Second South Street, Provo, Utah)—The value of the Audio-Amplifier in otologic diagnosis and study, even so soon after its initial appearance, is well established with those of us who are using it. Our experience has made us feel that Doctor Jones is conservative when he writes, "it meets practically every need that I can think of in daily routine practice." We believe that better and more progressive ear diagnosis will date its beginning from the advent of the Audio-Amplifier.

The use of this instrument, however, is daily bringing us to a realization of our failings in diagnostic otology. Among other imperfections attaching themselves to this science is our classification of hearing defects. Doctor Jones and Professor Knudsen, in their very estimable work, have designated all cases as falling under the heads: Obstruction, fixation or perception. Personally, we strongly feel that, to reach more nearly the truth, we should retain at the head of the list the old term, "conduction." This, because we believe that the great majority of chronic progressive deafness cases does not fall under obstruction—(as here applied) or fixation—(from the standpoint of fibrosis). To explain our reasons for such a conclusion requires more time than is here permissible, and will furnish subject matter for a preliminary report we hope to offer in the near future.

In learning to use the Audio-Amplifier, we were con-

fused by the term "pass" in speaking of high and low selective amplifications. If others are having similar difficulty from this usage, might it not be better at the start to accustom ourselves to the terms of "high selective amplification" and "low selective amplification"? Perhaps such a change is unimportant, but we feel that it would have helped us in the beginning. Accuracy of diagnosis is greatly promoted by graphically charting each audiometric study.

INTRACRANIAL HYPERTENSION AND SEROUS MENINGITIS

By EDWARD W. TWITCHELL, M. D., *San Francisco*

Serous meningitis is in its simplest form a very common thing.

Puncture should be far more often done than it is.

The procedure itself is so trivial that if there is any chance of help it should be used.

A means of differentiating between meningitis circumscripta and a new growth has not been found.

DISCUSSION by Howard W. Fleming, *San Francisco*; C. E. Locke, Jr., *Cleveland, Ohio*; I. Leon Meyers, *Los Angeles*.

AFTER the specific causes of the various types of meningitis became known, there was reluctance on the part of physicians to admit or recognize a meningitis which might consist in an increase of fluid and intracranial tension, without the presence and growth of organisms. The term "meningitis" was felt to connote bacterial growth, pleocytosis, marked inflammation, and, except in the case of epidemic meningitis, a uniformly fatal prognosis. Meningism was, to be sure, rather a popular term, but vaguely meant a meningeal irritation by blood-borne toxins, a passing manifestation with no demonstrable pathology. For years cases of meningeal irritation were reported—some of them making surprising recoveries, others ending fatally, with relatively minor meningeal findings at autopsies. Some such as Austin Flint's case were, of course, tuberculous in nature; others were hydrocephalic. Those which got well must have come in another category.

The problem did not advance toward solution until Quincke introduced lumbar puncture as a routine diagnostic procedure. He reported a number of cases with favorable outcome. Some were hydrocephalic children, in whom an intercurrent disease was responsible for the aggravation of intracranial pressure; others were syphilitic and responded to mercury and iodine, but they had outspoken signs of meningeal irritation which after a time subsided. Some of the more acute cases subsided in a few days after puncture.

The constant symptoms were headache, retraction of the neck, vomiting, defective pupillary reaction, confusion, delirium, unconsciousness at times, and occasionally edema of the optic disc. Nystagmus and staggering gait occasionally occurred. The spinal fluid sometimes showed great increase in pressure. Spinal fluid findings were usually negative. Quincke's first paper antedated the present-day serology and cytology, but in his later case reports the fluid often proved Wassermann negative, with normal cell count and globulins in many instances.

Quincke grouped his cases thus: (a) Those with acute onset with acute or chronic course. (b) Those with gradual onset with either a chronic progressive course or with acute exacerbations. Many cases he regarded as instances of exacerbations of chronic hydrocephalus. According to Quincke, the chief causes were injury, mental strain, alcohol, and fever. Infection was not regarded as necessary. In fact, said he, the causes were the same as for accumulations of fluid in the pleural or peritoneal cavities. He specifically mentioned instances of arachnitis with cyst formation, and cites the cases reported by Oppenheim and Borchardt.

Placzek and Krause, in 1907, reported the case of a patient suffering from giddiness, diplopia, vomiting, and paralysis of the right facial and left lateropulsion. Operation by Krause disclosed a cyst at the undersurface of the cerebellum. Unger, in 1909, reported a case with symptoms pointing to tumor at the cerebello-pontile angle. Here syphilis was proven and mercury and iodine used, but severe papillitis developing with diplopia and adiadochokinesis, the patient was operated upon and cured by destruction of a cyst. In 1910 Oppenheim and Borchardt reported the case of a 7-year-old girl who fell from a street-car, striking the occiput. Subsequent symptoms led to the diagnosis of brain tumor, and at operation a wine-glassful of cystic fluid was obtained from the cavity of the thickened arachnoid. Bing, in 1911, reported an instance of cyst of the cisterna magna cured by operation. Quincke, Braun and Lewandowsky and others draw attention to the fact that these cysts often form after a severe blow upon the head, as in the case of the child cited above from Borchardt. Quincke speaks of a "clear case of meningitis serosa traumatica."

Redlich, in Lewandowsky's Handbuch, speaks of the difficulty in differentiating between these cysts and neoplasms. In cases of rapidly developing meningitis serosa following ear trouble, the relief obtained by lumbar puncture, according to Redlich, is of much diagnostic value.

Finkelnburg (Lewandowsky Handbuch) finds neuritis and papillitis common. The pathological findings in fatal cases are "recht spärlich." A flattening of convolutions, injection of vessels, increased fluid with cloudiness are seen, and often many bacteria. This last statement makes one wonder how such cases are kept in the class of the ordinary meningitis.

Among the more important papers of later years are those of H. Claude in Questions Neurologique d'actualite and in L'Encephale. He reviews the subject from the time of Quincke in particular, and cites the early surgical cases of Emmerson and Frazier. The occasional cystic formation, as a result of arachnoid adhesions in other parts of the brain than the base, are described, and one case of marked depression of the convexity is pictured. Mention is made of other cases reported by Muskens, Ströbe, and Uréchia. He insists upon the damage done to the hypophysis by increased intracranial pressure, and cites instances where it has been almost destroyed. From that result what he called the "syndromes endocriniens secondaires."

Claude is a vigorous advocate of the routine use of the manometer for determining the degree of pressure of the spinal fluid. He makes the usual statement that rapidity of flow at the time of puncture is no index as to the pressure, or rather that, with very high pressure, the fluid may come slowly, drop by drop. This is true only if there is some impediment to the flow. Given needles of constant caliber and a limpid fluid, the rate of flow is directly as the pressure. If the needle be stopped partially, or the fluid thick, the flow will be slowed, regardless of the pressure behind it. This much, however, is always true: a spurt of fluid means very high pressure. The Queckenstedt manoeuvre of compression of the jugulars during withdrawal of fluid will give some idea as to whether or not there is any impediment to the flow.

Claude insists that lumbar puncture be done always where there is persistent headache, vertigo, and vomiting. This should be modified by the statement; provided that one can be sure that there is no danger of the pressure from above pressing the medulla down into the foramen magnum. If a very fine needle is used and but a small amount of fluid withdrawn, this danger is much lessened. It is true, however, that lumbar puncture should be done far oftener than is now customary. Many a severe headache in the course of active infectious disease would be relieved by lowering the pressure and leaving an opening in the dura through which drainage could keep up for a day or two.

Claude holds that circumscribed cortical serous meningitis is indicated by general symptoms of hypertension with low manometric reading, focal epilepsies, myoclonus, and absence of papillitis. He mentions one case of cyst beneath the cerebellum diagnosed as such before operation. One of the points of differentiation from a neoplasm was absence of edema of the disc. As one of my own cases will show, this is by no means a criterion.

Within the past year a number of cases have come to my notice, in which the outstanding symptoms pointed to intracranial hypertension, and I have chosen four of them as representing some of the types emphasized by Quincke and Claude. Three of the four are at present in good health, although one was subjected to a formidable operation. The one who died, died, we believe, from causes not connected with the meningeal condition.

CASE I—A. F., aet. 29, nat. California. Entered St. Francis Hospital 2-24-1923. For one month he has been complaining of severe frontal headache, chiefly over either eye. An x-ray examination showed evidence of slight sinusitis. Temperature was 101.5 degrees, pulse 60, respiration 17. At the time of entrance, the headache had become very severe and there was mental confusion and persistent vomiting. There were rigidity of neck and other signs of meningeal irritation. Urine was normal and so was the blood, aside from a leucocytosis of 10,500. Fundi were normal. A lumbar puncture brought a clear fluid under increased pressure, with normal cell count and globulins and negative Wassermann. Soon after puncture, the headache, vomiting, and other signs of meningeal irritation lessened. In three days the patient was in a normal condition and has remained so since. This is a good example of Quincke's Class "A"; acute onset and acute course with rapid relief after puncture.

CASE II—J. McK., aet. 20, nat. California. Entered St. Francis Hospital 8-23-23. There had been complaint of shortness of breath for months, of occipital headache for eleven days, and of vomiting for the last day or two.

This patient was exhausted by far advanced mitral stenosis, and when meningeal signs showed themselves, a tuberculous meningitis was suspected. The patient was delirious, with retracted head and positive Kernig. The spinal fluid, which was under increased pressure, was Wassermann negative. There were no organisms, no increase of cells, and no web on standing. Under daily spinal drainage, the signs of meningeal irritation disappeared and the patient regained consciousness. Suddenly he died, supposedly as a result of the heart lesion. Blood and spinal fluid cultures had shown no growth. The relief from spinal drainage was very striking in this case and we at one time were hopeful for recovery, though aware that it could be but temporary on account of the advanced decompensation. Unfortunately, an autopsy could not be obtained.

CASE III—A. G., aet. 11, nat. San Francisco. Entered isolation ward of San Francisco Hospital moaning, unconscious, head extended, pupils dilated, and extremities rigid. He had been struck on the back of the head in a fight ten days before entry. Twenty-four hours before entry he became feverish and was found unconscious on the floor of his bedroom. He vomited several times. The nose was bloody. Brudzinski and Kernig positive. Babinski group of reflexes all positive. Leucocytosis of 29,000. On puncture, the spinal fluid squirted at least a foot. There were 18 lymphocytes per cubic mm. and increased globulins. No organisms were seen in the smear, and no growth in culture at first. Later, staph. albus was reported with a question of contamination. Nasal smear was negative. A subsequent spinal puncture showed normal cell count. The fever subsided rapidly. At the end of a week the patient was discharged in apparently normal condition. It has been learned that the patient had a mild recurrence several weeks after going home, but at present writing is well.

In this case the blow on the head probably played a large part. It was what Quincke would have called "a clear case of meningitis serosa traumatica."

CASE IV—Mrs. W., aet. 36, nat. Austria. Married at 16 and infected by her husband, who has since died. She had as treatment only some medicine which he purchased at a drug store. She began to have "peculiar headaches" in 1912. These headaches sometimes ended in unconsciousness. She remembers once calling, "Come quick, help," and then becoming unconscious. In 1920 she came to San Francisco and at that time suffered greatly with thirst and polyuria. This undoubtedly was due to the hypophyseal compression, of which Claude speaks. By September, 1920, she was so blind that she had to be led around. Then she was given vigorous anti-syphilitic treatment and recovered her sight. She never menstruated after 1920, another associated endocrine symptom. In May, 1923, things grew worse again and the headaches were so severe that she yelled, as she expressed it. She had a spell of projectile vomiting and her eyes crossed. She talked indistinctly and grew irrational. Finally the left arm and the fingers of the left hand grew numb. She entered St. Francis Hospital 6-30-23 stuporous. The pupils were equal with poor reaction to light. The left abducens was weak. The discs were blurred and swollen, and there were hemorrhages and exudate in the retinae. There were left-sided asthenia, adiadokokinesis and dysmetria. A diagnosis of tumor in the left posterior fossa was made. Operation was done by Dr. Howard W. Fleming on July 1. A cyst was found occupying the space of the cisterna magna, walled by an arachnoid that was thickened like chamois skin. She left the hospital, ambulant, on July 24, but soon had a return of some symptoms, especially an uncontrollable vomiting. The discs, which had receded, swelled again and she was taken to the University of California Hospital. Here she was given intravenous injections of sodium iodide. Gradually she grew better. Her weight increased from 91 to 145 pounds, and her strength grew progressively greater. The nerve heads now are flat, vision is good, and the cerebellar signs are almost vanished. There was for some time a great deal of occipital soreness, but that has for the most part disappeared. It may be noted here that several blood Wassermans in recent years were negative. I have omitted all discussion of surgical details, with the idea that that side of the case will be subsequently treated by Dr. Fleming, upon whom the whole burden of the operation fell.

The first of these cases is one of acute hypertension of unknown origin. It is the type we see oftenest, and many such are recorded by Quincke, Claude and others. The symptoms of headache, retraction, vomiting, and mental confusion were pronounced. For unknown reasons there was a sudden rise of tension which produced them. Shortly after withdrawal of what appeared normal fluid, all symptoms subsided and the patient was rapidly restored to normal. The original cause probably being a transitory one, puncture was of undoubted value and was the only thing needed. The second case was a far more serious one. Some of the factors are still in doubt. No guinea pig injection was made and tuberculosis is a possibility, but the usual pleocytosis, increase of globulins, and web were wanting. The amelioration after repeated puncture was so marked that it was felt that the boy had a chance of recovery from the meningeal complex. The third case would come under Quincke's heading of meningitis serosa traumatica, but the leucocytosis of 29,000 is unexplained. The bloody nose made one think of extension of trouble from the sinuses, although nasal smears were negative. In any event, the puncture was a great help. The relapse after leaving the hospital was in keeping with the experiences of others. In such cases, cyst formation may result later.

The fourth case was one of meningitis serosa circumscripta syphilitica. Here a lumbar puncture might have been fatal, while cistern puncture might have given temporary relief. The only hope for the moribund woman was immediate operation, and fortunately it led to the finding and evacuation of a cyst. The reason for subsequent flare-up was never understood.

To sum up: Serous meningitis is, in its simplest form, a very common thing. It is one of the conditions in many cases of acute illness, and the distress which it causes can be relieved by prompt puncture. Puncture should be far more often done than it is. Whenever a headache is very persistent, and the usual remedies fail to relieve, puncture should be thought of. The procedure itself is so trivial that if there is any chance of help it should be used.

A means of differentiating between meningitis circumscripta and a new growth has not been found, but the fact that these cysts are rather frequent should keep one on the alert, for the operative treatment of them forms a very bright spot in what is a pretty dark corner of surgery.

909 Hyde Street.

DISCUSSION

HOWARD W. FLEMING, M. D. (380 Post Street, San Francisco)—Dr. Twitchell has asked me to discuss the surgical features of the patient operated on. At the time the patient was first seen she appeared to be in extremis. Examination was difficult, due to the lack of co-operation. She was unconscious, there was moderate cervical rigidity. The fundi revealed bi-lateral choking of several diopters. The extra ocular muscles were uninvolved, and a facial paresis was apparent.

The history of findings, made prior to loss of consciousness, made a cerebellar involvement beyond question. Our pre-operative diagnosis was cerebellar tumor.

An emergency operation was done that day under ether anesthesia, with the patient in the prone position. The usual cross-bow incision was made and the occipital bone

removed, including the posterior margin of the foramen magnum. Before opening the dura, it was necessary to puncture the lateral ventricle to reduce the intra-cranial pressure. The dura was opened widely, revealing a large cystic tumor, which was a part of, or overlying, the posterior cistern. The walls of the cyst were clear and appeared to be markedly thickened arachnoid tissue. It was necessary to cut the wall with a scissors before it could be opened widely. An abnormally large amount of fluid escaped. The greater part of the cyst was opened up and some excised for pathological examination. There was a marked herniation through the foramen magnum, and it was necessary to remove the lamina of the atlas and axis before the cerebellar tonsils could be elevated. The patient had a very stormy post-operative course. For several days her temperature rose as high as 105 and 106, with a very rapid pulse. About the seventh day she began to improve. All the neurological signs enumerated above disappeared. The choked discs subsided rapidly.

The patient had one relapse, which Twitchell has mentioned. At present she is feeling extremely well, and her only complaint is slight unsteadiness at times and a painful sensation in the region of the operative scar. Unfortunately, the tissue excised for diagnosis was lost in the pathological department. However, there is very little doubt but that this is a case of meningitis serosa circumscripta. A search was made for a posterior fossa tumor and both lobes punctured. At the present time the patient has no herniation at the site of occipital decompression, and the discs show no evidence of choking. We feel that with effectual anti-luetic therapy her prognosis should be good.

C. E. LOCKE, JR., M. D. (Cleveland Clinic, Cleveland, Ohio)—I want to thank Dr. Twitchell for his most excellent and instructive paper. Three cases, similar in symptomatology and operative findings to Twitchell's Case IV, yet with no proof of syphilis, have come to my notice. In one of these patients, histological study of the thickened arachnoid membrane showed definite round-cell infiltration. All three of these cases did exceedingly well after operation.

The differential diagnosis of circumscribed serous meningitis and brain tumor presents a difficult problem, especially when the latter is located in the posterior fossa. In this region, as the result of interference of the circulation of the cerebrospinal fluid, the pocketed subarachnoid fluid causes internal hydrocephalus and produces the usual signs and symptoms of increased intra-cranial pressure.

In contradistinction to tumor, it has been my experience that patients with circumscribed arachnoiditis of the posterior fossa complain of pain, stiffness and tenderness in the suboccipital region, diplopia and transient numbness of the extremities, and that the usual intra-cerebellar signs are less pronounced. With circumscribed arachnoiditis, the angle cranial nerve signs are usually absent, I believe. In cases of circumscribed serous meningitis, a preliminary history of a general acute infection may often be found.

I. LEON MEYERS, M. D. (517 Rillstreet Building, Los Angeles)—Serous meningitis as the cause of intra-cranial hypertension and its resulting manifestations is met with not only in conditions with general neurologic disturbances, but also in those with focal phenomena. It should, consequently, be considered as a possible cause of the trouble in any obscure case of intra-cranial hypertension.

Among the cases reported by Twitchell was one which followed a head injury. This coincides with the convictions which I have ascertained for some time that traumatic epilepsy, in the absence of focal irritation, is brought about by serous meningitis, the spinal fluid in these cases being practically always under increased tension. This is undoubtedly true of also the other so-called post-concussional syndromes, as, for example, the amnesic, the aphasic, and the labyrinthine, conditions which are also associated with increased fluid pressure, and not infrequently with the presence of globulin and a slight pleocytosis.

Particularly interesting, however, are the cases of serous meningitis with phenomena of focal brain irritation, such as Jacksonian spasms, cranial nerve palsies, nystagmus, and cerebellar signs. These cases are generally referred to as pseudo-tumors and have been noted even in the absence of such focal pathology as was found

in Dr. Twitchell's Case IV. Mohamed Saleh (1912) collected thirty-two such cases from the literature, in thirteen of which necropsy revealed pathology of only a minimal character.

A case of this type came under my observation at the Los Angeles General Hospital in 1922. The patient, a man 48 years of age, has bilateral ptosis of the upper eyelid, and marked limitation of all extra ocular movements, especially those which require the action of the right oculo-motorius. He had a horizontal nystagmus to the right, and was markedly ataxic. His gait was cerebellar in type, and he tended to fall forward and to the right. The subjective symptoms were: Severe headaches, diplopia on looking to the left, and dizziness. He was extremely apathetic. While at the hospital he had numerous attacks of unconsciousness, with convulsions. The convulsions were in the nature of tetanus-like seizures, and suggested a tumor of the vermis. There was no history of trauma. The Wassermann on his blood was negative, and the spinal fluid which was examined several times was, except for an increase in the tension, entirely negative. The patient remained in this stuporous condition for about ten days, and then began to improve. The improvement continued steadily, and within a week all symptoms and signs had disappeared so that he was able to go home. Professor Barany visited Los Angeles a few months later, and at my request examined this patient, but nothing abnormal was found, the patient stating at the same time that he felt perfectly well ever since he left the hospital. The marked improvement, and finally the complete disappearance in this patient of all signs and symptoms, which followed so closely, the lumbar punctures, and the absence of spinal fluid findings which are associated with epidemic (lethargic) encephalitis, leads one to believe that this was a case of serous meningitis of the type known as pseudo-tumor cerebri.

STRICTURE OF THE URETER AND DYSMENORRHOEA

By RAYMOND L. SCHULZ, M. D., *Los Angeles*

The chief reasons for this paper are to explain how stricture of the ureter develops, why it causes symptoms; how it may cause dysmenorrhoea; to emphasize some of the unusual features of the subject and to urge the importance of careful diagnostic treatment of these patients.

Stricture of the ureter should always be thought of in all cases of vague lower abdominal pain in either side; likewise severe menstrual pains.

Stricture of the ureter is perhaps the commonest urological condition that we have to deal with in women.

DISCUSSION by Norman H. Williams, *Los Angeles*; Clarence W. Page, *Berkeley*; E. J. Eytinge, *Redlands*; R. H. Van Denburg, *Los Angeles*; Harry H. Wilson, *Los Angeles*.

NOTWITHSTANDING the numerous articles on stricture on the female ureter, there are enough of these patients who go unrecognized for varying lengths of time, so that the subject is still of timely interest. Stricture of the ureter is perhaps the commonest urological condition that we have to deal with in women.

Many of the patients have had all sorts of examinations, without locating their trouble. The ordinary methods of cystoscopy, ureteral catheterization, and pyelography may not reveal any abnormality, but by the proper method we can determine quite accurately if the symptoms originate in the urinary tract or not, and, if they do, we can reproduce exactly the pain from which these patients

have been suffering so as to leave little doubt about a diagnosis.

Many of these patients have undergone operative procedures on the abdomen, such as removal of the appendix, gall-bladder exploration, removal of ovaries, tubes and uterus, without obtaining relief, when the underlying condition is stricture of the ureter. It is this lack of thorough diagnosis which tends to bring surgery into disrepute with some people. Too much emphasis cannot be placed upon the importance of considering the possibility of ureteral stricture in every case where there are vague abdominal pains, though at the same time we must not expect that this condition will explain every one of these puzzling cases. The tests for ureteral stricture should be used with discretion, depending upon history and physical findings.

A clearer understanding of the underlying pathological condition, its relation to focal infection and to physiological disturbances, should help in the earlier recognition of these cases.

Any condition that produces a chronic lymphadenitis of the pelvic lymph nodes, potentially, can be a causative factor in producing an ureteral stricture. Common causes are chronic tonsillitis, infections of the teeth, both of which are known to cause poisoning of remote parts of the body at times. Also chronic cervicitis following lacerations of the womb, infections of the tubes and ovaries by direct extension to the pelvic lymph nodes. If these conditions are treated, the inflammation of the lymphatics subsides, and sometimes the symptoms of pain from the ureteral obstruction quiet down. Many patients with pains from ureteral stricture give a history either of repeated attacks of tonsillitis or of having had considerable dental work, such as root fillings. In the absence of such a history, the mere inspection of the tonsils has revealed enlargement, and in one patient there was a chronic abscess about ready to break, though throat trouble was denied.

The usual location of simple strictures is in the broad ligament portion of the ureter, and also in that portion along the pelvic wall at the bifurcation of the internal iliac vessels. In both regions there are numerous lymph nodes in intimate contact with the ureter. Hunner reports that these have been found enlarged at operation, and that the stricture formation in the ureter varied from a slight annular degree to diffuse cartilage-like thickening, for several centimeters, of its length and to a thickness of 1 cm. The infiltration may be confined to the ureteral wall, or there may be much periureteritis.

Why should the pelvic lymph nodes of all the groups in the body be practically the only ones to cause trouble as a result of focal infection? How can the remote production of the ureteral stricture, as a result of repeated tonsillitis or other focal infection, be explained? First of all, these pelvic nodes are located next to a vital organ where only slight tissue changes are necessary to cause a disturbance. The lymphatics in other parts of the body are less likely to cause serious trouble on neighboring tissues, as long as they do not interfere with the functions of surrounding tissues. Inasmuch as the uret-

eral lumen is naturally very small, it takes but little pathology to cause trouble. Tonsillitis is a disease of lymphatic tissue. Infection is very apt to be disseminated to other portions of the body during an attack, and lymph nodes elsewhere become involved secondarily. The infection or its toxin may spread beyond strictly lymphatic tissue and involve neighboring structures. When such perilymphadenitis extends to an easily vulnerable organ like the ureter in the iliac and cervical gland regions, inflammatory changes are produced in the wall of the ureter. When these lymph nodes become inflamed repeatedly, there is a cumulative effect by the formation of fibrous scar tissue or fibrosis in the wall of the ureter. With the contraction of this scar tissue, symptoms of ureteral obstruction follow. It is probable that all or most of the pelvic lymph nodes take part in the inflammatory process secondarily to a focus of infection elsewhere, but only the lymph nodes in the cervical and iliac gland regions are heard from because they lie in contact with the ureter and, through it, cause trouble.

At first, there is a periureteritis, and as the infection extends, the ureter itself becomes involved in all its coats. Inasmuch as the ureter is naturally a relatively small tube, only slight narrowing is necessary to produce symptoms.

The urine is carried through the ureter by peristaltic waves similar to the intestinal waves. When obstruction of the ureter occurs, its first effect is an increased tension above the site of obstruction, the same as in intestinal or any other obstruction. If the obstruction is partial, nature compensates, to some degree, in trying to overcome the obstruction by hyperactivity of the musculature above. When obstruction of the bladder occurs gradually, hypertrophy of its musculature follows; similarly, hypertrophy of the heart occurs back of the point of obstruction. Likewise, in intestinal obstruction, hyperactive peristaltic waves are sometimes seen above the point of obstruction.

Undoubtedly, a similar process takes place in the ureter. The first effort on the part of nature to overcome the ureteral distension is an hyperactivity of the musculature above the point of obstruction. If the muscular activity of the ureter and its subsequent hypertrophy are sufficient to expel its contents into the bladder, there is not apt to be much dilatation of the ureter. At this stage there are apt to be cramp-like, colicky pains in the abdomen from the partial obstruction and hyperactivity of the ureter. As soon as the obstruction increases so that its resistance is greater than the peristaltic effort of the ureter, then dilatation occurs. As a rule, it begins just at or above the obstruction and extends upwards gradually as the contracting power of the musculature is overcome. If the process continues, hydroureter and hydronephrosis result. Dilatation of the ureter and hydronephrosis are the result of obstruction. The absence of dilatation in an ureterogram, however, does not prove the absence of stricture of the ureter.

Intermittent pain of varying degrees of intensity is the most common symptom. It is often suggestive of the colic similar to the passing of an ureteral calculus. Often it is in the appendix region or slightly lower on either side. Sometimes it is de-

scribed as radiating around toward the back. Sometimes it is deep-seated in the pelvis or ovarian regions and penetrating through toward the back.

Pains like Dietl's crisis should always be investigated for stricture of the ureter. In one instance, such attacks of the most excruciating pain occurred at times when the patient unconsciously took a very deep breath. She felt the most severe shooting pain in the left loin and back that lasted only an instant, but was of such severity as almost to produce collapse. The probability is that a moderate amount of urine had been collecting in the renal pelvis, its flow to the bladder was partially obstructed, the deep inspiration and contraction of the diaphragm produced sudden additional pressure upon the kidney, compressing it upon an excess of fluid in the renal pelvis and thus giving the same symptoms, but only much more intensified as those obtained when the kidney pelvis is overdistended by injection. Many cases of movable kidney produce few or no symptoms. If there is pain, and kidney suspension has not given relief, obstruction may be present in the lower portion of the ureter, causing all the symptoms. Every ureter should be investigated for stricture before any operation for kidney suspension is done; likewise, cases of renal and ureteral calculi and hydronephrosis having pain.

It should be questioned if the pains described as Dietl's crisis are in reality due to a twisting of the renal pedicle of a movable kidney. Body tissues are not very apt to become kinked of their own accord. The flexibility is usually sufficient to allow considerable bending of a long pedicle, without obstructing the lumen of the ureter or blood vessels. It would take a pretty sharp kink to really cause sufficient compression of any of these tubes to produce pain symptoms, particularly such as are liable to last for a couple of days. A sudden stoppage of arteries elsewhere by compression does not cause such sudden pain, why should compression of the renal vessels cause such excruciating pain, and so suddenly? The sudden compression of a kidney that is distended to capacity on account of a ureteral stricture is a much more logical explanation for the cause of Dietl's crisis.

Urinary symptoms, such as bladder pain, frequency, burning, dysuria, and ureteral pain, are quite common, especially when there is infection. The infection and urinary symptoms may be intermittent. In such cases where there is infection, fever may occasionally occur, particularly following ordinary ureteral catheterization. Such a fever may last many days and the patient may be very sick.

In discussing the symptoms of ureteral stricture, it is particularly desired to call attention to the importance of some cases of dysmenorrhoea that are caused by ureteral stricture. Dysmenorrhoeas that have not been relieved by the ordinary methods should certainly be tested for ureteral stricture. The test is of lesser severity than other surgical procedures, and should be applied first.

How can menstruation affect stricture of the ureter and cause the so-called dysmenorrhoea? We know that congestion of any tissue produces a swelling of that tissue by stasis in the blood vessels, and subsequent edema. At the beginning of menstruation, or a few hours previous, the cramp-like pains

begin, and often after its onset the pain lessens; in other words, the congestion of the pelvic vessels is partly relieved. Under normal conditions, a stricture of the ureter may be just large enough to permit urine to pass through without any hindrance. Produce a swelling of the pelvic tissues around and in an ureteral stricture, and there may be just enough additional constriction to cause obstruction and with it the hyperistalsis or cramps in the ureter. The easiest explanation in the past has been that the pain of dysmenorrhoea is a cramp of the uterus. The recumbent position partially relieves the pelvic congestion and, indirectly, the ureteral obstruction, consequently the pain is less severe.

On examining the abdomen, fairly deep palpation is usually permissible, even over the tender portions. Tenderness is more apt to be found at the lateral margin of the rectus and slightly lower than McBurney's point. Ofttimes the abdominal findings are remarkably negative.

Urinary infection and pus are not difficult to determine. A catheterized specimen should always be obtained for examination. Very often, where ureteral stricture is present and causing chiefly symptoms of pain, the urine may be perfectly clear. It is important to remember this, that a clear negative urine does not rule out the possibility of ureteral stricture.

With a history suggestive of ureteral stricture, are we going to do a pyelogram and bilateral ureteral catheterization the first thing, or should we proceed to relieve the patient's pain as soon as possible, even though we have to defer the completion of our tests until a later period?

First of all, we should always rule out urinary tuberculosis by careful examination of a bladder specimen. Then we proceed to determine whether to use ordinary methods of ureteral catheterization in order to differentiate the two sides, or whether special precautions are necessary so as to avoid complications.

Where pain symptoms are limited to one side, the immediate test with a wax bulb-dilating catheter is often desirable, because it gives quicker relief from pain if there is a stricture. When considerable pain is present in both sides and infection in the bladder urine, it is well to be very cautious and oft-times advisable to test only one side at a time with the wax bulb catheter, the bad side first. When the reaction has subsided, the other side is tested similarly. In this way the dangerous reactions of stricture cases and pyelitis can be controlled, and we avoid putting both kidneys temporarily out of commission simultaneously.

The alarming symptoms that may follow bilateral ureteral catheterization in cases where there has been pain and infection are familiar to most urologists. All previous symptoms may become very much more intensified. The pain may be terrific, the temperature may go to 104 and 105, there may be delirium. These symptoms may last for a considerable time or subside as soon as the edema in the stricture portion has subsided after being catheterized.

If there has been urinary trouble for a long time and the combined kidney function is impaired, temporary anuria may occur. At such times it is very important not to catheterize both ureters simultane-

ously. By bearing in mind that such dangerous symptoms may be due to ureteral obstruction, and by following immediately with dilatation or leaving a large catheter in place for drainage, these symptoms can be brought under control more readily.

Definite rules cannot be laid down. It is necessary to study each patient individually and outline the procedure accordingly. One must be familiar with the untoward reactions liable to follow any of the various procedures and be prepared to meet them as they occur, or, better, use such methods from the very start which tend to avoid trouble, even though we cannot always get all the information at the first examination we would like. In many cases we can give the patient quicker relief if we proceed intelligently. Accurate diagnosis is of first importance. It is accomplished best by means of the wax bulb catheter and the characteristic pull of the stricture when it is withdrawn. A plain catheter will pass through a stricture without dilating it and can produce just enough local trauma in the stricture itself to cause its closure by the resulting edema. In the presence of infection this is all the more serious, because it subjects the kidney parenchyma to the infection and usually causes high fever. As stated above, this will sometimes subside spontaneously, but usually requires dilatation or a prolonged convalescence. Partial dilatations are not effective enough in giving permanent relief. Unless the stricture has been overdilated, it is apt to recur. A severe cold or attack of grip is apt to bring about a recurrence when a stricture has not been dilated sufficiently. As to the size to which dilatation should be carried, no hard and fast rule can be made. Overdilatation is necessary.

The passing of a wax bulb catheter for diagnosis accomplishes the beginning of dilatation. If we use larger wax bulbs subsequently, there is apt to be so much pulling on the ureter when the catheter is removed, that it is exceedingly painful. To avoid this, special dilating catheters and bougies are used. Inasmuch as there is no shoulder at any portion, they are readily withdrawn through a stricture with but very little traction on the tissues, and almost no pain.

Patients in whom strictures are dilated insufficiently and soon after develop recurrences are apt to become discouraged. They begin to drift from one to another, each time becoming more skeptical and difficult to work with on account of their contrary attitude. If dilatation is to be attempted, it should be done right and not played with. Dilatation with the Garceau catheter and Brown Buerger cystoscope is not enough to cure these cases, those thus treated are apt to recur.

In all medical and surgical treatment it is always important to remove the original cause of the trouble. Only such tonsils as definitely show disease should be removed at the same time that dilatations of the ureter are begun. Otherwise, tonsillec-tomy is not always necessary, but should be considered when there are recurrences or when dilatation does not seem to give the expected relief, provided that there are no other foci of infection. If dilatation with a Garceau catheter fails to relieve symptoms, that would not be an indication for tonsillec-tomy. Garceau catheter dilatation is inadequate, in

the first place. By gradually dilating a stricture, we soon learn whether results are to be obtained by this method alone, or if trouble elsewhere is to be looked for.

STRICTURE OF THE URETER SHOULD ALWAYS BE THOUGHT OF IN ALL CASES OF VAGUE LOWER ABDOMINAL PAIN IN EITHER SIDE; LIKEWISE SEVERE MENSTRUAL PAINS

There may or may not be urinary symptoms. Pyelitis is very apt to be accompanied by stricture, and whenever infection is present in the urine it is well to be cautious. The urologist should be on his guard to consider the possibility of stricture when pain following ordinary ureteral catheterization becomes unduly severe, and should not hesitate to investigate and dilate a stricture so as to give immediate relief. Urine and x-ray findings may be entirely negative. Overdilatation is necessary to cure a stricture.

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DISCUSSION

NORMAN H. WILLIAMS, M. D. (1052 West Sixth Street, Los Angeles)—Doctor Schulz has, I believe, approached what will probably prove to be a source of relief from certain types of pelvic pain. The patients who will probably get most relief by dilatation of the ureter may perhaps be divided into three classes. First, those of the dysmenorrhea occurring in nulliparae. Second, pelvic pain resulting from marked retro-version. Third, those patients in whom there is chronic laceration of the cervix with subsequent chronic infection producing pain in the pelvis.

The dysmenorrhoea in the first class may readily be caused by the marked congestion which characterizes the early phases of menstruation. The tissues are necessarily swollen, thus compressing the ureter in its broad ligament portion sufficiently to cause an increased peristalsis of the ureter. One finds, of course, occasionally in this type of case sufficient obstruction of the cervical canal to account for pain. However, there are many cases in which from an anatomic viewpoint this type of obstruction cannot be the sole cause for pain and it is in these that compression of the ureter is many times the disturbing cause. Following the onset of the menstrual flow and the subsequent subsidence of the pelvic congestion the pain disappears.

In the second group where marked retro-version is present there is often pelvic pain on either side, or both, which is caused by torsion of the ureter which doubtless causes more or less mechanical constriction. When the uterus, in these cases, is held up by pessary or by suspension this torsion is relieved and the pain subsides.

In the third class are patients in which the chronic infection of the cervix is present as the result of chronic laceration. As Schulz has mentioned in his paper, the constriction of the ureter is caused by enlargement of the lymph nodes immediately in the vicinity of the ureter in its pelvic portion. These are the patients who are frequently operated upon for appendicitis as no other definite pathology is found upon examination. It is, therefore, incumbent upon the surgeon to definitely ascertain if any ureteral disturbance is present before concluding that a possible chronic appendicitis is the sole cause for pain. Many times this pain will completely disappear following a repair of the cervix.

CLARENCE W. PAGE, M. D. (Physician's Building, Berkeley)—The diagnosis of ureteral stricture, not due to stone, was seldom considered until the work of Hunner demonstrated the frequency of this condition as a cause of many obscure gynecologic symptoms. Appreciation of its importance is still far from general recognition, and this paper by Schulz is, therefore, timely.

While the technic of the examination is comparatively simple, considerable skill and experience is required to

detect some of the milder cases. The results that have been achieved by the correction of this lesion, however, are now sufficiently established to justify the opinion that such an examination should be more commonly carried out in the types of patients Doctor Schulz so well describes.

E. J. EYTINGE, M. D. (118 Cajon street, Redlands)—Doctor Schulz's paper adds to the growing importance of stricture of the ureter. Some of his points of technic are to be especially emphasized.

1. The avoidance of over-instrumentation at one sitting.

2. The chief diagnostic point being the "hang" of the catheter. It is fortunate that the Kelley cystoscope can be used for the work considered, as it is the only instrument in which the "hang" is dependable.

3. Overlarge wax bulbs are not only painful, but the wax bulb pulls off too easily.

Removal of the primary focus as well as the continued overdilation is necessary to prevent recurrence.

R. H. VAN DENBURG, M. D. (Merchants National Bank Building, Los Angeles)—As Doctor Schulz has said, "stricture of the ureter is perhaps the commonest urological condition that we have to deal with in women." It is, without doubt, the commonest and most frequent pathological condition, and is one of the chief causes of years of suffering to many women.

It is the cause of more kidney changes than any other one factor. It accounts for hydronephrosis, pyelitis, and pyonephrosis. It is more frequent than ureteral stone and largely contributes to its cause.

Its causes are clearly explained in this paper, yet the matter of diagnosis requires patient and careful technique. The symptoms are so strikingly like ureteral calculus that this must first be ruled out. However, the multiplicity of symptoms, often with severe bladder disturbance, lead one to suspect stricture rather than stone. And again, in mild cases, only few symptoms may be present and the urine entirely negative.

The chief point in the diagnosis is in the proper kind of wax-bulb catheter used, and best through a Kelly endoscope, which is best adapted to its use. The dilatations are best accomplished by different sized bougies carefully introduced and not too many at one sitting. The Garceau catheter is insufficient, as Schulz has said.

It is both surprising and most gratifying to see the relief obtained in patients who have suffered over a long period of time, who have been on the operating table through some incorrect diagnosis.

HARRY H. WILSON, M. D. (Brockman Building, Los Angeles)—Judging from my own experience, I am inclined to believe that the large percentage of physicians, other than urologists, are unfamiliar with the frequency of stricture.

In the process of diagnosis it is so important for the welfare of the patient and the standing of the physician as an individual, as well as of the profession as a whole, that the real cause of patients' symptoms be diagnosed before they are submitted to operation or long treatment which may be useless if the true cause is undetermined.

The tendency for each man to find diseases or conditions in the field in which he specializes is so well known that we must be all the more careful to give our patients the advantage of unbiased examination if possible.

Specifically—any woman with pain in the abdomen and not clearly defined pathology directly explanatory of her pain should surely have an examination by a competent urologist before she is operated upon for some undefined female trouble.

It has been my pleasure to have seen several patients cured of severe pain from dilation of the ureter after other operative and long-continued medical treatment had failed to help them.

DOCTOR SCHULZ (closing)—When Hunner first published his work on stricture of the ureter, tremendous skepticism arose, which, no doubt, has interfered with the more general application of his teachings. Some of the leading urologists of the country were loud in their

denunciation of his claims. Hence, the writer appreciates all the more the support that has been given by those who have discussed this subject. The occasional opposition encountered nowadays seems to come from those sources where the methods of diagnosis have been improperly or unskillfully applied, or where the patients have not been selected. There should be a word of warning against the indiscriminate and unskillful application of the tests; neither should the possibility of co-existing lesions elsewhere be overlooked.

The remarks brought out in the discussion are all in accord with the subject. It is encouraging to learn that stricture of the ureter is beginning to receive more general recognition. It is hoped that the explanation of the mechanism of this condition will make the subject clearer to a greater number of physicians.

Clinical Notes and Case Reports

ROCKY MOUNTAIN SPOTTED FEVER— REPORT OF A FATAL CASE

By BEAUMONT BROWN, M. D., AND
GEORGE MAGEE, M. D.,
Yerington, Nevada

This report of Rocky Mountain spotted fever near Lake Tahoe is a matter of considerable importance to both public and personal health doctors, as well as to the people of Nevada and California.

Prompt energetic action NOW might prevent subsequent extensive expense and loss of life.—EDITOR.

This case is reported because we know of no other cases coming from this extreme western section of the state.

J. P., 44, rancher. Family history: negative. Past history: typhoid, age 18. Present illness: On May 24, while driving cattle near Como, about thirty-five miles east of Lake Tahoe, he was bitten by several ticks. He noticed no symptoms until May 28, when he had a chill followed by severe headache and pains in the joints and lumbar region. These symptoms continued until June 4.

The headache was frontal and throbbing. There was a slight unproductive cough. Constipation was present, and the urine was reduced in amount. The face was flushed, the conjunctivae injected, and the pupils reacted normally to light and accommodation. There were no adenopathies and no stiffness of the neck. Respirations were 30, the lungs were clear; pulse 100, full and strong; blood pressure 140/90, and there were no adventitious heart sounds. The abdomen was not tender; liver and spleen not palpable. The reflexes were normal. The urine showed a specific gravity of 1022, acid. Alb. 0; sugar 0, but with great numbers of granular and blood casts. The blood Hg. 80 per cent; r. b. c. 4,400,000; w. b. c. 16,000. Polys. 60 per cent; l. m. 20 per cent; s. m. 15 per cent; trans. 5 per cent. Eosin. 0. Baso. 0. Wassermann negative. Blood culture not taken. *Dermacentroxenus rickettsii* not found in smears. Tissue sent to Dr. G. Rusk for biopsy.

At this time (June 1) a faint rash could be seen, consisting of rose-colored macules about 1-3 mm. in diameter, not elevated, and disappearing on pressure. The rash was more prominent on the wrists, ankles, arms, and back. By June 4, the macules assumed a purplish color and became larger and did not disappear on pressure. On June 5, petechial hemorrhages of varying size appeared in the cutaneous and subcutaneous tissue. The skin was not sensitive except on the scrotum, where there was a hemorrhagic area the size of a dollar which was very tender. From June 1 to June 4 his condition continued practically unchanged. On June 4 he became irrational. The temperature dropped to normal, the pulse increased to 130, and the blood pressure dropped to 80/60. He gradually became worse and died June 8, the twelfth day of the disease.

ADRENALIN (INTRACARDIAC) SAVES CESAREAN INFANT

By JULIUS R. HAMILTON, M. D., Hollywood, Calif.

EDITOR'S NOTE—*Doctor Hamilton here presents the kind of a case report that delights, because his useful message is so briefly, yet withal so well presented, that it will be widely read.*

As the result of an ankylosed condition of practically all joints due to a long-standing arthritis of about seventeen years, it was necessary at termination of pregnancy to effect delivery by Cesarean section. The operation and subsequent recovery of the mother was uneventful. The placenta was attached to the posterior surface of the anterior wall of the uterus, and it was necessary to continue the incision through it, which, of course, interfered with the blood supply of the child. The cord encircled the child by several turns, and by the time this was freed and the child delivered, though with no undue delay, there were no signs of viability in the child whatever. The color was and remained grayish, no flushing, no efforts of respiration, and no heart sounds. The many usual methods of resuscitation were employed over a period of at least fifteen minutes, with negative results, after which time I resorted to an intracardiac injection of 8 minims of 1 to 1000 solution of adrenalin. Artificial respiration was continued, and in perhaps thirty to forty-five seconds I detected a slight fluttering impulse under my hand which was over the heart. This flutter was repeated, and then impulses were distinctly present, which became rapidly more regular and stronger. It was perhaps five or six minutes later, artificial respiration being constantly employed, before voluntary respiration was established. There was no further medication, and to the present time, which is four months, the child seems perfectly normal.

I felt a little hesitancy in using a dose as large as 8 minims, thinking of possible convulsions if successful in resuscitation, but the moribund state over that period of time, I thought, warranted it, and there were no ill effects whatever. I have purposely delayed reporting this case, to note any possible resulting complications due to the above procedure, but have discovered none, and of the four cases I found reported, three had died within thirty-six hours.

THE AFTER CARE OF INDUSTRIAL ACCIDENTS

By A. J. LANGAN, M. D.,
First National Bank Building, San Pedro, Calif.

It is mainly with the after care that the average industrial surgeon is mostly concerned. The after care is where most surgeons make the mistake of taking for granted that the injury is progressing satisfactorily, and allow a nurse or assistant to follow up the treatments. It is in this manner that contractures, ankylosis, infection, slipping back of fractures, are most apt to occur and result disastrously, both for the patient and for the surgeon. It is far better to have a patient report daily, if for nothing more than a casual glance, than to allow a case to progress unseen from day to day, allowing only weekly or bi-weekly visits. To be sure, daily visits mount into the expense of the care of the patient, but better cut the fee in accordance with the standard or usual fee for such work and have satisfaction than to allow patients to remain away until some complication develops, which will cost triple the extra surgical cost.

In the proper handling of cases in the after care, is the real secret of success in handling industrial accident cases. In my office the daily visit system is practiced; it inspires the confidence of the patient and allows the surgeon to forestall any possible complications. Many men have not the facilities for proper home care. To these men the daily hand or foot bath, the proper application of a loosened splint, the instillation of collyria or withdrawal of soiled drainage and re-insertion of new, means the more rapid healing and a quicker return to work. Close contact with a patient brings confidence to the patient, and confidence means better co-operation with the surgeon.

No industrial surgeon's equipment is complete without

proper facilities for carrying out a good measure of physiotherapy. The application of physiotherapy in all its various phases is not the haphazard routine that it has been in years gone by, but a special branch of after care in which every surgeon should aim to make himself proficient.

In the Alpine lamp and the Quartz lamp, we have efficient agencies for the removal of pain. In the pain of back sprain, ankle sprain and the general bruises, which are so common, we have a most useful agent if properly used. On the other hand, the Quartz lamp can do much damage if left to the hands of a novice. I have seen several severe burns as the result of too diligent operation of the Quartz light. In the ulcers resulting from injury to varicose legs, I have seen healing progress when all other measures seemed to fail. Indolent granulations, which seem to resist all other treatment, very often resolve and healthy granulations begin, as in old burns of long standing. As to the depth of penetration of the various lights, there is some doubt that it goes very much below the surface covering, but leucocytosis and blood supply are increased.

In diathermy, we have at our command a means of introducing concentrated heat almost to a mathematical exactness. Diathermy has comparatively no germicidal action, but in it we have a powerful agent in producing active congestion, in stimulating the artero-venous circulation to and from the part.

It is to be hoped that in the use of the various mechanical agents at our hand, we will not become lax or hesitant in the quick use of surgical means where such is needed.

DEATH FOLLOWING CAUTERIZATION OF THE CERVIX

By W. W. CROSS, M. D., Fresno, Calif.

INTRODUCTORY NOTE

Some stupid physicians who still claim to doubt that the practice of medicine is a hazardous vocation might learn lessons about safety of more than one kind by a careful perusal of this report by Doctor Cross.

That it is still easier to sell some doctors life insurance than it is insurance to protect health and reputation, is an inexplicable fact.—EDITOR.

This report is made because death followed a procedure usually considered free of danger.

I became familiar with the circumstances regarding this patient at the necropsy. The following information was obtained from the physicians who attended her during her illness.

Mrs. X applied to her physician April 21, 1925, complaining that she had an irritating vaginal discharge. She was 35 years of age, apparently in a fair condition of health. The physical examination failed to disclose significant facts other than those bearing upon the condition for which she applied for treatment. The vaginal discharge, according to the patient, had developed after the birth of her second child, who is now 18 months of age.

Examination revealed a vaginal discharge, irritation of the vagina and vulva, the skin of the thighs showed discoloration, apparently caused by the secretion, the cervix was red, lacerated, and had granulating tissue protruding from the opening.

Treatment consisted in an application of silver nitrate in a 25 per cent solution to the cervix, and an antiseptic douch prescribed for her use at home. The silver solution was used at intervals of four days. Twenty-two days following her first visit, menstruation occurred, according to her statement, and she was advised to have the cervix cauterized, as the local condition remained the same. She was examined by an associate, as well as by the physician in charge, and both were of the opinion she was not pregnant.

Cauterization of the cervix was performed with an olive-point electrode, the canal curetted, and the surface again seared over with the olive point, the canal loosely packed with iodoform gauze. This was done June 2; the gauze was removed June 4. The next morning, June 5, the patient had chills, fever, and a general appearance of

serious illness. At this time the husband became dissatisfied with the situation and discharged the physician.

From those who subsequently directed the treatment, it was learned that the patient had a temperature of 105, the circulation was embarrassed, and blood cultures were positive for streptococcus; white blood count, 6200. Death resulted on the eighth day following cauterization.

At the post mortem made the day following death, an examination of the abdomen and genital canal only was made. Upon opening the abdomen a moderate amount of gas was found in the intestine, the surface was smooth, normal in color and free from exudate, except over the surface of the uterus, tubes, and ovaries. In this area the surface was smooth, free from exudate, and glistening. The color was changed by a uniform red which traveled apparently along the course of the blood vessels; the uterus and appendages were not swollen or enlarged. These structures, including the greater portion of the vagina, were removed. When the genital canal was divided posteriorly, the cervix showed a slight discoloration, due to hemorrhage into the tissue. There was not evidence of trauma. The mucous membrane was smooth, red and free of any evidence of trauma; the cavity free of membrane or debris.

It is worthy of comment that the embalmer injured his finger during the process of injection, and died four weeks later from septic poisoning. As the husband became dissatisfied with the patient's physician, a change was made and during the time she was under treatment by the second physician the question of pregnancy was raised. Had pregnancy been present, a criminal proceeding undoubtedly would have resulted. Although cultures were not made from the cervix, it does not appear unreasonable to ascribe the patient's death to infection lurking in the tissues cauterized. The end of a normal delivery could have resulted in disaster, charged to faulty attention at the time of delivery. Repair of the cervix and perineum could easily be the exciting cause of a disaster. The making of cultures before simple repairs may be the means of avoiding serious complications in a simple procedure, usually free of concern to the operator.

Mattei Building.

Demonstration of Female Sex Hormone in Circulating Blood—R. T. Frank, M. L. Frank, New York; R. G. Gustavson and W. W. Weyerts, Denver (Journal A. M. A.), have been able to show that the female sex hormone is present at times in demonstrable quantity in the circulating blood. The hormone is present only in great dilution. From the blood of five sows in estrus and the blood of one bull, an alcohol benzene extract was made and injected into one or more castrated rats and the vaginal smear watched. None of the anestrus bloods, or the male blood, gave a positive reaction. Of the five bloods obtained from estrous animals, four gave positive results with a total dosage of 75 mg. of crude extract. With present methods of extraction, at least 300 cc. of estrous blood is necessary to obtain 75 mg. of extract necessary for the test. Even with the present crude and not quantitative methods of concentration, these results show that: (1) the female sex hormone can be recovered from the circulating blood, and (2) the quantity in circulation is greater during estrus than during the interval.

Underestimation of Good Results in Mental Diseases—The careers of 1054 consecutive patients admitted to the department for mental and nervous diseases of the Pennsylvania Hospital were studied by Earl D. Bond, Philadelphia (Journal A. M. A.), for a period of from five to ten years. The patients had the more severe mental diseases. Of 1054 consecutive patients admitted, thirty were lost. Of the 1024 patients that could be followed over five years, 274 recovered and stayed well; 159 improved greatly; 331 died, and 260 remained stationary or grew worse. Bond says that everything in psychiatry today points to the prospect of increasing the recovery percentage by getting at mental diseases early. If by getting at them late, consecutive cases may be expected to show full return to function in 25 per cent and amelioration in 15 per cent more, the general practitioner first, and the psychiatrist later, is justified in taking as hopeful an attitude as is taken for surgical problems.

EDITORIALS

The Lane Medical Lectures

The Lane Medical Lectures will be given in Lane Hall, Stanford Medical School, Sacramento and Webster streets, San Francisco, Monday to Friday, November 9 to 13, 1925.

Lecture 1, November 9, 1925—Congenital Dislocation of the Hip.

Lecture 2, November 10, 1925—Arthroplasty—History and General Considerations.

Lecture 3, November 11, 1925 — Arthroplasty — Technique.

Lecture 4, November 12, 1925—New Conceptions of the Pathogenesis of Sciatic Pain.

Lecture 5, November 13, 1925—The University of Bologna in the History of Medicine.

impetus which was destined to modify and vastly enlarge the field usually assigned to orthopedic surgery.



Doctor Vittorio Putti

On invitation of Doctor Ray Lyman Wilbur, President of Stanford University, these lectures will be given by Doctor Vittorio Putti of Bologna, Italy, one of the world's most distinguished orthopedic surgeons. Comparatively a young man, he is full professor at the University of Bologna, and has been since the year 1910 director in the Rizzoli Institute in that city.

When he was a student at the University of Bologna, the great name of Antonio Codivilla turned his attention to the newly founded Rizzoli Institute. The surgery of the limbs and, in a broader sense, of the entire motive system of the human body had received from Codivilla a novel



Part of Rizzoli Institute, with City of Bologna in Distance.

In the year 1910, Putti succeeded Professor Codivilla in the direction of the Rizzoli Institute, which



Main Hall of Umberto I Library.



Anatomical Museum.
(Old refectory of the Monks.)



Pediatric Ward.

had become part of the medical school at the University of Bologna. During the war the Rizzoli Institute was made a surgical center for the care of the maimed and disabled soldiers. In its work-

was to manufacture the mechanical appliance so as to conform and possibly adapt the work of the surgeon to the mechanical demand of the instrument which was to be animated by the residual energies



Department of Upper Limbs Work.



Department of Lower Limbs Work.

shops thousands of artificial limbs were made under the direct supervision of the medical staff.

This intimate connection between mechanical and surgical science was an entirely new development in the field of Italian orthopedics. Having experimented and widely used the Vanghetti theory of cinematic surgery, Professor Putti always made a point of examining the stump with the artisan who

of the stump itself. The artificial limbs made at the Rizzoli Institute won the Gold Medal at the exhibits held in Paris and London.

It may be interesting to note that the workmen who made the wooden limbs were mostly experts in the carving of art furniture, a traditional Italian trade. The furniture was adorned by them with carved figures and ornaments which required a



Orthopedic Mechanic Laboratory



Kinesitherapy Ward.



Orthopedic Celluloid Department Work.



Department of Leather Work.

knowledge of drawing and of anatomy which was turned to a useful purpose in the carving of artificial limbs. The visitor may also note with interest that reproductions of Leonardo's anatomical drawings are used as models in the Bologna workshop.

Putti has twice visited America, is an honorary member of the American Orthopedic Association, and has many friends and acquaintances among the leading surgeons of America.

In 1923 he visited South America and lectured extensively in Argentina, Brazil, Peru, and Chile. He performed several important operations in San Paulo and Rio, and *on his desire the honorariums which were offered for his professional service were given to the hospital.*

The Rizzoli Institute for Orthopedic Diseases is named after Professor Francesco Rizzoli, who bequeathed his entire fortune for its establishment. It is located in the former Monastery of the Olivetan Monks on the hill of San Michele, in Bosco, overlooking the city of Bologna. Besides the beautiful surroundings, the building in itself is of great interest.

The library is located in a hall adorned by frescoes of the sixteenth century. The oak-panelled room, used by the monks as a refectory, has been transformed into a pathological museum. On the floor of the long corridors and court, quaint inscriptions and astronomic signs are to be seen. The Institute can accommodate 200 patients, but the large halls and wide corridors allowed it to receive up to 1000 soldiers during the war.

Besides the wards, private rooms, and special departments for children, the Institute is equipped with gymnasium, library, scientific laboratories, museum, and orthopedic workshops. There is now a branch of the institution in Cortina d'Ampezzo, where at an altitude of 7000 feet the patients enjoy mountain air and heliotherapy.

The lectures and courses for students of the University of Bologna take place in the Institute itself, and are attended by medical students from every part of Italy as well as from many foreign countries, including North and South America.

LANE MEDICAL LECTURER

Thus we have before us a brief sketch of the man—and his background—who is to give the Lane Lectures for 1925. Not only orthopedic surgeons,

but physicians of all classes ought to attend these lectures.

Why not set aside the week of November 9 to 14, to hear, meet, and know Doctor Putti? Physicians from other localities will be able to spend all of their available time in interesting conferences with other medical teachers and colleagues in any of the splendid hospitals of the city.

EVERY DOCTOR A HEALTH OFFICER

President George E. Vincent of the Rockefeller Foundation said several mighty interesting things (L. I. Med. Jour.) in a recent address before the Kings County (New York) Medical Society. At least we find them interesting because they are along the line that CALIFORNIA AND WESTERN MEDICINE has been preaching for years. In effect they are, that permanent health progress will move ahead precisely as physicians practice.

President Vincent had become so interested in the gratifying reports about better health among the people of Denmark that he sent a representative to study the secrets of success. The summary of the representative's report President Vincent gives in this sentence:

"In Denmark every doctor is a public health officer, and every public health officer is a doctor."

There was only one full-time public health officer in Denmark. There were no "Clean-up weeks," "tag days," "sales of seals," nor "vociferous campaigns of education." The writer goes on to say that the "limits of public authority (in health matters) are coming to be recognized." Precisely, and it is here—as always—that the *personal health doctor* is again being discovered as *public health doctor* upon whom the health progress of persons and masses unavoidably devolves. There is too much ballyhoo about health by people who do not and cannot know what they are talking about, and one of the chief results of their activities—whether or not so intended—is to lead average citizens to think less of the ability and usefulness of their doctors who do not utilize circus methods to promote their cause. As President Vincent points out, we are only beginning to appreciate that our boast of great, highly effective fire departments is made "without

realizing that the very need for them is a national disgrace." Some day—maybe—we will develop the same intelligent consciousness about "great public health departments."

However, we are now in a much earlier stage of development in health promotion, and we may continue to expand our fire departments of health until reaction comes and returning sanity again reveals the simpler, cheaper, and more effective method of the individual and family "health counselor." There is a place for organized public health, and there is plenty for such organizations to do. There is even a place for the public health "OFFICER," and there is great need for the public health DOCTOR. The distinction between "officer" and "doctor," as here used, is important and significant: Society needs more health *doctors* and fewer health *officers*. The public health doctor never forgets he is a *doctor*, and many health *officers* never have been doctors in the sense we mean, or, if so, they have forgotten the fact.

WHO FILLS YOUR PRESCRIPTIONS?

Ignorance, mistakes, or worse, on the part of pharmacists and other technicians who fill doctors' prescriptions are reflected with increasing frequency in the public press. Now it is substitution of corrosive sublimate for calomel; then it is inaccurate weighing and consequent overdosage; here it is wrong technique in preparing arsenicals, toxins, antitoxins or other dangerous substances, and there it is some other tragedy from some other form of carelessness, irresponsibility, or worse, on the part of the dispenser.

The doctor's duty is not ended when he writes an order or gives a prescription. He should satisfy himself that his instructions will be carried out by directing the patient, if need be, where he can find reliable service. True, most people once felt they could rely upon the state's license for such service, but it appears that this is now no more reliable in many places as to pharmacists and dispensers of doctors' prescriptions than is the state's license to practice medicine a guarantee of the honesty or ability of a doctor.

Newspaper stories are entirely too numerous of instances of poisoning by "wrong mixtures," "overdosage," substitution or what not, by narcotized, criminally negligent, ignorant, or mentally ill technicians who prepare dangerous supplies for doctors and their patients.

Nothing in this editorial is intended to reflect upon the great majority of prescription pharmacists who are rendering well a necessary service and upon whom physicians and the public rely with confidence. It is their interest as well as that of physicians, and more important still that of the public, that warrants this caution.

DIAGNOSTIC ERRORS

Of all the stupid traditions that hang onto and around the practice of medicine, there is none worse than that old and long since outgrown practice of trying to find some *one* disease that would explain all of the patient's symptoms and then looking no further *before* acting. Then if anything else should show up later, or if the symptoms continued after

the cure, to blame it all upon "complications sequelae or secondary disease."

Only a few years ago, given a patient with a leaking heart valve, and gall-bladder pain, much time was wasted in trying to make one of them the "primary or principal disease" and the other as "secondary or a complication." Too much of this sort of stupidity is still reflected in some hospital and morbidity records.

A great medical teacher has said that he could satisfy himself as to efficiency and thoroughness of a hospital or a physician by the number of **different** diagnoses found in each patient. "*Not primary and secondary complications and sequelae, but diagnoses.*"

The average number of diagnoses in large series of adult patients will show—and some of them do show—from two to six or even more separate troubles for each patient. Of course, there are secondary troubles and complications directly resulting from some other disease. *But this is not the important point from the standpoints of either preventive, ameliorative, or curative effort.*

Such narrow appreciation of the fundamentals of medicine, combined with a certain amount of carelessness, is responsible for a certain amount of unnecessary surgery and other forms of medication. This story and its consequences are seen and recognized by most physicians. It is reflected in many of the scores of letters that pour in daily to the Better Health Service. Patients by the hundreds during the last year have told their troubles, which may be illustrated by one: The patient complained of vague digestive symptoms. Physician's examination showed some tenderness in the right abdomen. The appendix was removed. The symptoms continued. The gall-bladder was removed. The symptoms still continued. The pelvis was examined, and some trouble found. The uterus was placed and fixed. More of the same and, of course, other symptoms. A neuropsychiatrist found a definite neurotic background, and made a diagnosis of hysteria. Appropriate treatment does all that could be done, considering the years of misapplied effort. It does all that was indicated at any time during the patient's illness.

Every physician can tell many stories to the same general effect. A larger proportion of patients than formerly now recognize that physicians make human errors, and more and more intelligent people are judging a physician by his education, his humanity and, above all, *by the earnestness and thoroughness with which he applies himself to his problems.*

Clinical and Serologic Studies of Neurosyphilis With Tryparsamide Therapy—In a series of thirty-seven cases of neurosyphilis, in all of which anti-syphilitic treatment had been given previously, tryparsamide therapy combined with special technic has proved, in the hands of J. M. Wolfshon and Carlos Leiva, San Francisco (Journal A. M. A.), an apparently distinct advance over other forms of treatment. The improvements are mostly symptomatic. Tryparsamide in doses of 2.5 gm. may and does occasionally cause ocular symptoms, but no more often than do other arsenicals. It is one of the best tolerated of the arsenicals used in the treatment of neurosyphilis. It has little or no effect on the serologic reactions in general paralysis. It is distinctly beneficial, both clinically and serologically, in certain types of tabes. Tryparsamide is a distinct addition to the therapy of neurosyphilis.

The Month With The Editor

Notes, reflections, extracts from correspondence, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

That the Roving Searchlight of health "uplift" is already turning its glare elsewhere and leaving the "periodic health examination on your birthday" propaganda in the shadows, is obvious.

This has been anticipated by intelligent thinkers from the beginning because:

(1) As Lord Dawson, physician to the British King, is widely quoted as saying, the "card index" type of insurance or other machine examination proposed by "uplifters" or those with a financial interest in the person's health is of little value.

(2) Many medical magazines, including CALIFORNIA AND WESTERN MEDICINE, have iterated and reiterated the fact that a health examination of itself is of no value and often does harm. Diagnosis is only one link—and an inseparable one—of many that make a chain that may promote health.

As Doctor Dawson so well says, if periodic health examinations are conducted by other than the person's own private health counselor they "only produce periodically a great amount of anxiety that may do any good otherwise achieved."

Doctor Have You Read that illuminating editorial headed "Oculists and Optometrists," published in the Journal of the A. M. A., July 25, 1925?

Are you following the developments in this problem in other scientific and general publications?

There is nothing complex or obscure about the problem, but its unfolding is worth following closely, particularly by those who are in danger of getting hurt.

The Attorney-General of California has ruled, according to press reports, that optometrists "may not use the prefix 'Doctor.'"

One writer suggests that "Doctor" might be substituted for by "Doptor" for the optometrists.

It is further suggested by the same author that the coinage of a new word might be helpful to the department of physics of the University of California in their embarrassing competition with the school of medicine of the same university, in the "preparation" of persons to "diagnose and treat the diseases and infirmities of human beings."

Skilled technicians, whether called opticians, optometrists, or by whatever title, are essential and useful persons. The state should see to it that they are licensed upon a basis of sufficient education, intelligence, and technical training to accurately fill the prescriptions of an oculist.

A good optician—or optometrist—should have precisely the same relation to an oculist that the well-trained technician in any other branch of medicine has to the physician. This is all that their background education and experience warrants their undertaking, and if any want to do more, they should first secure the much more difficult education of a physician.

"SCIENCE AND LEARNING have outpaced our populace," Doctor Wilbur announced in his Pennsylvania University Day address. Astronomy is accompanied by its popular imitation, astrology; medicine has its great shadow-land of buncombe, deceit and plausible foolishness and chicanery.

"One would think," continues Doctor Wilbur, "that a sense of humor alone would keep our fellow-citizens from thinking it possible that the stars in their courses were interested in the welfare of their livers and the success

of their love affairs, but it takes time and much education to cultivate more than the surface of the ordinary human mind."

"A considerable part of our so-called cultural education is about as genuine as Santa Claus."

"Rustling, not rusting, is needed to improve a good mind, and no amount of action on the screen can develop the body muscles of the onlookers."

The Shining Exception—"Did any of your family ever make a brilliant marriage?"

"Only my wife."

"WE FAIL TO REMEMBER," believes J. E. Sweet (Ohio Medical Journal), "that all research work in medicine starts with the patient, and will ultimately revert to the patient when the answer is found."

"It is easier for the patient today to put him into a Ford and transplant him fifty or seventy-five miles to the nearest hospital than it was fifteen years ago for him to wait while the old farm horse plodded to the village, to find the doctor thirty miles away in the other direction."

We Saw in Print recently a statement that the "school children of Los Angeles are treated by the school nurse after the physician has made the diagnosis."

Draw your own conclusions.

Another Attack of Eugenics—

"There's been quite a rumpus in the school yard. What is it all about?" asked the professor.

"Why," explained Harold, "the doctor has just been around examining us, and one of the deficient boys is knocking the stuffings out of a perfect kid."

"A CURIOUS WORLD devours news of politicians maneuvering their nations into wars, but skips over the news of still greater wars always going on at the outposts of civilization. There, where deadly enemies knowing no creed or boundary lines stand always at the gate, the army of medical science fights on without truce. . . . On every front, on every advanced line, medical science fights on for humanity going its heedless way."—San Francisco Chronicle.

When great metropolitan newspapers editorialize statements like this we feel that progress is broadening.

Statistics—

Old Uncle Eben Jones went into a life insurance office and requested a policy.

"Why, uncle," said the president, "you are too old for us to take the risk. How old are you?"

"Ninety-seven come next August," said the old man, and added testily, "If you folks will take the trouble to look up your statistics, you'll find that mighty few men die after they're 97."

"Pre?" Pre? Pre pre!—We have pre-ed most everything from birth to death.

Now comes the latest "broadcast," in which a life insurance company devotes pages to what they call "Pre-symptoms"!! Constipation is listed as one of their pre-symptoms. YE GODS!!

IT WOULD BE SAFE to wager that the editor of the San Francisco Chronicle received a hundred letters of protest about that paper's very fine editorial about cancer quacks.

We need more newspaper editors who will make statements like the following from the Chronicle editorial, and

who will at the same time apply the same policy to their advertising pages:

"Cancers have yielded to the surgeon's knife, but only in the hands of skillful men, and these will be found always to be reputable and ethical practitioners. . . . When there is a known cure it will be found by reputable men, and they will not keep it a secret. It will be given to the whole medical world, and for no selfish, financial motive. Anyone who claims to have discovered a short cut to a cure and uses it for profit reads himself out of the fellowship of decent men. He is a quack and a very cruel one."

The announcement that Doctor Rosenow "advances the hypothesis" that hiccough may be caused by streptococci leads a writer (Practical Druggist) to pen the following lines, which Dudley Smith enjoyed so much that he suggests we pass them along:

THE HUMBLE HICCOUGH

In days of old when beer was sold
At costs extremely low,
We used to think that it was drink
That made us hiccough so;
But now the news that we peruse
Informs us but to mock us
That every hic proclaimed us sick
And bit by streptococcus.

What time his spouse would greet a souse
That kicked him home a-blinking
And, features grim, would say to him,
"Adolphus, you've been drinking."
Ehu! 'twas then the good days when
'Twould have been worth the money
To say, "Th' bunk! No, I'm not drunk,
I'm streptocockeyed, honey!"

"S. S. S." one time widely recognized as the pseudonym of a patent medicine, later as a signal of distress, is now being more or less extensively interpreted as "Sob Sister Stuff."

There seems to be a chance that these "Sob Sisters" may concentrate their "excess of emotional perspiration," commonly called the "milk of human kindness," on evolution.

This will be helpful to many good causes they now embarrass, and evolution is a more harmless toy for them to play with than is the more prosaic question of health.

Dramatizing health essentials is much like dramatizing the Ten Commandments; it is a hard uphill pull, and no rest stations.

The way the pendulum is now swinging, the first thing we know the health centers and hip-hurrah methods of medical practice will be as dead as the stupid "health clown" propaganda and "Little Willie" health stuff of a few years ago. A lasting impression was made upon many by some ungainly "health fairy" dressed in white, exposing in her contortions the unappetizing movements of flabby oversized calves, unwieldy and flappy abdomen and heavy, pendulous breasts.

Well, it's about over, and many of the chronically ill and otherwise handicapped are forced to go back to doctors and nurses for services. So be it!

"SO FAR," says President Vincent of the Rockefeller Foundation, *"the outlook for the general practitioner in the United States is still cheerful."*

Encouraging deduction that, which the writer supports by declaring that it is a "serious fallacy" to say that "poorly trained professional people go to the country. *They are safer in the city.*"

Evening Up—He—"Is she progressive or conservative?"

She—"I don't know. She wears a last year's hat, drives a this year's car, and lives on next year's income."

AN EASTERN NEWSPAPER in discussing one of our California homicide trials concludes that "it's a poor alienist that won't work both ways."

It seems to us unfair, in view of recent history, for a Chicago paper to pick on California alienists.

"A NEW LAW is presented which will give the owner of a piece of ground the right to charge aviators for the use of the air above it.

"We knew that someone would soon invent a way for charging for the air you breathe. The only two free things left in the world were air and the doctor's time at the clinic. And now the air is to be collected for, while the physician still hustles down to the clinic to bestow his generosity on foreigners with rags on their backs and gold under the hearthstone at home!"

"THERE IS NO CREAM IN CREAM OF TARTAR, no grape in grapefruit, and no milk in milk of magnesia." However, there is bull in Bull Durham, Pathis in Osteopathy, and Tics in Chiropractics.

Comments—I wish to thank you for the attention which you have given the papers of Dr. Wisner, formerly of our group. They have been published in nice style, and we appreciate the editorial comment. I have sent a copy of the Journal to President Pritchett of the Carnegie Foundation.—F. V. Simonton, Chairman California Stomatological Research Group.

I See by the Papers That—

Annie Laurie, one of the most effective of newspaper writers, has been using her "lancet" upon the "Elixir of Youth—again" crowd.

She takes as her text Steinach's "latest" of many "discoveries," which should have occupied advertisement space, but which his representatives succeeded in selling as news.

"Who will believe," asks Annie Laurie, "that Steinach's new elixir of youth, for sale at so much a hypodermic, will make young again old ladies whose brains stopped growing at sweet sixteen; old men in their second childhood; pitiful old wives and pathetic old husbands."

Hundreds of thousands, and even millions, will believe, sacrifice and buy." What?

The number of stupid suckers would be materially reduced if our well-intentioned editors would make these propagandists pay for their space just as they do the "junior Steinachs" who, like the poor, are always with us.

—Two California doctors are defendants in a \$500,000 damage suit. According to the story, such a severe infection followed an operation for the removal of "surplus flesh" about the ankles that both legs had to be amputated. Now the patient wants half a million dollars for alleged "negligence."

Another doctor is defendant in a malpractice suit because a local infection and an ugly scar followed an ordinary intramuscular injection.

Still another doctor is charged with malpractice (negligence) because of injury produced by infiltration of salvarsan into the tissues about the arm vein.

As we have stated repeatedly, the practice of medicine is constantly growing more hazardous. The physician who does not protect himself and those dependent upon him against unavoidable accidents is not deserving of any special sympathy.

—Another Doctor Gets His Picture and scraps of an "interview" prominently before the public by claiming that "women are 20 per cent crazier than men." Of his last 15,000 "cases," "60 per cent were women."

Some papers charge space rates for "news" (?) of this character.

—Bishop Fiske (American Mercury) takes an awful "swat" at "organized commercialized social service." No matter what one's convictions may be, it is well worth while to read what the ever-growing group of writers—of whom Bishop Fiske is only one—have to say about placing humanitarian and spiritual services, which the Master called charity, upon a "business basis."

Persons who have openly repudiated the Old Testament and have given us a variety of versions of it to suit this or that group are on the road to similar actions with the Gospels. Jesus Christ, in speaking of charity

said, "Let not your left hand know what your right hand doeth."

Modern "experts" organize charity upon a "business basis" and designate their organizations as "voluntary government."

I wonder.

Chiropractors are not "legally qualified physicians" within the meaning of a health insurance policy, according to a ruling of the Supreme Court of Wisconsin, in the case of *Jake L. Isaacson vs. Wisconsin Casualty Association*. The plaintiff, while sick, submitted to treatment by a chiropractor for part of the time. The policy provided that he could make claim only for the time he was treated at least once a week by a "legally qualified physician." The Supreme Court decision was a reversal of the lower court's judgment.—Underwriters Report.

"The Legion News," the official publication of the California department of the Legion, editorially drastically criticizes doctors for opposing the Reed-Johnson Act. Several members have sent in clippings of an editorial which makes the statement, among others, that: "From the medicos' point of view, a soldier is entitled to little or nothing from the country he helped preserve during the trying period of war. From their standpoint it might be well to have frequent wars in order to build up a lot of work for our country doctors that they might better make a living."

One might think from this untruthful statement that none of our doctors were veterans. As a matter of fact, no other vocation enrolled such a high percentage of its members nor made greater sacrifices for our common cause.

The Legion News editor is unfair to a large group of the members of his own organization in thus attacking so viciously their principles, motive, and integrity.

As to the Reed-Johnson bill, unless we mistake the signs of the times, it is destined to travel the usual stormy road of socialistic schemes.

IF THE NUMBER OF COPIES of a form letter of the "Life Extension Institute, Inc., of New York," sent in to us with marginal notes, are indicative, this corporation's methods "as middlemen" in the practice of medicine in California are causing both them and the doctors some concern.

The letter in question purports to be "a correction of misstatements about The Life Extension Institute Incorporated."

The two paragraphs of the letter which have aroused the ire of some of our members, and which have "tickled the funny bone" of others, read:

"Reports have been circulated in medical circles to the effect that the Life Extension Institute buys examination reports from physicians and then sells the information received to insurance companies for higher fees.

"The facts are these: The Life Extension Institute contracts with insurance companies for service to policyholders. This service includes a medical examination, for which a fee is paid to the physician. The remainder of the fee received from the insurance company is used to pay for the other phases of health education service rendered to policyholders." (The bold face is ours.)

Read the charge and the reply again. It's interesting AND illuminating. Several of our correspondents ask if the corporation's admission that there is a "remainder of the fee" does not constitute an admission of the charge that they "buy at one price and sell at another."

One of our members comments upon this point thus: "I didn't larceny nothing; I just stole the hawg."

Another correspondent pencils this limerick on the margin of his copy:

There was a young lady of Niger
Who smiled as she rode on a tiger;
They came back from the ride
With the lady inside
And the smile on the face of the tiger.

MALPRACTICE SUITS are being reported against physicians for accidents and results following the use of anesthetics in the doctor's office.

There is no law that prevents a physician's anesthetizing a patient in his office. But when he does so, he

assumes moral, professional and legal hazards that most doctors prefer to avoid. The doctor who assumes such responsibility should at least protect his family by adequate liability insurance.

IF THERE REALLY ARE TIMES when ignorance is bliss, they assuredly do not include the ominous moments when a wily *beauty specialist* permits the life-killing rays of short wave length to impinge on the bearded skin of his unsuspecting victim.—Editorial, Journal A. M. A.

That the Way of the Transgressor Is Hard is just as true for the advertising, propagandizing, "interviewed-by-force" doctor as it is for the near doctor who sells some form of "hot air" as a panacea.

What happened to "Dr. Leonard Keene Hirshberg, A.B., M.A., M.D. (Johns Hopkins University)" is a good sample illustration; for details, see editorial Journal A. M. A., August 1, 1925.

TODAY, LIFE CALLS for physicians who are men of character, clean men, with honest self-sacrificing devotion to humanity and to truth. Equanimity, humility, and sympathy should dwell in the spirit of one who attends the suffering.—Editorial, Atlantic Medical Monthly.

"BETTER HEALTH" is now being broadcast by the Gorgas Memorial Institute as "*The Gorgas Idea*." This, in spite of the fact that "Better Health" has been for years protected by usage and the copyright laws as the title and working slogan for progressive health work emanating from California. The Gorgas Institute people know this, and we wonder how much further they will go in appropriating to their own use the property, by usage and law, of others.

DOCTOR OTIS ALLEN SHARPE writes us that he has suffered "chagrin, ridicule, and much damage" from recent unauthorized publicity about some of his work in certain newspapers.

The articles *did* read much like some of the illustrated interviews with "great goat gland specialists" that have "Advt" placed inconspicuously at the bottom.

We don't blame Doctor Sharpe for repudiating the whole thing, and hope he will persist in his present plan to seek legal redress.

From the Medical Press—

—Doctor Benjamin Kramer (Am. Jour. Dis. Children, August) claims to have cured eight children suffering from "active rickets" by the administration of "irradiated milk." His methods are described.

—Doctors Samuel J. Levin and John P. Parsons (Am. Jour. Dis. Children, August) found the skin "blanching test" of Schultz-Charlton effectively and specifically diagnostic in fifteen cases of scarlet fever. Evidence given in detail.

SHOULD DRUG ADDICTION be a reportable disease, we are asked. This is an important question, and we would like to have your answer to it.

If drug addiction is a disease—and it undoubtedly is—it certainly is a dangerous one, and communicated rather indiscriminately. Might not placing it upon the reportable list serve a useful purpose?

Treatment of Intracranial Hemorrhage in the New-born—Clifford G. Grulee, Chicago (Journal A. M. A.), feels that in the present state of our knowledge the best treatment for intracranial hemorrhage is absolute quiet and rest; that the measures up to the present time adopted for the relief of the condition are satisfactory neither from the theoretical nor from the practical standpoint; that the damage is done before the measures can be of value, and that, as a consequence, until a diagnosis is made much earlier than seems at present possible, the best plan to be followed is to see that nothing is done to disturb the quiet of the infant.

Medical Economics and Public Health

These Gems are quoted from widely published extracts of an address by a professor of a much heralded school of public health.

This professor, who is teaching doctors to be "public health officers," tells the world that the chief medical service of the future "will center about the county hospital" with a "full-time salaried staff" for the hospital "and clinics."

This state medicine—or more correctly, county medicine—center will serve "all the seriously sick of the county"; "maternity cases" and all those suffering from "obscure and chronic complaints."

"Private practitioners," according to this paragon, will be "mainly concerned with the health supervision of their patients." Even these "private practitioners" will be paid upon an "annual fee basis" and all the health work of a county will be regulated by a "medical director" responsible to a "board of trustees."

This speaker and the school he represents are not alone by any means in the apparent renewal of efforts to sovietize health in the United States.

The Pacific Coast Conference of Health Officials and the annual convention of the Health Officers of California meets at Long Beach, California, September 28 to October 3. Dr. F. W. Browning, Hayward, California, is secretary-treasurer of both organizations.

The United States Public Health Service Wants More Doctors—Applicants must be not less than 23 nor more than 32 years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written and clinical tests before a board of medical officers, and undergo a physical examination.

Examinations will be held in San Francisco, September 14. Further information may be obtained from the Surgeon-General, U. S. Public Health Service, Washington, D. C.

New Health Officers Receive Appointment—According to the California State Board of Health Bulletin, the following appointments and changes have been made recently:

Dr. E. B. Philbrook has been appointed health officer of the city of Santa Cruz to succeed Dr. W. H. Congdon. Doctor Philbrook is licensed to practice medicine and surgery in California, but is not a member of the California Medical Association.

Dr. Charna G. Perry, a member of the California Medical Association, succeeds Dr. Allen H. Vance as city health officer of Sausalito.

Dr. R. C. Main, health officer of Monterey County, has taken over the public health administration of the cities of Pacific Grove and Monterey, both of which municipalities are now included in the county health unit.

Mr. M. B. Ordway was formerly health officer of Pacific Grove, and Mr. H. R. Alexander of Monterey. Communications should be addressed to Dr. Main at Salinas or Mr. Clyde L. Dorsey, deputy health officer, Monterey. Doctor Main is licensed to practice medicine and surgery in California. He is not a member of the California Medical Association.

Dr. Smith McMullin of Yuba City has been appointed health officer of Sutter County, succeeding Dr. W. L. Stephens of Meridian. Doctor McMullin is a member of the California Medical Association and is licensed to practice medicine and surgery in California.

Dr. F. W. Townsend of Loyalton has been appointed health officer of Sierra County, filling an office which has been vacant for several months, following the departure of Dr. A. O. Eckhardt. Dr. Eckhardt is a member of the California Medical Association, but Doctor Townsend is not a member.

Mr. Edgar A. Miller has been appointed health officer of the newly incorporated city of Tujunga in Los Angeles County. Mr. Miller is not licensed to practice medicine and surgery in California.

Mr. F. A. Beggs has been appointed health officer of Signal Hill, succeeding Dr. Arthur E. Pike. Mr. Beggs is not licensed to practice medicine and surgery in California, and is not a member of the California Medical Association.

Dr. H. S. Gordon has been appointed health officer of Perris, succeeding Dr. D. W. Sheldon. Doctor Gordon is not now a member of the California Medical Association, but is licensed to practice medicine and surgery in California.

Encouraging Types of Advertising—Physicians of Southern California will shortly receive a brief circular from M. J. Benjamin regarding his "Natural Support for Hernia." Mr. Benjamin is an advertiser in CALIFORNIA AND WESTERN MEDICINE, and the encouraging feature of his other advertising matter is, that he voluntarily submits his "copy" to the California Medical Association for acceptance *before* he issues it.

In a letter Mr. Benjamin says: "I am prompted to submit this to you because of my being an advertiser in CALIFORNIA AND WESTERN MEDICINE and *because of my desire to conduct my business along ethical lines*. If there is anything objectionable regarding this form of advertising or the copy used, I will be glad to change it sufficiently to make it acceptable."

Several of our advertisers have adopted similar practices, to the interest and advantage of the public health, and, we firmly believe, to the financial advantage of the honest vendor of honest goods.

A working monograph on the treatment of syphilis, prepared by the Dermatological Research Laboratories, will be sent with the compliments of the publishers to any physician requesting a copy.

The introduction discusses arsphenamine vs. neoarsphenamine, sulpharsphenamine, bismuth, and mixed treatment.

Chapters are devoted to methods of treatment: Intraspinal injections; technic of preparing; arsphenamine; neoarsphenamine; sulpharsphenamine, and bismuth; possible reactions and sodium thiosulphate.

Requests for this monograph should be addressed either to The Abbott Laboratories, Chicago, or the Dermatological Research Laboratories, Philadelphia.

For the Convenience of Physicians located in the Eastbay region, the Travers Surgical Company has opened a store at 435 Nineteenth street, Oakland, telephone Oakland 343. The increased patronage of the members of the C. M. A. across the bay has made this possible. The same complete stock of supplies is carried in the Oakland store as has always been found in the San Francisco store, and the same service is rendered. The advertisement of this popular surgical supply house is always found in each issue of CALIFORNIA AND WESTERN MEDICINE, opposite the last page of reading matter, as their contract calls for this "preferred" space.

Imitation may be the Sincerest Form of Flattery, but when it enters the health field, whether as a medical organization, publication or what not, it may prove dangerous to the unwary.

We now have several imitators of Better Health magazine. Some have contented themselves with appropriating the copyrighted title, while others carry the imitation to fake better health services.

There are all sorts of fake "national" medical and research organizations that make their names and general procedures sound as much like the genuine as they can or dare. This obviously for the purpose of fooling the public.

The "National Health Service," an organization with something to sell, approximates our "U. S. Public Health Service" so closely in name that Surgeon-General Cumming has "released" a statement denying that the Gov-

ernment has any connection with the "National Health Service."

"Orders From Washington have stopped the sale of confiscated liquors to doctors, druggists, and hospitals."

An energetic doctors' supply house broadcasts this information, and at the bottom of their letter invites a telephone call for prompt service.

But oh, what a difference in the price!

The Anglo-French Drug Company take their place in this number along with our other accredited ethical advertising firms who invite the confidence and support of our members. Their new offices are in the Flood building.

Alum Rock Sanatorium—Dr. Charles P. Durney, who has been active in tuberculosis work in the Hawaiian Islands for the last fourteen years, and who is head of the Government Sanatorium at Kula, Maui, T. H., has accepted the position of resident medical director of the Alum Rock Sanatorium, and will be associated with the staff in developing its growth as an institution for the care of patients suffering from lung diseases and tuberculosis in all its forms.

The Sanatorium has recently added a new wing of eight private rooms, and has completely rebuilt the culinary department.

"Should Pay for Treatment."—"The more I see of the way people spend their money," says "A Red Cross Public Health Nurse" in the Pacific Coast Journal of Nursing, June, 1925, "the more I am inclined to question, as do the doctors, the wisdom of some of our work."

Electrocoagulation and Radiation Therapy in Malignant Disease of the Ear, Nose, and Throat—Electrocoagulation in the treatment of malignant disease of the ear, nose, or throat, according to George E. Pfahler, Philadelphia (Journal A. M. A.), will have only a very limited field of application. Electrocoagulation consists in the destruction of the disease by coagulation of the tissues. The heat is caused by the resistance in the tissues to the flow of the high frequency electricity. It differs from the destruction by cautery; it is not a transmitted heat, but is heat generated in the tissues and extends to a greater depth than that of the cautery. It destroys all kinds of tissue in its path, and, therefore, cannot be used where blood vessels, nerves, bone or other essential tissues must be preserved. It is a painful procedure and must be used with either local or general anesthesia. If the area to be destroyed is supplied by large blood vessels, these arteries must be ligated in advance for fear of a secondary hemorrhage when the slough separates. There is always a sloughing process which will continue for several weeks or months, until all the dead tissue has been thrown off. If bone has been destroyed, it will suppurate, and generally separate as a sequestrum. Electrocoagulation can be used wherever the cautery can be applied and often also in very small areas where only a single wire can be introduced. It must be used under the guidance of the eye, and much skill is required in order that the tissue may be destroyed to the proper depth. Tissue can be destroyed by plunging the needle to any depth, but this demands skill, experience, and an accurate knowledge of anatomy. Radiation, on the other hand, has been used extensively with good results. Radiation can be used to advantage preceding operation, following operation or independent of operation, and should always be used in conjunction with electrocoagulation.

The Use of Antimony and Potassium Tartrate in Trichinosis—In a case cited by J. S. Grove, Chicago (Journal A. M. A.), very small doses of antimony and potassium tartrate proved effective; 1 cc. of a freshly prepared 2 per cent sterile solution was given intravenously. The next day 2 cc. of the 2 per cent solution was given intravenously. Following this the patient began to feel much better, and her temperature dropped to normal levels. On the third day, 3 cc. of the 2 per cent solution was given; on this day the patient developed slight muscular tenderness over the biceps brachii. On the fifth day, 4 cc. was given. Three days later the patient was well.

California Medical Association

EDWARD N. EWER, M. D., Oakland.....President
W. T. McARTHUR, M. D.....President-Elect
EMMA W. POPE, M. D., San Francisco.....
.....Secretary and Associate Editor for California

MEETING OF THE COUNCIL, C. M. A.

The next meeting of the Council of the C. M. A. will be held in Dining-room No. 3 of Hotel Biltmore, Los Angeles, September 26, 1925.

An open meeting will be held in the same room at 8 o'clock that evening to discuss industrial medicine and other subjects of general interest to members.

C. M. A. REVISING EXTENSION LECTURE PROGRAM

A revision of the Extension Lecture program of the California Medical Association is in progress. Every lecturer on the present list of speakers has been invited to revise the titles of his lectures at this time and submit the revised program to this office for publication.

Any member not on the present list who desires to be included in this service should at this time furnish the State Association's office his name and program. When lantern slides are used to illustrate lectures a notation to that effect is helpful. Lecturers are permitted the use of the Association's lanterns in this service, and may secure them from the office, 1016 Balboa building, between the hours of 9 a. m. and 5 p. m. daily, except on Saturday, when the office closes at noon.

It is earnestly hoped that interest in the Extension program will be stimulated by the submission of an enlarged and varied program.

SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by Bert S. Thomas, secretary) — Since our last report in August we have had three new applications for membership. These will be presented at the September meeting. They come from E. P. Moser, Camino, Calif.; Charles G. Reynolds, Repressa, Calif.; Hans F. Schlueter, Sacramento, Calif.

The recent death of J. F. Sigwart, which occurred during the doctor's visit in San Francisco, came to us as a shock from a clear sky. He was a comparatively young man, in apparently perfect health. The heart of our Society goes out to his parents, Mr. and Mrs. J. A. Sigwart.

Sacramento and its close neighbor, Mather Field, have been assigned two hospital trains and two medical laboratories by the Allocation Board of the Ninth Corps Area. Once again, let me call your attention to the desirability of having our Society take an active part in comprising the professional personnel of these outfits.

It is pleasing to see G. W. Dufficy again making active rounds at the Sisters' Hospital. He spent a lengthy period in San Francisco in a post-operative convalescence.

Leo W. Farrell has continued as the resident surgeon at the Community Hospital.

Mervyn F. Frandy is now located at Jackson, Amador County. He goes there from Placerville.

With the coming of fall, the Society again starts its monthly meetings. The September meeting will be devoted to a roentgenologic symposium.

SAN BERNARDINO COUNTY

San Bernardino County Hospital Accredited by the Council on Medical Education and Hospitals of the A. M. A.:

Dear Doctor Musgrave—We are pleased to announce

that the San Bernardino County Hospital has been placed on the list of hospitals approved for internships. Copy of the Council's letter to Dr. Tisinger, the superintendent, follows:

"It is a pleasure to inform you that the Council on Medical Education and Hospitals has carefully considered your application, together with the recommendation of Hospital Betterment Service Bureau of your state, and has placed the San Bernardino County Hospital on the list of hospitals approved for internships. A notice of this recognition will shortly be published in The Journal of the American Medical Association.

We trust that this will be taken as an expression of confidence on the part of the Council and a sincere desire to be of any assistance to you in the future development and usefulness of the institution.

Very truly yours,

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS.

Per Homer F. Sanger."

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SAN DIEGO COUNTY

San Diego County Medical Notes (reported by Robert Pollock, M.D.)—The Alpine Sanitarium for the treatment and education of the tubercular, located at Alpine, California, is now under the general superintendency of Bryant R. Simpson, M.D., formerly in charge of the U. S. V. B. Hospital No. 64, Camp Kearney, California. Dr. Simpson employs a full-time specialist in tuberculosis as a house physician.

As a guarantee of the character, equipment, and service afforded, it has been passed upon and has secured the endorsement of the Council of the San Diego County Medical Society, as well as the San Diego County Hospital Commission. The admirable location of this institution in the foothills, with one of the most equable climates in Southern California, will undoubtedly make of it a very desirable place to which we may refer our tubercular patients.

Dr. Will H. Potter and Dr. Marjorie J. Potter have returned from the clinical tour of European capitals, which they much enjoyed.

The fall scientific program of the Medical Society shows a number of interesting meetings, starting with the annual visit to the Imperial County Society, which meeting will be held at the Barbara Worth Hotel at El Centro.

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SAN MATEO COUNTY

San Mateo County Medical Society (reported by W. H. Murphy, secretary)—At the July meeting of the San Mateo County Medical Society a fee schedule was presented by a special committee and adopted by the Society. Fees for general practice, including office and home work, obstetrics, surgery, gynecology, orthopedics, laboratory work, and genito-urinary treatment were set. The Society also adopted a placard to be posted in each physicians office, stating the fees for the more common forms of medical service. The plan in general was modeled after that used by the Tulare County Society, data upon which was furnished by Dr. John N. Blood of Redwood City, who formerly practiced at Exeter. No attempt was made to regulate the fees for eye, ear, nose, and throat work, it being the feeling of the Society that these should be set by the men who specialize in these lines.

The matter of establishing a credit bureau in connection with the Society was also presented, but it was decided to leave this matter in the hands of the individual practitioners. A credit bureau operating in the county offered to handle the work for the Society at a flat yearly rate per member, providing all members would adopt the plan. As unanimous consent to this could not be obtained, it was decided to let the credit bureau work with the members individually.

Walter M. Dickie of the State Board of Health addressed the Society at a special meeting on the evening of August 13 on the topic of full-time county health boards. At the July meeting a motion favoring the co-operation of the Society in such a movement was unanimously passed, and it was decided to request Dr. Dickie to talk to the Society so as to familiarize the organization with the details of the plan. Dickie discussed the advantages of forming a full-time county board and the

methods by which it might be done. He also spoke of infant mortality in California, and brought out the fact that in most counties a large amount of money is being spent yearly on health work with little results, due to the lack of proper organization and supervision.

Following Dr. Dickie's speech, the point was brought out by members of the Society that at present many "lay" organizations in the county are fostering the plan of a county health board, and that these bodies should have support and leadership from the county society. In order to further this plan, a committee was appointed to co-operate with such organizations. Members of the committee are F. Holmes Smith, San Bruno; W. C. Chidester, San Mateo; and W. H. Murphy, Redwood City.

At the present time the Society is carrying on work to familiarize the various interested organizations of the county, as well as the public at large, with the fact that the Society is behind the movement in question, and ready to lend it full support. The co-operation of the district attorney is also being requested in the legal aspects of the movement.

Harper Piddicord, formerly of Fort Bragg, has opened an office in Redwood City. He has transferred his membership from the Mendocino Society to the San Mateo County Society.

M. F. Desmond, Burlingame, and John N. Blood, Redwood City, both of whom have been away from practice because of illness, have recovered sufficiently to carry on their work.

James Raphael, formerly connected with the South San Francisco Hospital, has removed to Berkeley.

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SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by Alex C. Soper Jr., M.D., secretary)—No meetings are being held through July and August, a vacation having been unanimously declared. Physicians of the city are busy enough finding new quarters, there being an almost universal desire to be "on the ground" and not in a big office building since the earthquake. The result so far is a considerable association of "groups" in bungalows, either new or reconstructed. These men are, however, careful to state that they are associated together only by "contiguity." So may be noted the association of Robinson, Isaac, Ullman, and Hotchkiss; of Schurmeier and Bagby; of Pierce, Freidell, Wells, Ryan, and Stevens; and of Brush, Luton Means, Soper, Varick, and Allen and Marian Williams.

Damage to the St. Francis Hospital was considerable, and the miraculous escape of everyone in the building is remarkable. At first their patients were cared for at the Cottage Hospital tent colony, but later the old St. Francis building was prepared for their use.

The General (County) Hospital was badly damaged, but here also no one was injured. Patients were moved out onto the lawn, while the main building, nurses' quarters, and superintendent's buildings are being reconstructed.

Practice during the first days of the quake was much disturbed, due to temporary lack of telephones, gas, electricity, and quarters. Various members of the Society did community service—those of the Reserve Corps especially, Lieutenant-Colonel Ullman and Major Means having the particular duty of issuing passes to the myriads of people wishing to enter the damaged zone, and Wilson and Henderson giving many first-aid treatments at the Red Cross headquarters.

The quick action of the gas and electric employes in shutting off supply immediately undoubtedly saved the city from conflagration. The telephone operators, with walls crumbling all around them, stuck to their desks and maintained connections as long as possible, while the long distance wires were the first to be re-connected, giving the outside world a chance to inquire about conditions.

"When the earthquake came," writes Amy Cryan, "the forty nurses of the Santa Barbara Cottage Hospital were at breakfast, and at once—without delaying for orders—each one went to the patients she had just been nursing, as promptly and simply and courageously as if it had been part of her routine training. These girls carried out the patients, many of whom were helpless and some of them were heavy men, and not till afterwards

did they realize how strained their backs and arms felt. They did not realize that they had acted heroically; they did not even know how all-important their courageous work was to prove, since it left them ready to deal with the patients who were rushed down from the St. Francis Hospital, which was wrecked."

"Bright as are the pages of the history of medicine, the record of the Santa Barbara Cottage Hospital has brightened these pages still further with its gallant record of devotion to duty. Characteristically, it is left to an outsider to record that historic week."

CHANGES IN MEMBERSHIP

New Members—Alameda County—Donald D. Lum, Alameda; Thomas O. Lake, Berkeley; Gordon W. Roberts, Oakland.

Kern County—Thomas L. Matlock, Wasco.

Los Angeles County—H. N. Krohn, Charles F. Sebastian, Joseph M. Klein, Bernard Aronchik, Oscar S. Essensen, Frederick D. Facey, Howard L. Hatfield, C. H. Hayton, J. C. Ross, Cora Smith King, John F. Van Paing, Allan M. Wilkinson, M. H. Newman, Harry J. Mayer, Los Angeles; Ralph Kirsch, Lamada Park; Erle B. Woodward, Monrovia.

San Diego County—John J. Shea, Anita M. Muhl, William C. Newton, Philip M. Harker, San Diego.

San Mateo County—Fred C. Smith, Palo Alto.

Deaths—Sanborn, Christopher Allen. Died at Redlands, July 18, 1925, age 70. Graduate of Bellevue Hospital Medical College, New York, 1882. Licensed in California in 1888. Doctor Sanborn was a member of the San Bernardino County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Sigwart, Joseph Frederick. Died at San Francisco, August 2, 1925, age 39. Graduate of the St. Louis University School of Medicine, 1912, and licensed in California the same year. Doctor Sigwart was a member of the Sacramento County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Allergic and Toxic Properties of Lens Protein—Of eighty-six patients tested by Sanford R. Gifford, Omaha (Journal A. M. A.), with lens protein, 12.6 per cent gave positive dermal reactions. Of those giving positive skin tests, six showed unusual post-operative ocular reactions, which may well be interpreted as due to their sensitization to lens protein. In a further case with a very severe reaction there seemed no doubt of this. It was found possible to sensitize animals by injections of lens protein, so that dissection produced an increased ocular reaction; but this occurred most often in animals treated so intensively as to be immunized to lens protein. In eight patients with negative skin tests, ocular reactions, apparently due to absorbing lens matter, occurred, indicating some toxic factor, not depending on anaphylaxis, in the lens matter itself. Normal lens matter showed toxicity when injected into the anterior chamber of the eyes of animals, but cataractous lens matter was apparently much more toxic, nine of fourteen animals showing more marked reactions from the cataractous lens, and none more marked from the normal lens. There is evidence that autolysis of the lens proteins occurs, with the production of leukomains and allied products, which may be toxic, and that the chemical differences between cataractous and normal lenses can explain the greater toxicity of cataractous lens matter. While endophthalmitis phaco-anaphylactica, in the sense of Verhoeff and Lemoine, undoubtedly does occur, a large number of reactions to lens substance cannot be explained as anaphylactic, and perhaps a majority of such reactions are due to the toxicity of lens matter itself. Hence, a better name for the whole group of reactions is that of Straub, "endophthalmitis phacogenetica."

Anaphylactic Shock and Failure of Desensitization After Administration of Pneumococcus Type 1 Serum—The case reported by M. A. Blankenhorn, Cleveland (Journal A. M. A.), presented three unusual phenomena: 1. The patient developed fatal septicemia after surviving lobar pneumonia terminating in crisis by the aid of antiserum. 2. He became extremely sensitive in nineteen days after serum treatment, but the sensitization was not discernable by skin test. 3. Desensitization failed.

Utah State Medical Association

SOL G. KAHN, Salt Lake City.....President
WILLIAM L. RICH, M. D., Salt Lake.....Secretary
J. U. GIESY, Kearns Building, Salt Lake City,
Associate Editor for Utah

SOLOMON AND THE NEWER MEDICINE

Solomon was a great king and a wise man—and a blasé one we may imagine because, as the champion wise cracker of his day, he pulled that one about there being nothing new under the sun.

Of course, one may excuse Solomon. One may excuse any man with his reputed number of lady friends and wives. According to the fundamentalists, woman was made from the bone of a man—and she's been a bone of contention ever since. But, the point of it all is that Solomon, reputed the wisest bird of his day, either before or after his run-in with Sheba—we forget which—opened his mouth and spilled something that really justified his reputation for wisdom more fully than even he perhaps imagined at the time.

Speaking of avocados—this brings us to the subject of recent modern medical research and the eternal subject of metabolism, which is, after all, but the study of that wonderful engine, the body, in which cholesterol, activated by the sun bath in the skin capillaries, carries its resultant quality to the cell to explode it into activity, and so make the engine run.

Looking at medicine from the attitude of a man in the bleachers observing a game, it appears now that the study of internal function—in other words, internal medicine—is the line along which medicine in the future must advance.

Surgery, after all (and with all respect to the brilliancy of its performance) is but a makeshift—a tacit confession that we know of nothing better—nothing more that can be done. Yet in a wide range of conditions surgery may presumably be avoided, if the understanding of the causation of the final condition is arrived at, and the defective metabolism leading to it be corrected in time.

Comes now parathyrin, as perhaps the latest metabolic advance. Parathyrin is an extract of the parathyroid glands. It has shown wonderful results in tetany, either of disease or of traumatic injury of the parathyroids. It may be expected to show equally good results in the body metabolism of lime—hence, in the treatment of, say, spasmophilia, putrefactive bowel conditions, the treatment of ulcerative processes of the digestive tract or of the integument—or any condition depending largely upon lime imbalance, just as we already know that the pituitary is so intimately involved in the process of growth, and the thyroid in the maintenance of normal basal metabolism, and the adrenals with blood pressure and a normal or abnormal circulatory tone, as well as a possible defensive function in infectious processes.

And this brings us back to our text and the truth of Solomon's world-weary observation. Because all these extracts are derived from animal

organs—desiccated or otherwise—and for untold generations the Chinese have been feeding the organs of animals to the afflicted individual to correct internal function. And there you are. Endocrinology isn't such new stuff after all. It's only a refinement of method rather than a new or radical thing.

And yet—and yet one wonders where it all may lead in the eventual history of medicine. More and more it appears that the question of immunity and infection hinges upon metabolism—functional balance more than any other thing. Infection, then, depends upon a condition or conditions tending to make the body of the most fit soil for the infecting growth, and these conditions, even to the point of tissue change wrought by trauma, are but changes in metabolic balance, with a resultant lowering of resistance to a danger point. Health or unhealth at this rate would seem to be but a matter of metabolic—or function—balance, depending upon a bodily chemistry properly maintained.

Hence, one wonders if in the future the internist will not perhaps be the one to solve the riddle of such a maintained balance which so long ago led the Chinese to employ an organotherapy different from ours in form, though not in any sense different in intent.

At least it seems that if medicine is to advance greatly, it must advance along this line. Should it do so, prophylaxis or early attack on disease will profit, and polypharmacy will decline. Today the effort to sterilize is in reality the treatment of a symptom rather than any other thing. Naturally, if an infecting agent can be destroyed, the infected tissue, unless too greatly damaged, may eventually regain a normal or nearly normal tone. But how much better could the condition have been prevented or aborted before any great damage was done. Today do we not in actuality pay too much attention to the infection and not enough to the metabolic tone? Do we not treat the infection too much *per se*, and leave the body, once the infection is destroyed if we do succeed in bringing about its destruction, to recover its damaged balance as best it may—much like a battered tin Lizzie limping home on two cylinders and a flat tire? Are we not actually putting the cart before the horse in this way many times? If infection means lowered metabolism or a metabolism deranged, then does it not mean a metabolism still deranged even after the infection has been abated by whatever agency we have employed? And in this direction does it not lie for internal medicine to accomplish marvelous things? Will we come to a day when bio-chemic changes can be recognized early enough to prevent disaster from occurring before rather than after the fact? I don't know and you don't know. But it is pleasant to theorize. And to us it seems that with the medical man it lies to show whether Solomon's classic dictum was right or wrong—at least as to medicine.

A YEAR AND A MONTH

It is now a year and a month since the president of the Utah Medical Association, in his official capacity, and, as we suspect, because we had already won a pair of nickel-plated spurs as a writer of fiction, and hence knew a little about stringing words

together, appointed us as the incumbent of Ye Editorial Chair for the state.

Since then, however, we have tried our "damndest," as the cowboy put it, to make the Utah section of the Journal something which the medical men of the state might care to read. And, quoting the cowboy again, "Angels can do no worse."

Now that another convention approaches, however, and we may be given our just deserts and cast into the ash-can in favor of one better able to carry on the work we have attempted, it seems timely to say a word in our own behalf. First, then, we have tried to make the Utah section as interesting as we could, and as complete in regard to medical news. We want to thank the secretaries of the various county societies who have co-operated, and we want to damn the secretaries who have not. The Utah section should be representative of the state. Merely because the editor happens to be a Salt Lake man is no reason why there should be a feeling, as has been intimated to him, that Salt Lake wants to hog the thing and would not print news from other parts of the state if it were submitted for use. And we want to say here and now that such a thought or statement is "all damp." What we would like above all things is a chance to get hold of all the information bearing on the medical activities from Cache County, south to Dixie. And we'll print it if we can get it to print. And we dare any secretary to send in his stuff and prove or disprove this statement. And we know who is going to be convinced. Yet, in the last year, only Box Elder and Weber have given us a chance to make good, and we've printed everything they sent. And we've thanked and do thank the secretaries of those societies for having given us the chance. And we wish the other societies would get up on the wagon and help drive, instead of passing us up.

This, however, is not a belch. Because, in spite of all our disappointments in support, we have enjoyed the work, and we feel and we hope the readers feel with us that we have done something to improve the Utah section inside the last year and a month.

We thank you.

Utah News Notes (reported by G. U. Giesy, associate editor)—News this month resembles the proverbial hen's teeth. Everybody is vacationing or going to vacation or has vacationed. The societies are not meeting. About all that is left is routine work, and that is something we can't report.

Drs. Root, Schulte, and Rich have returned from Europe, after a very enjoyable trip.

Dr. Sandberg of Salt Lake has left for an extended trip to Europe with his bride. During their absence they will visit England, France, Germany, and Austria. While in Europe Dr. Sandberg will do post-graduate work in Berlin and Vienna. The return home will be made by way of the Mediterranean countries, with a tour of Canada to round off the honeymoon.

The following physicians have been recently licensed to practice within the state:

Maurice Carver Melrose of Iowa, Vernon Scott Lilly of Ohio, James Albert Pederson of Washington, D. C.; Frank J. Lemon of Washington, and Thomas Francis Welsh of Nebraska. The new physicians admitted through examination are Robert E. Smylie of Price, T. M. Aldous of Springville, Leslie A. Smith of Logan, Leslie J. White of Salt Lake, Junio E. Rich of Ogden, Silas S. Smith of Salt Lake, and H. Asa Dewey of Bingham.

Nevada State Medical Association

W. M. EDWARDS, M. D., Mason.....President
 CLAUDE E. PIERSALL, M. D., Reno.....Secretary-Treasurer and Associate Editor for Nevada

TWENTY-SECOND ANNUAL MEETING

As we go to press, the Twenty-second Annual Session of the Nevada Medical Association is being held at Elko. The program, as given below, is a splendid one; and many of the papers, carefully edited and discussed, will appear during the year in CALIFORNIA AND WESTERN MEDICINE, as the official publication of the N. M. A.

The meeting is being held September 4, 5, and 6, so that members and guests may also take advantage of the Utah annual meeting and post-graduate week, at Salt Lake, September 7 to 12.

Officers and committees of the N. M. A. are as follows:

Officers—President, William M. Edwards, Yerington; First Vice-President, A. J. Hood, Elko; Second Vice-President, A. F. Adams, Reno; Secretary-Treasurer, C. E. Piersall, Reno. Trustees—W. A. Shaw, Elko; A. P. Lewis, Reno; George F. Pope, Winnemucca.

Council—S. K. Morrison, Reno; Hal L. Hewetson, Las Vegas; J. T. Reese, Yerington; William Howell, Gardnerville; F. M. West, Lovelock; A. L. Stadtherr, Reno; P. D. McLeod, Tonopah; William Brennan, Eureka; Charles E. Sweezy, Winnemucca; M. J. Rand, Ely; William Riley, Gold Hill.

COMMITTEES

Membership—B. Brown, A. C. Olmsted, C. C. Bullette. Judicial—M. A. Robison, A. J. Hood, R. A. Bowdle, A. R. Craig, Horace J. Brown.

Scientific Work and Program—V. A. Muller, J. C. Ferrell, A. Huffaker.

Necrology—Mary H. Fulstone, Donald Maclean.

Entertainment—C. E. Secor, W. A. Shaw, J. R. Eby.

Public Health and Education—Henry Albert, W. A. Shaw, M. R. Walker.

Delegate to A. M. A.—C. E. Piersall.

Alternate—William M. Edwards.

Military Affairs—The President, Vice-President, and Secretary.

PROGRAM

Friday, September 4, 1925

Elko General Hospital

Colonel L. M. Maus, Hot Springs, Ark.—Hydrotherapy at Hot Springs, also Medical Exhibit. Discussion by R. H. Richardson, P. K. Brown, and M. J. Rand.

J. F. Kerby, Salt Lake City, Utah—Anomalies, Diseases and Injuries of the Spine. Discussion by James Watkins and D. Maclean.

George L. Eaton, San Francisco, Calif.—One Hundred and Fifty Prostatectomies. Discussion by A. L. Stadtherr, V. A. Muller, and W. B. Coffee.

Edgar L. Gilcreest, San Francisco, Calif.—The Treatment of Fractures of the Elbow Joint and the Lower End of the Humerus. Discussion by A. R. DeCosta, A. J. Hood (Elko), and J. T. Watkins.

Henry Albert, Reno—The Prevention and Control of Infantile Paralysis. Discussion by John Tees, J. E. Worden, G. L. Belanger, Alex McIntyre, and G. L. Dempsey.

At the noon luncheon, Dr. Gilcreest will give an illustrated talk on Reminiscences of Sir William Osler.

William H. Brennan, Eureka—The Physician in Politics. Discussion by D. Maclean, George Servoss, A. C. Olmsted, and M. A. Robison.

W. H. Riley, Gold Hill—Problems of the Industrial Surgeons. Discussion by D. Maclean, James Watkins, and H. J. Brown.

Horace J. Brown, Reno—The Workings of the A. M. A. Discussion by M. A. Robison, A. R. Kilgore, and S. K. Morrison.

Philip King Brown, San Francisco, Calif.—The Medical and Surgical Treatment of Angina. Discussion by E. H. Falconer, T. W. Bath, C. E. Secor, and W. J. Van DenBerg.

Eric A. Larson, Woodland, Calif.—The Treatment of

Peptic Ulcer. Discussion by J. W. Gerow, G. R. McGee, and G. L. Eaton.

Saturday, September 5

Professor R. G. Foster, of Nevada Agriculture Extension Division, U. of N., Reno—Health Contests among 4'H. Clubs.

W. B. Coffee, San Francisco, Calif.—Discussion by R. A. Bowdle, M. B. Wesson, W. A. Shaw, and S. M. Sproat.

Miley B. Wesson, San Francisco, Calif.—Conservation vs. Radical Surgery for Traumatic Rupture of the Kidneys. Discussion by B. H. Caples, E. L. Gilcreest, and A. L. Stadtherr.

V. A. Muller, Reno—The Management of the Goiter Patient. Discussion by W. B. Coffee, R. P. Roantree, and H. L. Hewetson.

W. W. Washburn, San Francisco, Calif.—Intestinal Obstruction. Discussion by E. A. Larson, B. Brown, and C. W. West.

Maxmilian L. Herzig, Seattle, Wash.—A Study of Thoracoplasty in Unilateral Pulmonary Tuberculosis. Discussion by P. DeM. McLeod, A. P. Lewis, and D. G. Lynwalter.

T. W. Bath, Reno—Gonorrhea in Women, Pathology and Treatment. Discussion by A. B. Spaulding, G. W. Green, and A. L. Thompson.

A. B. Spaulding, San Francisco, Calif.—The Surgical Utility of the Pelvic Fascia in Cases of Cystocele, Rectocele, and Uterine Prolapse. Discussion by E. A. Larson, E. K. Smith, and H. W. Sawyer.

Albert Soiland, Los Angeles, Calif.—The Granuloniata, Hodgkin's Disease, Lympho-Sarcoma, and Leukemia. Discussion by A. R. Kilgore, W. N. Kingsbury, and J. F. Kerby.

The business session will be held in the Elko General Hospital, 8. p. m., Friday, September 4. Just following the business session will be moving pictures, showing pulmonary tuberculosis, presented by the Reno Radium-X-Ray Association.

Banquet at Lamoile Saturday evening.

Sunday, September 6, will be devoted to a fishing trip. Ladies cordially invited.

Arrangements are made for other entertainments. Announcement of details will be made at the first session.

Clinics will be held at the Elko General Hospital.

The Washoe County Medical Society, reports Henry Albert, secretary, met in regular session in a room of the Chamber of Commerce, August 11, President Vinton A. Muller presiding.

Business—The application for membership in the Society made by Carl H. Lehnert, having been approved by the Board of Censors, a motion was passed that the secretary be instructed to cast the unanimous vote of the Society for the election of Dr. Lehnert.

The secretary read communications from representatives of the Treasury Department of the Federal Government, in answer to the request of the Society to have the Federal Government discontinue the war tax imposed on physicians under the Harrison Narcotic Law; and also to permit certain professional expenses incurred in connection with medical meetings and post-graduate study deducted from the physician's income in the computation of the income tax. The replies in each case indicated an attitude on the part of the Federal Government that present rulings were justifiable.

L. G. Kassabian applied for membership in the Society. The application was referred to the Board of Censors.

Program—Drs. S. K. Morrison and R. H. Richardson gave very entertaining and instructive talks on "Observations and Impressions of Medical Activities Abroad." They recently returned from a visit to the medical centers of Canada, England, Ireland, and Scotland. The visit was made in company with about three hundred other physicians.

Attendance—Members: Adams, Albert, Bath, Brown, Caples, Da Costa, De Chene, Fuller, W. H. and A. J. Hood, Lewis, Morrison, Muller, Piersall, Richardson, Robinson, Robison, Tees, Thompson, Walker.

CORRESPONDENCE

POPE TRAVELOGUE

Tanganyika, June 23, 1925.

My dear Dr. Musgrave—Since writing you last, Africa has furnished quite a bit of amusement to our hunting party. A portion of this was the mix-up which Stewart Edward White and his two gun-bearers had with a leopard.

The dispatch news of this event has, of course, been in the daily papers—at least I walked thirty-four miles to the nearest human contact and started the message to Mrs. White.

You recall the episode, a common one in this country: White wounded a leopard with a bullet in the body, too far back to kill it outright. The beast entered the jungle, and in an attempt to rouse him from his retreat, the gun-bearer was attacked, the two rolling over in combat on the ground. White could not shoot, for fear of killing his man. A second gunboy ran up and was, in turn, borne to the ground by the fighting animal. White now had a chance to land a shot. The leopard left his second victim and sprang upon White, knocking the gun from his hands and bearing him to the earth.

White clutched the beast by the throat and threw his weight upon its chest until he choked it to death. He was bitten in the arms and shoulder and clawed in the face.

The second gun-bearer was bitten in the arm, and the first man was a mass of shredded flesh. His arms were deeply wounded by the leopard's fangs, his scalp was torn loose from his skull and lacerated to an extensive degree, but, worst of all, the animal caught the skull between his jaws and tried to crush it. One fang entered the orbit, ripping the eyelid to pieces, fracturing the outer bony structure and almost enucleating the eyeball. The wound extended deeply into the temporal fossa. The opposite fang grooved the calvarium as if a gouge had been driven over the bone.

The disfigurement was terrible!

White disinfected all these wounds as best he could with permanganate crystals.

By the time I arrived on the scene several hours later, they were laid out under a thorn tree, and a pretty mess of tatters and blood.

White insisted that I attend to Solomani, the gun boy, first. I dressed his wounds in saturated permanganate solution on gauze, after syringing them all to their depths with the same. Having treated all men alike, we made a crude stretcher for Solomani and carried him to camp, some four miles. He was in shock, of course. When I got him in camp I set out my surgical equipment, which was hardly adequate for wholesale injuries of this sort.

I gave Solomani chloroform and operated upon him at the same time, having no assistance but one intelligent tent boy, Hassani.

Out in the open, with a few boxes for tables and the simplest outfit in the world, we did the best we could for the poor fellow, cleaning his wounds, opening up pockets for drainage, repairing his ragged eyelid, and putting his optic back where it belonged. I was the only white man on deck—Young and Simson were in Nauobi, and the astonished natives stood around with China eyes, to see me cast one of their number into so deep a sleep that I could cut and sew without pain. We applied moist dressings and put him back on his straw couch in his little mud hut.

White's wounds healed nicely, and on the third day following, just to show his status, he went out and shot another lion—and, incidentally, broke open his shoulder wound.

The second gun boy, Kysuma, also recovered with a moderate amount of infection. But poor Solomani, when I removed his dressings next day, I found every scalp wound crawling with maggots, which I killed with a kerosene compress, and two or three days later every wound was running good, old trench pus, with bacteria of every known description, I assume.

For three weeks I've had a daily clinic, dressing wounds

that would satisfy a hyena for richness of odor and quantities of pus.

Dakin's solution would have been the thing to use, but unfortunately we are six weeks away from the nearest supplies. I syringed the deep wounds with a dilute iodine solution and kept the compresses moist with sheep dip, the only antiseptic that I had in quantity.

The eye has undergone a pan ophthalmitis, and I fear is a complete loss. Fragments of bone and bits of grass driven way back in the orbit came out with the flow of pus, and the eyeball will have to be enucleated soon, I fear.

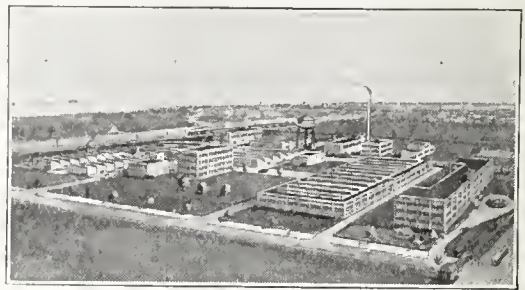
The lacerated and punctured wounds made by the leopard's long canine teeth in the forearm are remarkable. There are half a dozen or more and extend completely through the muscles of the upper segment, but do not fracture either bone. They look a good deal like shrapnel injuries. Fortunately, no large nerves or blood vessels seem to be severed and the joint is not invaded, though the olecranon bursa was ripped open.

No anti-tetanic serum was used; we had none. Salvarsan has been employed in other cases of septicemia following lion bite, and the reports are good.

So this is Africa! Well, these predatory creatures know their business. We have met officially and taken the scalps of thirty-four lions and five leopards to date, and the score is in our favor so far. They have registered a dozen close misses and three hits; we have stung thirteen with our shafts, mortally wounding seven and killing the rest outright. The others we have had to use more persuasive arguments on, and they capitulated. Otherwise all is peace and quiet.

Yours as ever,
SAXTON POPE.

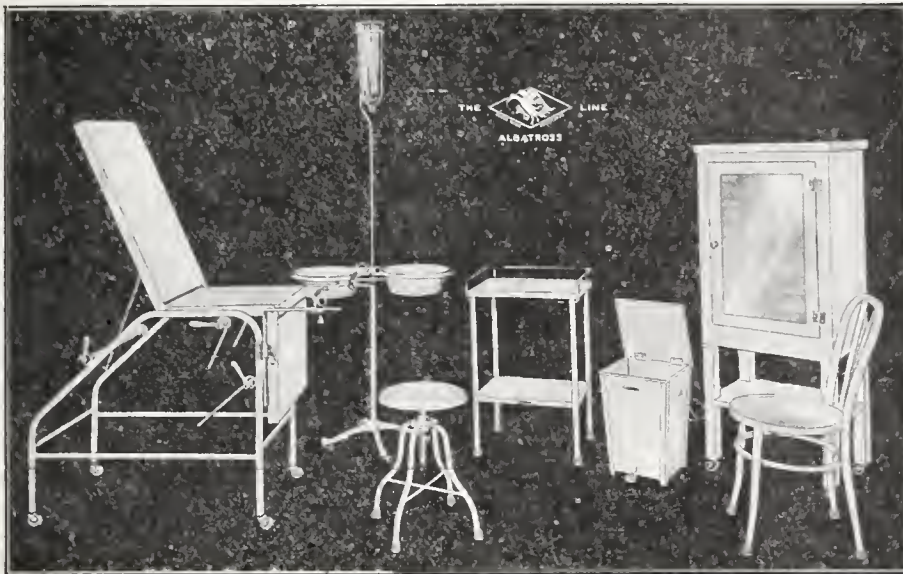
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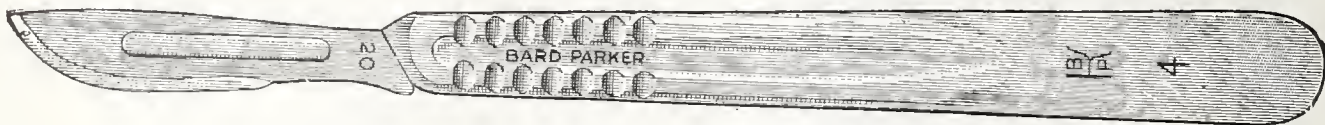
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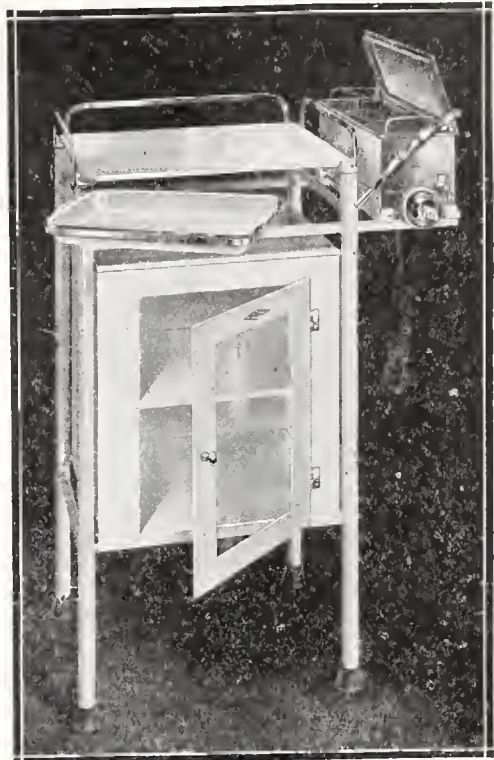
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ACKNOWLEDGMENT OF REPRINTS

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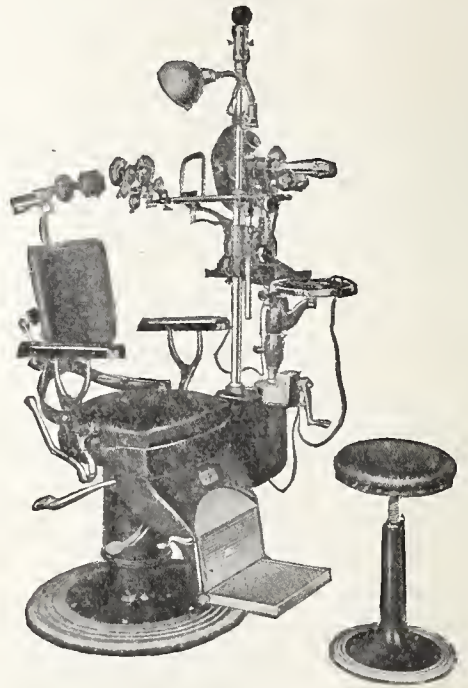
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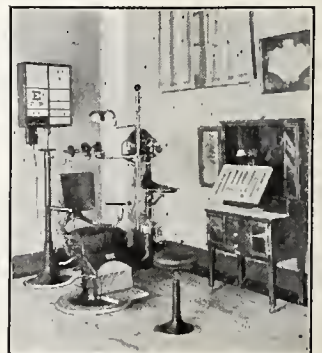
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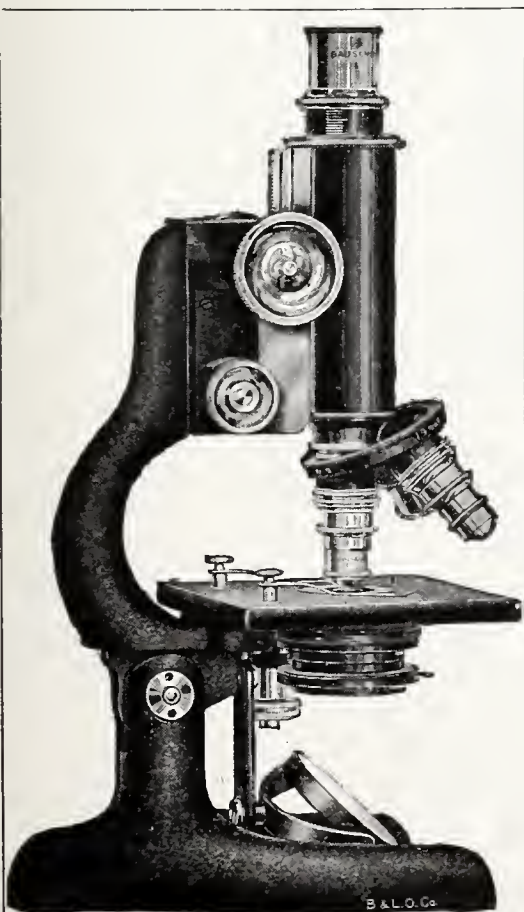
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Note—These do not represent all of the actions of the Council, but they do represent those remedies manufactured by firms who co-operate with California and Western Medicine in its advertising columns, and thereby with the physicians in California.

In addition to the articles enumerated in our last report, the following have been accepted:

Eli Lilly & Co.—Diphtheria Toxin-Antitoxin Mixture 0.1L plus; Typhoid Mixed Vaccine, Prophylactic and Therapeutic Schick Test, 50 test package.

Parke, Davis & Co.—Germicidal Discs of Potassio-Mercurio Iodide.—P. D. & Co.

Powers-Weightman-Rosengarten Co.—Bismosol; Bismosol Ampules, 1 cc.

Tuna Fish Protein Extract Diagnostic (P. D. & Co.)—A protein extract diagnostic—P. D. & Co. (New and Non-official Remedies, 1925, p. 289).—Parke, Davis & Co., Detroit.

Schick Test (Lilly) — Diphtheria Immunity Test (Schick Test) (New and Non-official Remedies, 1925, p. 50) is also marketed in packages of two vials, one containing diphtheria toxin sufficient for fifty tests, and the other vial containing the proper amount of diluent.—Eli Lilly & Co., Indianapolis.

Industrial Health Under Non-Medical Supervision —Emery T. Hayhurst, Columbus, Ohio (Jour. A. M. A.), summarizes his views on this topic as follows: For the public weal, industrial health simply requires sanitarians to take charge, both official and non-official, medical and non-medical, with local health departments supervising, and guided considerably by the experience of those industrial physicians and surgeons whose duties actually extend to hygiene and sanitation of working conditions in their respective plants.

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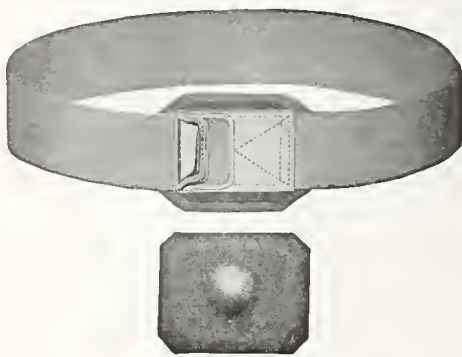
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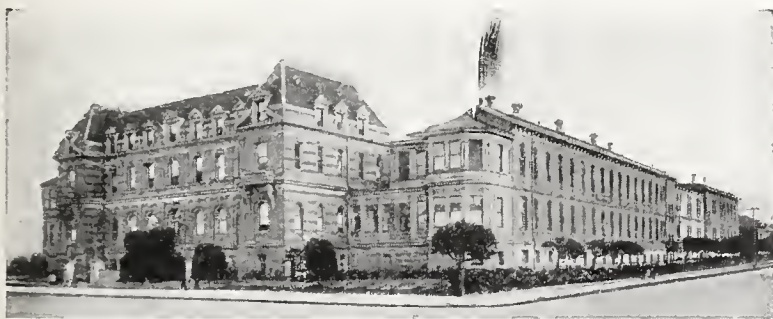
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BOOK REVIEWS

This column is conducted solely in the interests of California and Western Medicine readers. Critical comment, favorable and unfavorable, purely from the standpoint of the interests of the medical reader, will be made about books selected from the larger number acknowledged in the Books Received column. The advertising columns are open to book publishers who wish to make additional statements about their publications.

The Normal Diet. By W. D. Sansum, M. D. Published by C. V. Mosby Company. Price, \$1.50. For sale by advertisers in this issue of California and Western Medicine.

Doctor, this is the book you have been looking for to recommend to members of your clientele. It is brief (70 pages), accurate, and the subject of diet is presented most attractively.

Recovery Record. For use in tuberculosis. By Gerald B. Webb and Charles T. Ryder. Review copy by courtesy of the publisher, Paul Hoeber. Price, \$2. For sale by advertisers in California and Western Medicine.

This interesting little manual will be welcome to the physician, as well as to the patient who is taking "the cure." All the aspects of treatment in which the patient must co-operate are reviewed. The reasons for restrictions are clearly explained. The "false cure," first emphasized by Laennec, is mentioned, and "emphasis and reiteration that the treatment of tuberculosis calls for a thorough and prolonged rest" is dealt with at length. The many factors, including both the physical and mental aspects of the disease, are stressed, especially the need for properly graded mental occupation during convalescence, the accidents and obstacles, the record of disease, the technic of recovery, and the hygiene of recovery.

The chart sheets at the back are sufficient in number to last for two years. They are the usual temperature, pulse, and weight charts used by patients in a sanitarium. Each chart contains some well-adapted quotations. The cheerful philosophy and serenity which characterize the book make it a valuable adjunct in the care of the tuberculous patient.

Laws (Abstract) and Board Rulings Regulating the Practice of Medicine in the United States and Elsewhere.

Revised to May 1, 1925. Price, 60 cents. Copyright 1925 by the American Medical Association, 535 North Dearborn Street, Chicago.

This useful little book of 250 pages should be on the desk of every physician and every health worker of whatever kind in the whole United States. It contains a digest of the laws and board rulings of all states and most foreign countries; is exceedingly well done, with enough intelligent comment to give interested readers valuable information about the general conditions necessary to secure a license to practice medicine.

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Choice of a Medical School. Reprinted from the Journal of the American Medical Association, with revisions and additions.

This pamphlet of some twenty-five pages will be exceedingly useful to young men and young women contemplating the study of medicine. It is part of the ever-growing splendid service that the A. M. A. is rendering, not only to physicians, but to the public as well.

Education in Roentgenology—Preston M. Hickey, Ann Arbor, Michigan (Journal A. M. A.), is of the opinion that roentgenology as a modern specialty is inadequately taught in a large percentage of the medical colleges in the United States. Roentgenology should be recognized as a separate department in all standard medical schools and should have a director of professorial rank. The teaching of roentgenology in medical colleges should be carefully correlated with the other branches, so that the students would receive proportionate and adequate instruction in this specialty. The Class A hospital should assist in the teaching of roentgenology by affording its interns the opportunity to become acquainted with the every-day applications of its principles. The training of the specialist in roentgenology should be one of the functions of a Class A hospital.

Epidemiologic Methods—Don M. Griswold, Iowa City (Journal A. M. A.), describes methods of procedure and the construction and use of chronologic charts, spot maps, case records, and special graphs.



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Oculists or Optometrists—Which?—James M. Patton, Omaha (Journal A. M. A.), believes that the majority of optometrists are in the main making an honest effort, through preliminary training and the establishment of definite standards of ethics and proficiency, to render service to the public. However, during the last five or six years there has been a growing activity on the part of certain optometrists, some of whom hold official positions in state optometric organizations, which can be interpreted only as an attempt to restrict the rights of the regularly licensed oculist so far as the fitting and prescribing of glasses is concerned, even looking forward to the time when all oculists will be compelled by law to pass an examination before the board of optometry of the state in which he may be located. The status of optometry in each state is reviewed by Patton. He concludes by saying: Let us remember that there is an active group of influential optometrists who are perfectly willing to prevent by law all who are not registered optometrists from fitting glasses, and that active measures are contemplated to compel the oculist to pass their boards, before he can legally practice this phase of his profession. Let us be suspicious of bills regulating optometry containing ambiguous clauses, or those restricting the rights of manufacturing opticians who ordinarily serve the oculist. Let us remember that ours is a profession and not a trade. We cannot afford to face the charge of making a profit out of the glasses we prescribe, but we do have the right to protect our patients from the exorbitant prices and high pressure retail sales methods of the optometrists. We must be awake to the situation; and, while we may have no quarrel with the optometrist who limits himself strictly to his own field, at the same time, we owe it to our profession and to our patients to forestall any legislation which will limit the fitting of glasses to a single group.

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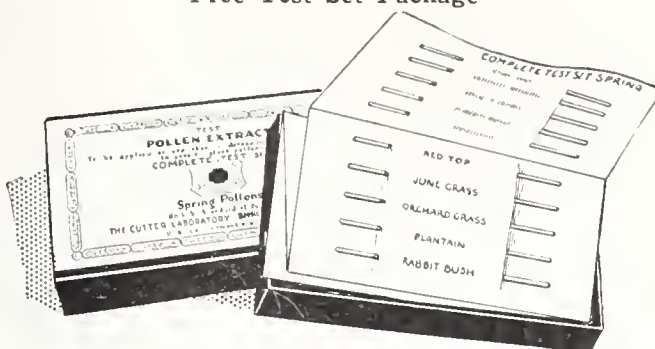
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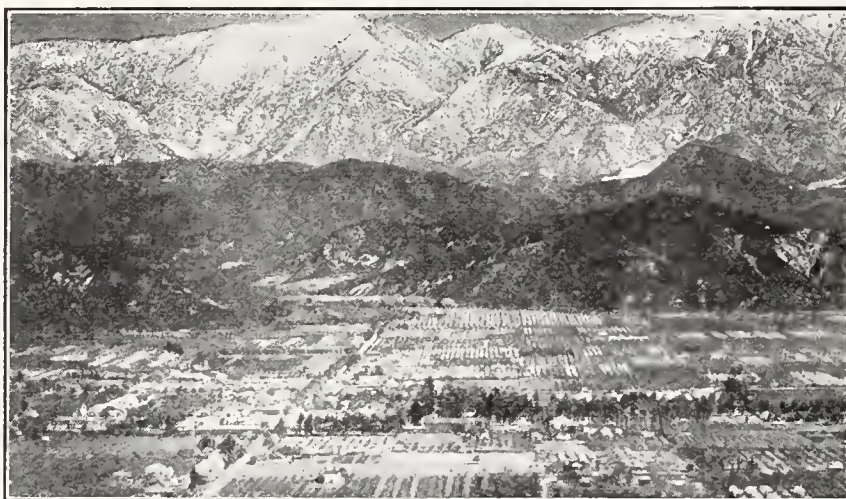
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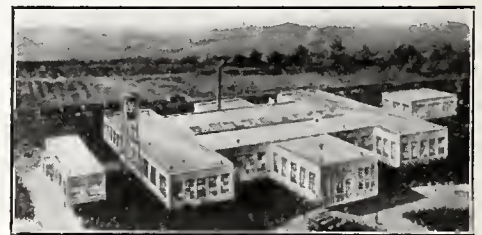
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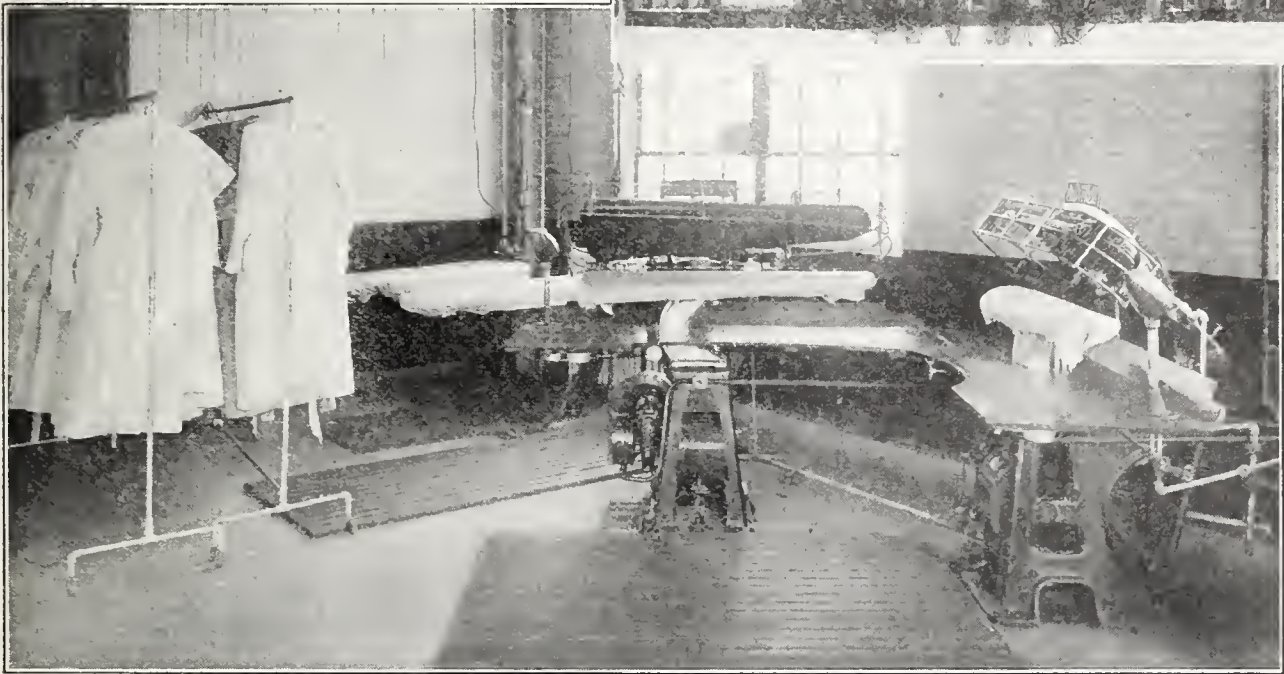
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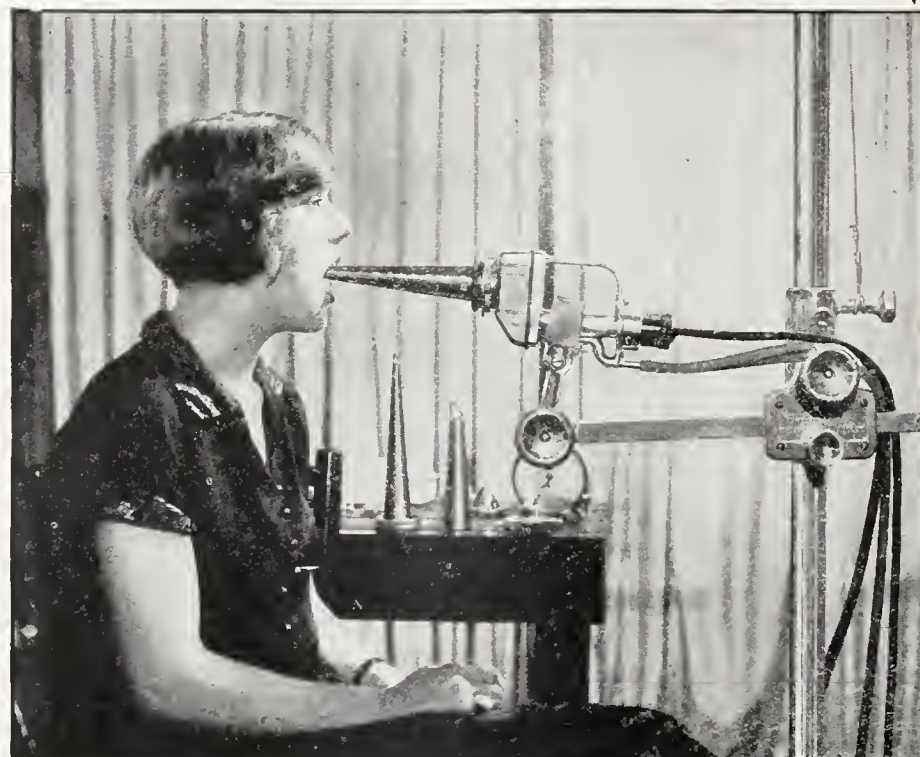
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Monday 9:00 a. m.—Medical Ward Rounds. Samuel H. Hurwitz, M. D.
Tuesday 8:00 a. m.—Weekly Staff Conference.

Tuesday 9:00 a. m.—Urologic and Cystoscopic Examinations. Louis Clive Jacobs, M. D.
Wednesday 8:30 a. m.—Operations. Charles G. Levison, M. D., and Harold Brunn, M. D.
Thursday 8:30 a. m.—Eye, Nose and Throat Operations. Aaron Green, M. D., and Herbert Cohn, M. D.
Thursday 9:00 a. m.—Medical Ward Rounds. Emilo Jellinek, M. D.
Friday 8:30 a. m.—Clinical X-Ray Conference. Lloyd Bryan, M. D.
Friday 9:00 a. m.—Pediatrics Rounds. E. Chas. Fleischner, M. D., and Ralph Kuhns, M. D.
Friday 9:30 a. m.—Prenatal Clinic. Louis I. Breitstein, M. D.

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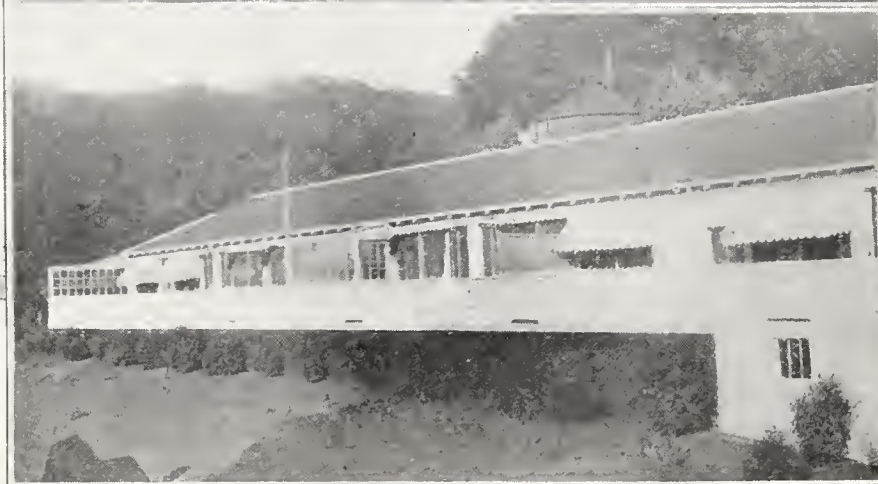


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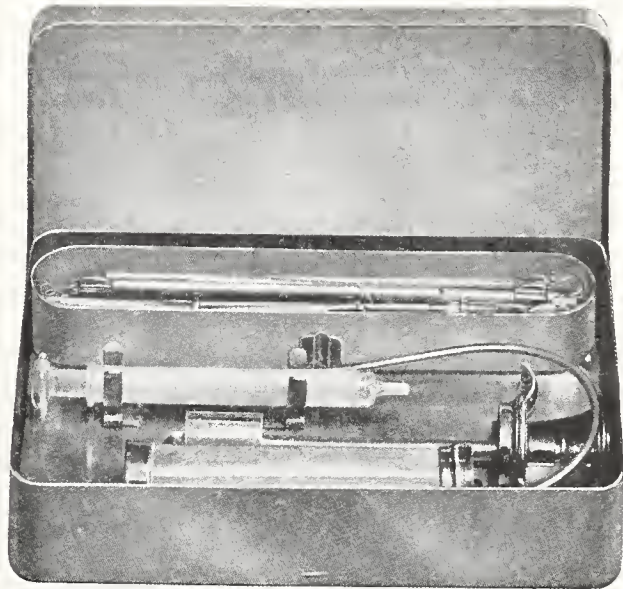
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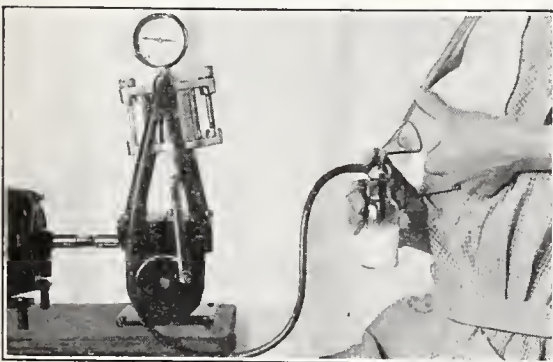
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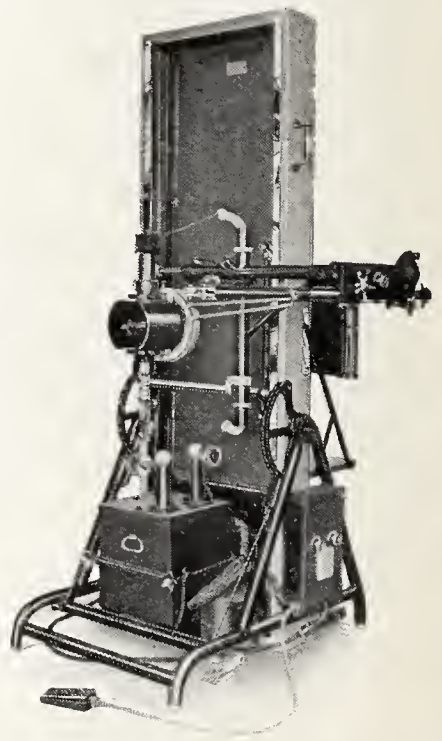
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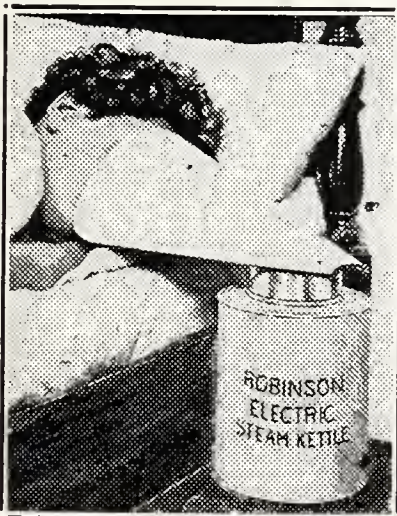
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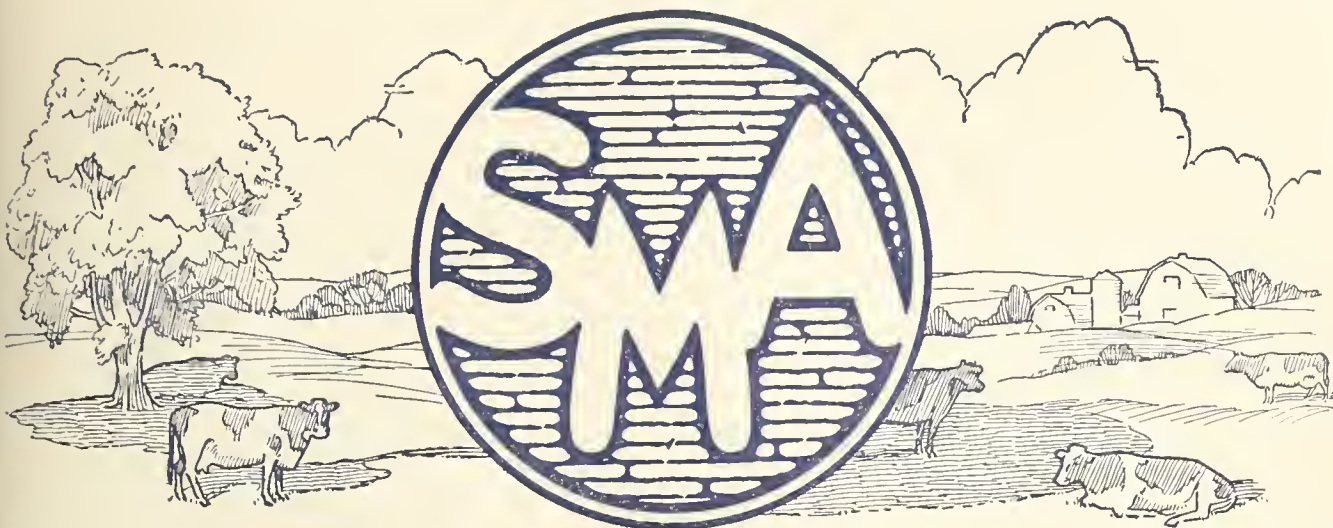
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Jour. Amer. Med. Ass'n., Jan. 5, 1925

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Contributors to This Issue:

FREDERICK M. ALLEN, M. D.
Remarks on the Practical Treatment of Diabetes

ALICE F. MAXWELL, M. D.
Caesarean Section for Pelvic Obstruction

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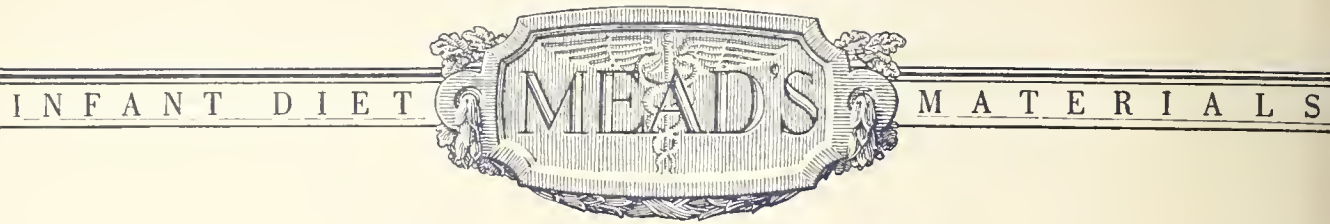
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VOLUME XXIII

OCTOBER, 1925

No. 10

Subscription prices, \$5.00 (\$6.00 for foreign countries); single copies, 50 cents.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 10, 1918.

VOLUMES begin with the first of January. Subscriptions may commence at any time.

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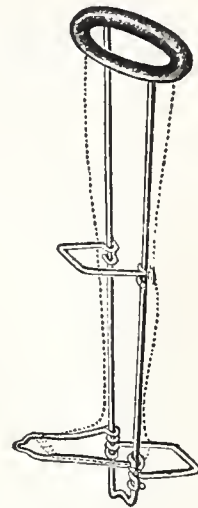
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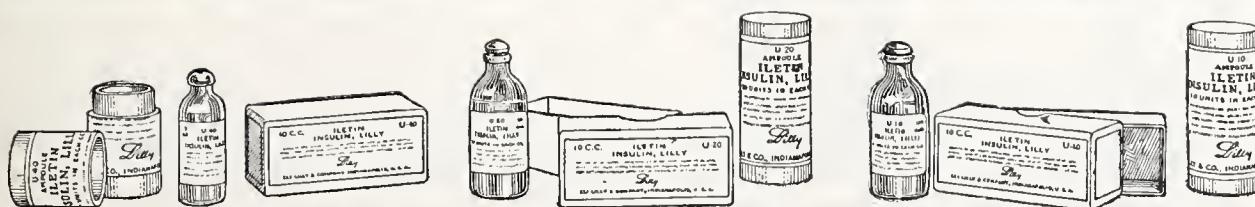
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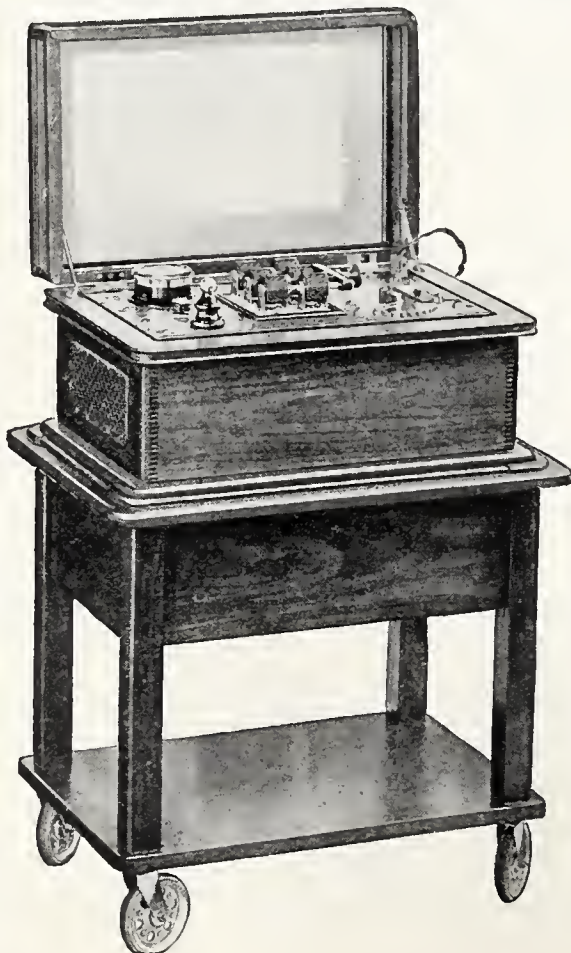


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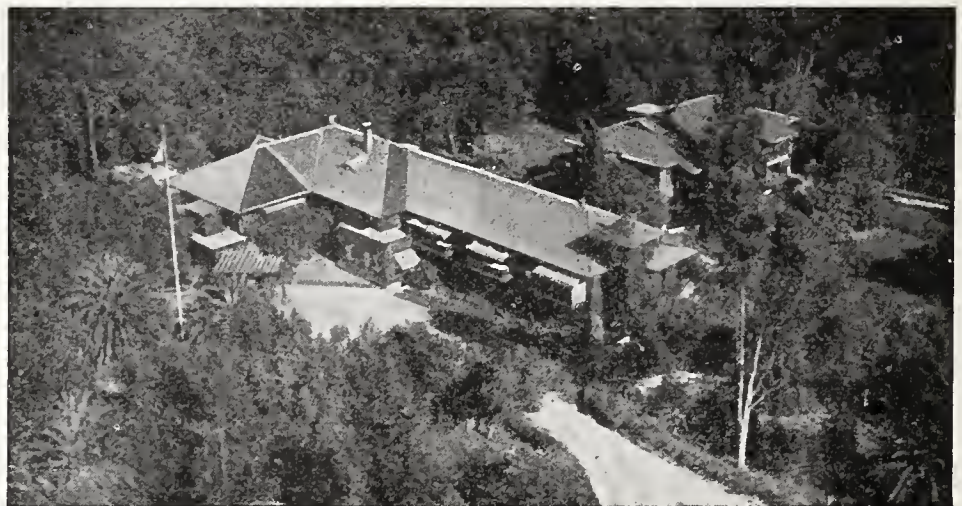
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Monday 9:00 a. m.—Medical Ward Rounds. Samuel H. Hurwitz, M. D.

Tuesday 8:00 a. m.—Weekly Staff Conference.

Tuesday 9:00 a. m.—Urologic and Cystoscopic Examinations. Louis Clive Jacobs, M. D.

Wednesday 8:30 a. m.—Operations. Charles G. Levison, M. D., and Harold Brunn, M. D.

Thursday 8:30 a. m.—Eye, Nose and Throat Operations. Aaron Green, M. D., and Herbert Cohn, M. D.

Thursday 9:00 a. m.—Medical Ward Rounds. Emil O. Jellinek, M. D.

Friday 8:30 a. m.—Clinical X-Ray Conference. Lloyd Bryan, M. D.

Friday 9:00 a. m.—Pediatrics Rounds. E. Chas. Fleischner, M. D. and Jos. Sampson, M. D.

Friday 9:30 a. m.—Prenatal Clinic. Louis I. Breitstein, M. D.

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of the first and third months of pregnancy contains some active substance, but the placenta contains much larger quantities. The evidence presented indicates that the corpus can be excised as early as twenty days following the last menstruation without interfering with normal gestation; consequently, this endocrine function of the corpus in woman during this time does not seem a necessary one. Two possibilities present themselves to explain placental endocrine function: Either (1) the hormone extracted from the placenta is elaborated there, or (2) it is retained there after being formed in the ovarian follicles or (in woman) in the corpus luteum. Further experimental evidence is necessary to settle this point.

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Personal and Community Health. By Clair Elsmere Turner, Associate Professor of Biology and Public Health in the Massachusetts Institute of Technology; Associate Professor of Hygiene in the Tufts College Medical and Dental Schools. Illustrated. Review copy furnished by courtesy of the publishers, The C. V. Mosby Company, St. Louis, 1925. For sale by advertisers in California and Western Medicine.

Methods in Surgery, used in the Surgical Divisions of Barnes Hospital, and Washington University Dispensary. Including outlines for case history-taking, pre-operative and post-operation care of patients, routines, diets, etc. By Glover H. Copher, M. D., Instructor in Surgery, Washington University School of Medicine; Clinical Assistant to Barnes Hospital; Surgeon to Out-patients, Washington University Dispensary. Review copy furnished by courtesy of the publishers, The C. V. Mosby Company, St. Louis, 1925. For sale by advertisers in California and Western Medicine.

Symptoms of Visceral Disease. A Study of the Vegetative Nervous System in Its Relationship to Clinical Medicine. By Francis Marion Pottenger, M. D., Medical Director Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California; Author of "Clinical Tuberculosis," "Tuberculin in Diagnosis and Treatment," "Muscle Spasm and Degeneration," etc. Third Edition, With Eighty-six Text Illustrations and Ten Color Plates. Review copy furnished by courtesy of The C. V. Mosby Company, publishers, St. Louis, 1925. For sale by advertisers in California and Western Medicine.

Some Fundamental Considerations in the Treatment of

Empyema Thoracis. By Evarts A. Graham, M. D.; Member of Empyema Commission, United States Army; Professor of Surgery, Washington University School of Medicine. This essay was awarded the Samuel D. Gross prize of the Philadelphia Academy of Surgery in 1920. Illustrated. Review copy by courtesy of publishers, The C. V. Mosby Company, St. Louis, 1925. For sale by advertisers in California and Western Medicine.

Eye, Ear, Nose, and Throat Manual for Nurses. By Roy H. Parkinson, M. D., Visiting Oculist and Aurist to St. Joseph's Hospital, San Francisco. Illustrated. Review copy furnished by The C. V. Mosby Company, 1925. For sale by advertisers in this issue.

Allergy: Asthma, Hay-Fever, Urticaria, and Allied Manifestations of Reaction. By William W. Duke, M. D., Kansas City, Missouri. Seventy-five Illustrations. Review copy furnished by The C. V. Mosby Company, 1925.

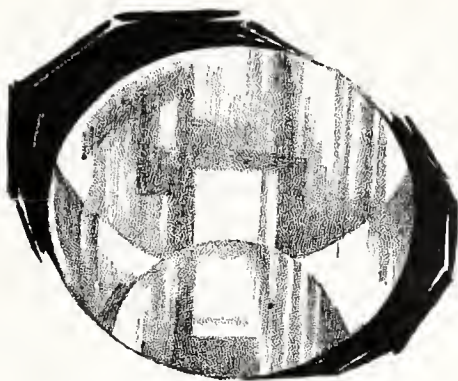
Recent Advances in Medicine, Clinical Laboratory Therapeutic. By G. E. Beaumont, D.M. (Oxon.), F.R.C.P., D.P.H. (Lond.), Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, etc., and E. G. Dodds, Ph.D., B.Sc. (Lond.), Professor of Biochemistry in the University of London, etc. Second Edition, With Forty Illustrations. Philadelphia: P. Blakiston's Son & Co., 1925.

Ocular Therapeutics: A Manual for the Student and the Practitioner. By Doctor Ernst Franke, A. O., Professor of Ophthalmology and Chief of the Second Eye Clinic at the University of Hamburg. Translated by Clarence Loeb, M. D., Oculist to the Michael Reese Hospital, and Head of the Department of Ophthalmology of the Michael Reese Dispensary, Chicago. St. Louis: The C. V. Mosby Company, 1925.

Old and New Viewpoints in Psychology. By Knight Dunlap, Professor of Experimental Psychology in the Johns Hopkins University. St. Louis: The C. V. Mosby Company. Review copy furnished by courtesy of the publishers. For sale by advertisers in California and Western Medicine.

Zur Kritik Der Homöopathie Antworten auf die Frage von Geheimrat Bier: "Wie sollen wir uns zu der Homöopathie stellen?" 1. Verhandlungen des Vereins für in-

(Continued on Page 1263)



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(Continued from Page 1260)

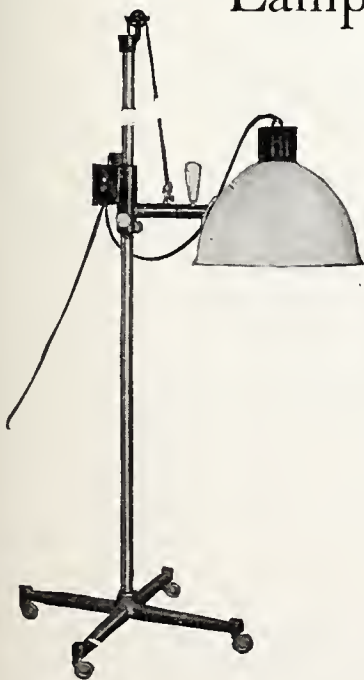
nerer Medizin und Kinderheilkunde in Berlin am 29. Juni, 1925, Referenten: Prof. Ed. Müller und Prof. W. Huebner. Aussprache: A. Bler, A. Magnus-Levy, G. Joachimoglu, G. Klemperer, A. Goldscheider u. a. 2. Hofrat Prof. Hans Horst Meyer. 3. Prof. H. Rietchel. Herausgegeben von Vorstand des Vereins für innere Medizin und von der Schriftleitung der D. M. W., 1925, Georg Thieme Verlag Leipzig.

Treatment of Kidney Diseases and High Blood Pressure. By Frederick M. Allen, M. D. Part 1. Practical Manual for Physicians and Patients. The Psychiatric Institute, Morristown, New Jersey.

The Medical Follies, An Analysis of the Foibles of Some Healing Cults, Including Osteopathy, Chiropractic, and the Electronic Reactions of Abrams, With Essays on the Anti-vivisectionists, Health Legislation, Physical Culture, Birth Control, and Rejuvenation. By Morris Fishbein, M. D., Editor of the Journal of the American Medical Association. New York: Boni & Liveright, 1925.

Static Peritonitis in the Malnourished Infant—John A. Foote, Washington, D. C. (Journal A. M. A.), states that premature, toxic and typically athreptic infants display symptoms of peritoneal injury in a manner that may be termed static. One of his patients showed infection through the umbilical vein. In intussusception in the athreptic infant, pain, tumor, and vomiting may be seen only late in the disease, and diagnosis may be difficult. Even slight distention, not reducible by enemas, in emaciated infants, should be a contra-indication for intraperitoneal instillation of salt solution or blood. A gain of weight after this procedure in desperate ill athreptic infants means a non-absorbing peritoneum. Usually, by the time it is possible to establish the diagnosis with certainty, treatment is unavailing. Hence the need for prophylaxis of athrepsia by breast-milk feeding and care as to the hygiene of the infant in the first week of life. The use of pituitary extract to promote peristalsis in young infants is fraught with danger, since it readily produces intussusception.

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CALIFORNIA AND WESTERN MEDICINE

VOL. XXIII

OCTOBER, 1925

No. 10

SPECIAL ARTICLE

REMARKS ON THE PRACTICAL TREATMENT OF DIABETES

By FREDERICK M. ALLEN, M. D., *Morriston, New Jersey*
(*Delivered before the San Diego Medical Society, November 18, 1924*)

DOCTOR ALLEN'S method of handling the subject of diabetes, by refuting many of the erroneous views that creep into the discussion of any new subject is particularly pertinent. Following promptly in the wake of any scientific discovery is a stimulated crop of all kinds of pseudo-scientific views bearing more or less closely upon the subject; and even we physicians are not above espousing them for a time. A direct negation, given by an authority we recognize, to the more plausible of these errors clears our vision and strengthens our practice wonderfully.—EDITOR.

I SHALL speak informally on the subject of the practical treatment of diabetes.

Many advances have been made in this subject, as you all know, and as in most subjects, many fads come and go. Sufficient time has now elapsed, I believe, for us to judge some of the recent movements in this subject, and I shall speak rather frankly and freely of my own notion of these movements. You are in no way obligated to believe what you hear.

In 1914 I set up certain innovations in diabetes in the form of a treatment based on something new in diet, namely, the limitation, not only of carbohydrate, but of total calories, the idea being that the tolerance is governed not only by the carbohydrate, but by the fat intake and body weight. In criticizing some of the ideas that have come up since that time, I am not attacking other individuals in expressing my opinion freely, but

rather defending my position against their attacks, and the question as to who is right will simply have to be decided by experimental evidence.

The treatment of diabetes is today practically twofold: by diet and by insulin. I shall consider the subject under these two heads, and shall begin under each heading by stating certain things which, in my opinion, are not true.

DIET TREATMENT

First of all, it is not true that insulin diminishes the need for accuracy of diet. Diet is just as live a question as it ever was, if not more so. Accuracy of diet is needed as much as ever, if not more, because formerly there was greater leeway in treating diabetes on lax diets; now if a diabetic takes insulin he is almost compelled to have a weighed diet. For that reason many physicians who never studied diets before are studying them now in order to treat diabetes intelligently with or without insulin. A very striking suggestion in that connection has been put forth by Gray, who, in a recent paper, raises the question: "Is insulin more important to the diabetic than food scales?" The point brought out is that, from a practical standpoint, food scales may be considered more important than this wonderful discovery, because most diabetics do not, after all, need insulin, but they all need diet, and those who do need insulin cannot be treated satisfactorily with insulin unless they have accurate diet. That is one way of expressing the importance of diet in diabetes. Now we still have deaths in patients treated with insulin. We still have deaths from old-fashioned diabetes, because those patients do not follow diet, and any idea that one can use insulin successfully simply by planning the dosage of insulin and disregarding everything else is contrary to fact. Diet, then, maintains its full importance.

Second. It is not true that any form of diet can take the place of undernutrition. There are various forms of reduced diet, the strictest of all being total fasting. The more you undernourish the patient the more you raise his tolerance. To feed him with the number of calories he is burning is not equivalent to fasting; that can be shown experimentally.

Third. It is not true that the respiratory metabolism can furnish a guide to the diet. Perhaps such remarks may unfavorably impress persons who do respiratory metabolism. I appreciate their work very highly and its importance for theoretical and practical purposes, but tonight I am speaking of a practical subject to practitioners. A large proportion of writers on this subject now speak of taking the basal metabolism and figuring the basal diet of the patient, and then building up a diet from that, giving him first the basal requirement. This may be very interesting if you are doing research work on the subject,

or perhaps if you have a new machine and like to play with it or to impress patients. But for actual practical benefit I see no advantage in taking observations of the respiratory metabolism. It does not guide one in the treatment, and it does not tell how many calories the patient needs. Whatever his basal metabolism is we must guess at his active metabolism, and it is just as easy to guess at the whole thing in the first place.

Fourth. Another point bearing closely upon this whole subject is the question of protein. It is not true that protein has any specific injurious action on diabetes. A number of older writers have argued that it has some influence as a special toxic food injuring the pancreas somehow or other. More recent writers have speculated that it may be injurious through its specific dynamic action, raising the metabolism, and that for this reason protein should be especially restricted. The only answer is that it is not true in actual practice. If you think otherwise, try it. Protein makes somewhat less tendency to glycosuria than the equivalent in preformed carbohydrate. If there were any special toxic action in protein, or if it especially influenced the tolerance through its raising of the total metabolism, it would create more of a demand for insulin than carbohydrate. The contrary is true. Carbohydrate creates more of a demand for insulin than its equivalent in the form of protein. Therefore, protein is not to be particularly dreaded in diabetes.

Fifth. The total calories of the diet cannot be ignored. This means in particular that fat cannot be ignored. The tolerance of the diet cannot be figured solely in terms of carbohydrate, assuming that all diets are the same if they contain equal glucose values in the form of carbohydrate as such, or protein, counting it as 60 per cent carbohydrate, or with allowance for any supposed carbohydrate value of fat. You cannot figure diabetic diets as equivalent on that basis, but must consider also their total caloric value. This principle is largely ignored in recent writings on diabetes, but is just as valid as ever.

Sixth. As a continuation of this idea, the high fat diets, so-called, which have been the most recent of the diabetic fads, and which are very extensively used today, in my opinion do not represent any valuable new step in the treatment of diabetes. They are practically a reversion to the old treatment with low carbohydrate and protein and high fat. They are a negation of the principle of the influence of total calories. The basic principle of the high fat diets is that carbohydrate is all that counts; that if we restrict the carbohydrate enough, and also restrict protein, the more calories we give in fat or perhaps alcohol the better. That is untrue. I have published the proof, and some others have also published confirmations. Until these experiments are overthrown the principle of total calories cannot be ignored. As a matter of fact, Newburgh and Marsh, whose names are associated with high fat diets, have not ignored this principle in actual practice. If one will look up their papers he will find that, although their cases on the average are mild, the total calories in their diets are not high. Men like Petrén in Europe have used actually high fat diets, running these diets as high as possible, often

above 3000 calories. But Newburgh and Marsh have done better. After an initial undernutrition with about 900 calories, they have limited their milder cases to about 2400 calories. Also, if you look up their original papers, you will find that their severe cases have received final diets only as high as 1500 calories. In other words, their diets were on the whole not higher in total calories than the diets of Joslin, myself or others for similar cases. They were not able to take thin diabetics and make them fat; nobody ever succeeded in doing that until insulin came. The reason is that the emaciated patient suffering with severe diabetes cannot assimilate high calories in any form.

Seventh. It is not true that the practitioner need go to the trouble of calculating ratios of the ketogenic and anti-ketogenic substances in the diet. That is again one of the fads that have complicated diet unnecessarily. In the first place, if we give a patient any ordinary combination of foodstuffs we are likely to use, we shall find that we have nothing to fear from acidosis provided glycosuria is kept absent. Newburgh and Marsh are perfectly correct in that principle, which is not new. If we keep a patient sugar-free we can give him huge quantities of fat in proportion to carbohydrate and protein, and not get serious acidosis. Wilder has published recently some very narrow ratios of carbohydrate and fat in the diet, allowing the patient to show some ketosis and finding that no apparent harm was done. It need not injure the patient if he does show a little acetone in the urine. It is extremely important theoretically to know what combinations of materials make acetone in the body and how and why ketosis arises. But even from a theoretical standpoint it is hard to tell where ketosis begins, and whether we should be guided by the first bare trace of acetone or only by a large increase. Practically no two authors agree as to the amount of ketogenic and anti-ketogenic materials a diet should contain. On the practical side I would say that we are interested only in making the patient safe and evidently various ratios are safe, but the main point is that they all fall within any diet we are likely to choose. Some people prefer higher fat, some lower fat, some higher carbohydrate and some lower, but I do not know anybody who can make any palatable combination of foods that would produce any serious acidosis in a patient who is sugar-free. Therefore, physicians need not worry too much about the scientific phrases.

Eighth. It is not true that there is any valid ratio of tolerance for different foods on the basis of their glucose value. It has been argued that in figuring the diet we must count the glucose available as 100 per cent for the carbohydrate, at 56 or 60 per cent for the protein, and at 10 per cent for the fat; and that thus diets can be planned which will prevent acidosis and at the same time supply high fat and high calories. The purpose of these calculations is to give the patient as many calories as possible. High caloric diets are what these authors have aimed at; their fundamental principle has been that only glucose need be considered, and that if you exchange other foods for fat you can give more calories in the form of fat, and therefore a higher fat diet is better. That is where the mistake lies. It is

not true that you can exchange 10 grams of carbohydrate for 100 grams of fat and have it mean the same to the patient. If you do that you are subtracting 40 calories and adding (with your 100 grams of fat) 900 calories; but they are not the same. If you could do this you could soon run up to a diet of 4000 calories, in return for taking away perhaps only 180 calories. What actually happens if you exchange glucose for fat is at first perhaps an apparent increase of tolerance or decrease of the insulin need. If a patient is on, say, 1500 calories, and you subtract 20 grams of carbohydrate and add 200 grams of fat, the first effect may be a lowering of the insulin dosage for at least a few days. Afterward you will find that the insulin dosage will creep up and the slow delayed effects of the fat will become more evident as the weeks and months go by. We have had plenty of examples of the harm resulting from adding calories in that fashion. One patient could be kept sugar-free on 40 units of insulin a day, but by substitutions which doubled his calories without changing the theoretical glucose value he reached a point where he was taking 140 units of insulin and still excreting 90 grams of glucose. It is easiest to see this result in the severe cases; therefore, they are the best for tests. But in all cases total calories must be considered, and food-stuffs cannot be interchanged on a mere basis of glucose content.

Ninth. It is not true that any special or artificial kinds of food can evade this law. Levulose, caramel, intarvin, glycerol, and other artificial or unusual forms of food have been introduced as things which might not form glucose in the metabolism, thus returning to the old notions of diet. These foods may not impose the same strain that carbohydrate does. Foods differ in this respect. The greatest strain on the pancreatic function is imposed by carbohydrate, the next by protein, and the least by fat. But even if the artificial foods may perhaps impose less strain than carbohydrate, they do not escape the law of total calories, and it is not true that you can give any food to diabetics without taking account of its caloric value.

Tenth. It is not true that the influence of body weight and obesity is yet explained by any known metabolic laws. We do not know why obesity predisposes to developing diabetes. Joslin especially has shown the fact statistically. Obesity or gain of weight also has a marked effect on the tolerance of diabetics. The tolerance is greatly increased by reducing the weight. Of course, as we increase the weight we increase metabolism, but as far as known the increased strain on the pancreatic function is out of all proportion to the increased metabolism. If you increase a patient's weight by ten, fifteen, or twenty pounds, you increase his metabolism appreciably, but in some cases you may increase the insulin requirement four or five times. The tissue he puts on is likely to be almost pure fat, and adipose tissue is not known to increase the metabolism greatly; but it seems to be this very adipose tissue which chiefly increases the insulin requirement. When a patient begins to lay on fat his insulin requirement goes up. The reason may be figured out some day in terms of metabolic laws, but up to the present the explanation seems not to have been found.

INSULIN TREATMENT

Turning to the subject of insulin, I shall mention a similar list of things, which, according to present evidence, are not true.

First. Insulin is not required in the majority of diabetic cases. It is easier and simpler to get along without it, and most cases are mild enough that you can get along without it.

Second. It is equally well known that insulin does not cure diabetes. We have tried maximum dosage in children with very mild or early cases, and have not succeeded in curing them; these children, like all other patients, have remained diabetics. In a few cases the tolerance does rise tremendously, so that insulin may be greatly reduced and sometimes stopped altogether. There is always the hope that in some rare cases the diabetes may come to an end, particularly if there is an acute or subacute pancreatitis underlying the diabetes. It is theoretically conceivable that if the pancreatitis gets better the patient may recover. But ordinarily the rule is, once a diabetic, always a diabetic; and that rule has not been broken by insulin.

Third. It is not true that insulin has any specific curative effect upon diabetic complications. If we become too optimistic on this subject we are likely to be disappointed. It was always true that if we controlled the diabetes the complications became better. We thus obtained good results in gangrene, without insulin. Insulin furnishes a quicker and surer means of arresting all complications; but if a patient has deep gangrene he still, as a rule, loses his foot. We saved some feet before we had insulin, and we do not save appreciably more of them nowadays with insulin, because there is the same basis of arteriosclerosis. We save some lives we could not save before, because patients can be kept sugar-free more readily, but insulin has no specific action on the gangrene. Sugar freedom obtained by insulin is no more important than sugar freedom obtained by diet in its effect on complications.

Fourth. It is not true that there is any practical method of giving insulin except by injection subcutaneously or intravenously. There has been interesting work done experimentally with the administration of insulin by various other ways, especially in animals. But from the practical standpoint it does not work, and if any absorption were obtained it would be too uncertain and irregular for practical purposes. Also, no other pancreatic preparation has been shown to have any effect. Pancreatic substance taken by mouth in any form, or proprietary remedies alleged to stimulate the pancreas or to act in some way other than insulin, have not sustained their claims and have no scientific basis.

Fifth. It is not true that any diabetic cases are refractory to insulin. It is interesting to watch the literature for reports of that kind. I felt pretty sure they would come from people who use high caloric diets and who do not recognize certain principles in diet. Those reports are coming in. One of the most noteworthy was published by Falta last July. He reports a case in which he gave insulin, as high as 160 units a day, and it did not affect the blood sugar when given either subcutaneously or intravenously. Therefore, he claims that this case is re-

fractory to insulin and assumes that it is not due to deficiency of insulin or of pancreatic function, and must be due to some other cause. If you study this case you will observe that, although during a few hours following his doses he did not find much fall of blood sugar, yet he admits that the total sugar excretion on insulin days was less than without it. Then, too, the patient is described as being of medium height and weighing approximately 200 pounds, decidedly obese. That kind of a result can be duplicated any day. By fattening a severely diabetic patient, you can get him into a condition where insulin can be poured in almost like water, and the largest doses will have minimal effects. If Falta's patient were brought down to a reasonable weight, it would probably be found that the case not only can be controlled by insulin, but is not very severe. Such difficulties are going to be encountered by a number of people who give fats and other foods in such quantities as to keep their patients obese. I mentioned our own experience where a patient took 140 units a day and still excreted as much as 90 grams of sugar a day.

Sixth. Following up the point just mentioned, it is not true that there is evidence of disturbance of any gland other than the pancreas in typical cases of diabetes. Insulin prepared from the pancreatic islands does control diabetes in every case, and no preparation from any gland other than the pancreas has the slightest influence on diabetes. Yet in spite of this discovery, the pluriglandists base an argument on the fact that you can give insulin to lower the blood sugar, and give adrenalin to bring it up. One lowers, the other raises; therefore, is there not an antagonism? and the answer is, no, there is not. In the first place we have no evidence that adrenalin is ever thrown into the blood stream in such quantities normally in the living body. Furthermore, there is no evidence of a true antagonism. Adrenalin tends to produce glucose from glycogen and thus throws sugar into the blood stream, but it does not cause inability to use glucose, which is the essential feature in diabetes. Furthermore, there is recent evidence that insulin does not serve specifically to build up glycogen, and under some circumstances actually reduces it. Therefore, no true antagonism exists between adrenalin and insulin, and there is no proof of any glandular antagonism in the body. Diabetes is purely a pancreatic disease.

Seventh. It is not true that the mechanism of insulin action is yet known. The theory of Winter and Smith that there is something peculiar in the character of the glucose, that the blood sugar in diabetes is chemically different from that of the normal organism, is not apparently gaining support. One of the most interesting future possibilities is that we may learn how insulin is related to the carbohydrate metabolism, or to the total metabolism. Even the toxic effect of insulin is not yet explained. One of the brilliant observations of the Toronto school was found in the symptom complex of hypoglycemia—the effect on the body of too little blood sugar. But insulin poisoning is not due strictly or solely to hypoglycemia. Your patient may show severe symptoms of collapse, or even unconsciousness or convulsions, and yet not have an extremely low blood sugar. We do not know what makes the

intoxication in such a case. We do know that glucose relieves it, regardless of the blood sugar level.

Eighth: It is not true that the insulin requirement is governed by the total metabolism. Exercise is a very powerful means of raising the total metabolism, but it rather lowers the insulin requirement. The patient taking heavy exercise does not need more insulin than before; he needs less. Whether insulin is related to the basal metabolism is not clearly proven. There is partial evidence in favor of the conception of basal metabolism being a deciding factor. In fasting, glycosuria is reduced, the insulin requirement is reduced and the basal metabolism is reduced. We do not know whether the fall in metabolism is the essential reason for the relief of the strain upon the pancreas. In the majority of cases when the basal metabolism is raised (e. g., by gain of weight, by hyperthyroidism or by fever) the tendency to glycosuria and the need for insulin is increased. But this suggestive evidence is not conclusive.

Ninth. It is not true that either the diet or the urine furnishes any uniform basis for calculating the insulin dosage. In the early days many conjectures were made that if there was a certain quantity of glucose in the urine or in the diet a certain number of units of insulin would be needed. That is not true. The only way to find out the insulin dosage is to try it. For instance, there is a difference according to the source of the glucose. If a patient shows glucose in the urine from adding carbohydrate to his diet, that is one thing; if he shows the same amount of sugar in the urine from adding high calories in the form of fat, that is very different. The latter form is much harder to clear up, and takes more insulin. Also the effect of complications is well known. Acidosis, for some reason, multiplies the insulin requirement. There is also an observation from Toronto which seems to be correct, that each unit of insulin becomes less effective as the total units are increased. If you give a patient 100 units of insulin, each unit is less effective per gram of glucose than if you give 10 units. There are other factors, but certainly there is clinical proof that only by testing the individual case can one decide how much insulin is needed.

Tenth. It is not true that there is any specific progressive pathological process in diabetes if the pancreatic function is saved from functional overstrain. Several years ago I put forward this doctrine, and I doubt if anybody believed it at that time. Now with insulin at hand, probably everybody will believe it, because with insulin we can relieve the strain upon the pancreatic function more easily and more thoroughly than could previously be done by diet. In severe cases it was formerly very difficult to keep the blood sugar down and clear up obvious signs of overstrain of the pancreatic islands. Now that this is done on a wide scale with insulin, everybody can see that the progressiveness of diabetes can be halted. The reason for progressiveness is found in the hydropic degeneration of islands of Langerhans, photographs of which you have seen passed around in this meeting. Hydropic degeneration is the vacuolation, swelling and destruction of the island cells, which results from functional overstrain. The islands get it only when they try to

work beyond their capacity. When that process is checked either by diet or by insulin, diabetes apparently does not progress.

PRACTICAL DETAILS

Altogether twenty points have been mentioned as not true, and it may be asked, "What is true?" There remains much room for individual judgment as to the method actually used, if a few basic principles are observed.

In the first place we prefer beginning with institutional treatment, which means that the patient generally remains in the hospital for two or three weeks. We believe the case can be studied better and the patient taught to care for himself better by being in an institution, and the period should not be too short or he loses the full benefit.

Then, using the same two headings, diet and insulin, I shall take up first, diet.

The first requisite is a doctor's ability to calculate a diet. If he cannot figure a diet in carbohydrate, protein and calories, he ought not to treat diabetes. Anybody can be a specialist if he will simply familiarize himself with the primary principles of diet, but if he will not take that trouble, he ought to send his diabetic patients to somebody else. But if he goes to this trouble he can treat diabetes more easily and also more successfully than can be done by following any hard and fast set of rules.

As regards proportions of the different foods, we believe that 60 to 80 grams (or more in mild cases) of carbohydrate and about the same of protein makes the most satisfying diet, is most conducive to comfort, strength and fidelity, and gives the widest margin of safety against acidosis. In a few cases lower carbohydrate and protein may be useful for reducing the dosage of insulin or avoiding it altogether. In all cases it is a matter of preference, not a choice between right and wrong, as to whether the diet contains high or low proportions of carbohydrate or fat, provided the total calories are suitably restricted. If you believe in carbohydrate and protein rations as low as 30 or 40 grams per day you may treat diabetes very efficiently with them, but comparative tests will show you that in the long run little insulin is saved and the patients are distinctly less comfortable than with the more normally balanced diet above mentioned.

As regards total calories, our diets are such as to keep the patients not above the normal average weight. Sometimes they are fully up to the normal, and frequently five or ten pounds below the normal average, because in this way less burden is placed upon the pancreas, and on the whole the patients do better. The influence of the total calories and body weight far exceeds the influence of a few grams more or less of carbohydrate or protein.

Then, as regards insulin, we use it when there are severe complications, or when the patient cannot gain tolerance for an adequate diet without insulin. Blood sugar determinations are desirable. Some persons have tried substituting other tests, particularly the new quantitative methods for sugar in normal urine, but I believe the consensus of opinion is that the best method is that of blood sugar tests. They may not be absolutely indispensable, but they

are extremely valuable and are generally the best basis of treatment.

The dosage of insulin is that which will keep the patient completely free from glycosuria, and the blood sugar as nearly normal as possible. It cannot always be normal. But the patient with glycosuria or extremely high blood sugar is liable to infections, and is more apt to develop acidosis and perhaps die suddenly. With existing glycosuria, even though the patient is on high insulin dosage, there is very serious danger of a sudden outbreak of acidosis, causing death within forty-eight hours.

The total daily dosage is divided into a number of injections, according to the size of the total dose. We practically never give more than 20 units in one dose. We seldom give less than two doses per day, even if the total number of units of insulin is low. Insulin may be given with meals; that is the commonest way, but in some of the severest cases we have published a method of giving it about one hour before breakfast for the first dose, and an hour or two after supper for the third dose, as that plan shortens the night period. This reduces the tendency to fluctuation in the blood sugar, and there is no particular reason why every dose should be given with a meal.

Also the plan is to keep the total insulin as low as possible. If it rises too high, for example, above 100 units, it is almost impossible to keep the patient free from glycosuria or hypoglycemia, one or the other. The only remedy is to cut down the insulin dosage. The way to do that is to reduce the patient's weight. Therefore, as far as possible, we use a low caloric diet to keep the body weight somewhat below normal, and in that way ordinarily we keep the insulin dosage down, so as to allow the case to run smoothly. The patient who can use the least insulin is the best off in the long run.

The special treatment of complications cannot be gone into in detail, partly because it has been covered so often before.

The point I would emphasize, in conclusion, is that all the evidence, theoretical and practical, indicates that if patients are handled properly in these two respects—diet and insulin—every case of diabetes can be controlled, and this control can be maintained without downward progress and without any deaths occurring on account of diabetes.

Some Causes of Ageing—"We doubt if we can ever discover means of greatly lengthening life," concludes Malford W. Thewlis (Medical Journal and Record). "There are many factors," continues this author, "at play in the production of premature senility, such as an abnormal mode of living, and the excitement and worry of modern life. Normal old age seems to be a mystery, as far as its actual cause is concerned. There seems to be a law of Nature which brings about old age just as it brings birth in a given length of time, and puberty at another. If Rolleston is right, there is a more or less definite cycle during which cells multiply and after which they cease to do so. It seems to be the best explanation we have of the cause of normal old age. As for the causes of abnormal old age, to repeat, numerous factors must be considered."

"... There is no greater power in the realm of man today than the printing press, and it would be infinitely more powerful and productive of results if those whose thoughts go out to millions through it would write in a spirit of service and in the sense of stewardship."—Edward W. Bok.

CAESAREAN SECTION FOR PELVIC OBSTRUCTION

By ALICE F. MAXWELL, M. D., San Francisco

Contracted pelvis in white women are comparatively rare—the degree of contraction in the large majority of cases is such that spontaneous pelvic delivery is the rule. This is the most advantageous method of labor for mother and child. Caesarean section, under ideal circumstances, carries a definite maternal mortality and must not be regarded as a panacea for obstetrical complications.

DISCUSSION by Titian Coffey, Los Angeles; L. I. Breitstein, San Francisco; Charles E. French, San Francisco; Edward N. Eaver, Oakland.

BEFORE Sanger introduced the method of suturing the uterus, the appalling maternal mortality which followed Caesarean section was the factor which limited its employment to cases in which no other method was available to secure a living child. Pelvic obstruction was the one and only indication which justified its performance.

As the result of the increasing safety of modern abdominal surgery, and because of the ease and simplicity with which the operation can be done at the present time, an ever-growing number of fancy and flimsy indications are advanced for its employment. Varicose veins, asthma, abdominal pain, epilepsy, breech, hydramnios, etc., as indications serve to illustrate the inadequate conception of the real danger of Caesarean section. This loss of perspective and unsuitable widening of its applications reflect the lack of even the fundamental principles of obstetrical art or else an unwillingness on the part of the obstetrician to sacrifice himself, or to give of his time and thought in an effort to assist a woman to deliver herself by the natural passages. The impression in the mind of many medically trained men that Caesarean section is a panacea for all obstetrical problems suggests a serious lack of knowledge of the inherent danger of abdominal surgery to the pregnant woman. Statistics from large clinics have shown that, even under ideal circumstances, the maternal mortality is 2 to 4 per cent if performed upon women in labor, or after vaginal attempts at delivery have been made the mortality varies from 11 to 34 per cent.

Arnold Roux, in 1911, showed that: 245 cases not in labor, 3.8 per cent mortality; 274 cases in labor, membranes intact, 2.6 per cent mortality; 166 cases in labor, membranes ruptured, 10.8 per cent mortality; 64 cases frequent exam. or forceps, 34.3 per cent mortality.

Guy's Hospital report of 121 cases of Caesarean section, from the years 1910-1920, show mortality of 6.8 per cent.

Holland and Kerr's figures from Great Britain and Ireland, from the years 1911-1920, in 4000 sections show that: 1200 cases not in labor, 1.6 per cent mortality; 389 cases early in labor, 1.8 per cent mortality; 220 cases late in labor, 10 per cent mortality; 35 cases after induction of labor, 14 per cent mortality; 107 cases, forceps or craniotomy, 27 per cent mortality.

Williams, in 1921, analyzing 183 sections done in 20,000 deliveries, had a gross mortality of 5.51 per cent—net 3.5 per cent; 4 per cent in conserva-

tive Caesarean, and 1.8 per cent in Porro sections. Data furnished by questionnaires sent to hospitals throughout California disclosed a startling situation, namely, in 1922, there was a 10 per cent maternal mortality following Caesarean section.

Newell, as the result of his investigations of the mortality of Caesarean section in some of the smaller communities near Boston, concluded that the operation as performed by local operators for alleged indications was the most fatal of surgical procedures.

Any break in surgical technique of the corps of assistants needed at the operation will result in disaster to the woman. Any surgeon may have a long series of cases without any deaths, but, given the opportunity, in the end he cannot escape the inevitable minimal mortality.

If these facts are borne in mind, it would seem imperative to consider the indications which actually warrant our employing a procedure which admits at least 2 to 4 per cent mortality under the most ideal and advantageous situations, and a death rate of 35 per cent plus in unfavorably modifying circumstances.

The most frequent and important indication for Caesarean section is pelvic obstruction.

Admitting that the size of the birth canal has a distinct bearing on labor, it must not be forgotten that the vital consideration, nevertheless, is the relative proportion which the passenger bears to the passage, which is, after all, the determining factor of a particular labor. It may be no more difficult for an undersized child to pass through a contracted birth canal than an overdeveloped child to pass through a normal pelvis. The strength of the uterine contractions has also a definite bearing on the outcome of a labor, for, given two women with the same degree of disproportion between the pelvis and child, the efficiency of the labor pains will be the deciding factor in effecting a spontaneous labor in one, or forcing an operative delivery in the other. Pelvimetry serves to demonstrate the degree of adequacy or inadequacy of the pelvis; the size of the child, its position and the vis-a-tergo must enter into the calculation of the proper treatment of an individual case.

Pelvimetry indicates that the frequency of contracted pelvis varies greatly. Thus, the German clinics give a frequency of 8.24 per cent; the Austrian 2.1 per cent, and the French 5.1 per cent. In America, Williams noted contracted pelvis in 24.4 per cent, the proportion in the black race being three times as often as the white—40.9 per cent and 13.4 per cent, respectively.

Crossen reports 1800 cases with 1.7 per cent showing pelvic contraction. In the University of California series of 4604 cases, there were 3.5 per cent with pelvic contractions.

It is generally conceded that 80 per cent of women with contracted pelvis, even with the impossible or doubtful types, will deliver themselves spontaneously if allowed to go into labor. Thus Schauta, in 5288 cases of contracted pelvis among 39,397 births, had a spontaneous labor in 77.8 per cent, with a maternal mortality of .09 per cent and a foetal of 2.2 per cent.

Holland and Kerr's review of 4000 sections in

Great Britain and Ireland showed that 3372 sections were done for contracted pelvis, with a mortality of 4.1 per cent. Guy's Hospital reports in 1920, 121 cases with contracted pelvis as indication 107 times; Williams, in list of 183 sections in 20,000 deliveries, found disproportion of the pelvis furnished the indication in 144 cases (78 per cent).

In our series of 4604 cases at the University of California Hospital, 3.5 per cent (162) were found to have contracted pelvis. Yet 65 per cent of these women were potentially spontaneous, if we deduct the low forceps deliveries in which there was no dystocia due to the pelvis, and Caesarean section was performed only twenty-one times for contracted pelvis.

That eight out of ten women will deliver spontaneously must be emphasized and should serve to impress upon us the necessity of exercising calm judgment in handling these women; it should also prevent meddlesome interference early in labor which may block this hoped-for outcome in the large majority, or in the small less fortunate group render impossible sane surgical treatment. We all agree that it is best for the woman to deliver herself spontaneously, for no other method is associated with so little danger to the mother and child.

If contracted pelvis occur in about 10 per cent of white women, and the large majority of such contractures are compatible with spontaneous pelvic delivery, it is apparent that even in a large clinic Caesarean section will be rarely performed for pelvic obstruction.

However, there are absolute indications for the performance of Caesarean section, namely, when the abdominal route offers the only possibility of saving the mother or child. It is universally agreed that when the true conjugate measures 5 cm. or less, abdominal section is essential to accomplish delivery, regardless of the presence of uterine infection, for such degree of contraction renders impossible delivery by the natural passages of a foetus, even though crushed. With our present-day prenatal observations and pelvimetry, such a degree of contraction cannot be overlooked and its recognition at once establishes the necessity for surgical treatment at term or before the woman has been allowed to go into labor; in other words, to operate under ideal circumstances. Then the operation is an invaluable procedure and undoubtedly has saved many mothers and children who, with other treatment, would be hopelessly doomed. This type, in whom natural delivery is impossible, forms a very small number, considering the frequency of contracted pelvis, for we emphasize in the vast majority of cases spontaneous labor at term is mechanically possible. Only a small group in whom the issue is doubtful may require the nicest judgment in treatment to safeguard the mother and child's best interest.

Relative indications for Caesarean section are afforded by a pelvis with a true conjugate of such length that it is practically impossible to deliver a non-mutilated child through the bony pelvis. With this degree of contraction, section at term will meet the best interests of both patients. Even with less marked degree of contraction, i. e., 7.5 to 8.5 cm.

in flat pelvis and 7.5 to 9 cm. in generally contracted, the operation is frequently done as an elective procedure, for, while spontaneous labor is possible in a large proportion of this class, it will be exceedingly difficult to prognosticate the course of labor in advance—for the efficiency of the uterine contractions is the undetermined variable and many mothers and children may be hopelessly injured or lost, should this last factor be weak and infrequent in character. The best interest of the mother will not be conserved if the mere possibility of pelvic delivery counterbalances the physical and psychic trauma of a severe labor with the attending tears of the supporting structures of the pelvic organs and resulting prolonged invalidism.

In these borderline cases, helpful conclusions regarding the possible outcome of labor can be obtained by noting the presence or absence of overriding of the head on the symphysis. If the head does not override the brim and can be pushed into the pelvis (under anesthesia, if necessary to secure relaxation), it is practically certain that, with ordinary labor pains, a pelvic delivery can be looked for. However, with overriding or inability to push the head into the brim, the outcome is not so certain, and modifying factors must come up for consideration of the treatment of each individual case. If, for example, we have an elderly primipara with this pelvic condition, a section at the proper time will insure a baby with the irreducible minimum of any surgical operation to this mother. The same situation occurring in a woman who gives a history of previous obstetrical disasters will warrant a section if we admit the tendency to enlargement of successive children. Careful measurement of the head and comparison with the pelvis will, of course, materially modify our judgment, although a history of repeated foetal death from pelvic dystocia, even with slight degree of contraction, will influence our choice toward section as the conservative method of delivery for mother and child.

The position which the presenting part bears to the inlet is significant. A face or brow presentation indicates definite and maladjustment; a posterior position of the head may be a modifying factor which may definitely influence our decision. The rigidity of the maternal soft parts and cervix, the moulding possibilities of the child's head, as affected by width of sutures and fontanelles as demonstrated by rectal palpation, the time of rupture of the membranes and the efficiency of the uterine contractions must all come up for consideration.

The effect of a long, hard labor upon the particular woman with a borderline pelvis is of great importance, some patients being so nervously and physically constituted that even a moderate strain will often impair the health for a period of many months or years. Women with cardiac weakness should always be spared the possibility of a decompensation resulting from prolonged labor. If we feel that the physical or nervous stamina is below par or that severe exhaustion after a moderately difficult labor will follow the effort to deliver by the natural passages, a section will be the conservative procedure.

Because it is not always possible to decide upon the proper course, and because we recognize our

fallibility in prognosticating the outcome of a particular case, the test of labor is frequently applied, for it affords a strong hint as to the probable outcome. If we find that labor is initiated by strong uterine contractions, that the cervix is dilating steadily, as determined by rectal examinations which should be definitely limited in number (for we do not admit this method of examination is done without danger of introducing infection into the cervix) and that the head is fixing and moulding through the pelvis, we feel that the patient should be given the opportunity to deliver herself. If, however, early in labor some complicating factors, such as inefficient, weak contractions, face presentation developing during labor, premature rupture of the membranes with only beginning cervical dilatation should be added to the complexity of the problem, we must be prepared to modify our plan of treatment. Early interference in labor with the woman not compromised by vaginal examination, with the cervix just beginning to dilate, particularly if the membranes are intact, practically adds nothing to the danger of abdominal delivery. We do not feel, however, that when the test of labor has been allowed to extend over a period of several hours, even in the absence of vaginal examinations, that the ordinary conservative section can be considered as the safe alternative method of delivery. Every hour of labor adds ten-fold to the potentiality of infection. Under these circumstances, we cannot be justified in submitting a patient to the risk of a procedure which the most conservative figures show will doom at least one out of ten mothers.

In considering pelvic obstruction as an indication for section, contractions of the outlet must not be overlooked. Funnel pelvis is the most common type of pelvis abnormality in white women, according to Williams. In these cases, the pelvis assumes male characteristics, the pelvic arch is narrowed, with resulting limitation of space available for the foetal head beneath the symphysis. The posterior segment of the outlet here must be accurately determined, for the head must be accommodated largely by the area between the tuber ischii and the lip of the coccyx. Pelvimetry will determine the degree of contraction, but again modifying factors must help to make the decision. The size of the child, its position, age of the patient, rigidity of the soft parts, are important in determining the policy of conducting the particular case. Pubiotomy must always come up for consideration in treatment of contractions of the outlet, for the widening of the outlet depends directly upon the amount of separation of the pubic bone. With the patient advanced in labor and the child obstructed at the outlet, Caesarean section cannot be compared to pubiotomy as the conservative method.

In conclusion, I would like to stress the following:

Contracted pelvis in white women are comparatively rare. The degree of contraction in the large majority of cases is such that spontaneous pelvic delivery is the rule. This is the most advantageous method of labor for mother and child. Caesarean section, under ideal circumstances, carries a definite

maternal mortality and must not be regarded as a panacea for obstetrical complications.

University of California Medical School.

DISCUSSION

TITIAN COFFEY, M. D. (1136 West Sixth Street, Los Angeles)—Two of the most valuable points brought out in Doctor Maxwell's paper that appeal to me are, first, the incredible and unheard of so-called indications for Caesarean section that are being used today all over the country; second, the fact that a large majority of cases of contracted pelvis deliver spontaneously at full term. I am glad she has stressed these points, for they are of the utmost importance and should be constantly borne in mind when studying the parturient woman.

Caesarean section at present is done for almost any indication and I for one would be glad to see the pendulum swing back and a more sane attitude taken as regards relative indications.

The positive indications are few and well recognized and need not be referred to but the border line cases are the ones that demand a nicety of judgment and utmost skill on the part of the obstetrician in determining what is best for the mother and child.

Disregarding extreme emergencies such as eclampsia, placenta previa, etc., that apparently may present a relative indication and then almost instantly change into a positive one, it is our duty to so study the pelvic cavity before confinement and the relation of the presenting part thereto, that we have pretty well made up our minds as to the character of labor a given woman will have and what our procedure is likely to be to effect delivery if complications arise. In a young primipara, upon first examination in beginning pregnancy, when the parts are tight and snug we are apt to underestimate the size of the pelvic cavity and think section will be necessary at the end. Many patients are told this or else they are told they can never have children as they are too small.

It is amazing as pregnancy goes on how the parts soften and how much larger the pelvic cavity becomes a few weeks before full term. We may still find the occiput high or attempting to engage at the brim, but we now have a softened enlarged pelvic cavity that puts us in a position to make a much better estimate as to whether or not the head will go through than at our earlier examination.

It is a good working rule that if the promontory of the sacrum cannot be felt by the examining middle finger an average-sized baby will go through that given cavity.

Especially toward the last, all doubtful cases should be kept under close observation so they may be classified and treated as "operations of choice" rather than thrown into the haphazard class and any old chance taken. Considering the appalling mortality in cases that have been neglected, when the golden opportunity has been lost by injudicious "man-handling," certainly version and extraction is a preferable procedure to section.

In other words, the vast majority of cases, by careful preliminary study, put us in a position to know our method of delivery long before they become even relative cases.

Induction of premature labor two to three weeks in advance of full term or induction of labor at term is not done frequently enough. Doubtful cases should never be allowed to go over time. By the induction of labor in suitable cases many mothers will be saved section.

Doctor Maxwell's point that a large majority of cases of contracted pelvis deliver spontaneously is well taken and should never be lost sight of.

L. I. BREITSTEIN, M. D. (350 Post Street, San Francisco)—Doctor Maxwell's paper is a very important contribution and should be studied by every one doing obstetrics. The statistics that she quotes, namely, a maternal death-rate in elected and clean cases under ideal conditions averaging from 2 to 4 per cent, and in cases where women were in labor or after vaginal attempts at delivery have been made, varying from 11 to 34 per cent, are simply appalling. It certainly appears as a crying indictment against the Caesarean section operation. On closer study, the trouble is not with the Caesarean section

operation, but in the judgment of men doing obstetrics. I feel sure we can reduce the maternal death-rate if we would approach the problem from the following angle: Not so much from the stand that we should do a Caesarean section, but from the stand when should we not do a Caesarean section. If certain rules were laid down contra-indicating this operation, and the hospital requirement demanding consultation before this operation is permitted, I am sure the number of mothers dying from Caesarian section would rapidly diminish.

In my service at Mt. Zion Hospital a good many of our maternity cases are drawn from women who were born in Russia, Balkan States, Turkey, Armenia, Palestine and Egypt. We find our average of cases of contracted pelvis runs higher than at the University of California Hospital. The types we see are:

1. General contracted.
2. Flat rachitic with wide contracted outlet.
3. Masculine type with contracted outlet.

Our working rule is as follows:

1. For elected and absolute clean cases we employ the classical Caesarean section, using the high incision.
2. For cases which have been given the test of labor or where membranes have prematurely ruptured and thirty-six hours have elapsed, or in cases where one or two vaginal examinations have been made, even under aseptic technique, these cases are considered as potentially infected, and we resort to the low cervical section.
3. All other cases not included under the above two heads, with the exception of the absolute indication, are not sectioned, but delivered from below, even if we have to resort to a craneotomy. I am happy to say our maternal mortality averages from 1 to 2 per cent.

CHARLES E. FRENCH, M. D. (Flood Building, San Francisco)—There are a certain number of women of the upper class, somewhat advanced in years, who request a Caesarean section rather than undergo the pains of labor. They know something of the operation, have perhaps seen its brilliant results in friends, and have been assured by medical men that in uncomplicated cases, if done before the onset of labor, it is no more serious than an interval operation for appendicitis. If the results of these carefully gathered statistics, taken from such a diversity of sources, were presented to such women they would be more reticent about having this operation. Nitrous oxid analgesia, with version or forceps, if necessary, means perhaps a little more pain, but at a greatly lessened risk.

I believe that a damaged heart is used as an indication for Caesarean more frequently than is absolutely necessary. I have been amazed more than once to see how well a badly damaged heart could accommodate itself to labor in patients who have refused a Caesarean. As an added argument in heart cases it is proposed to sterilize the patient at the same time. I think that this should be disregarded in making a decision to operate. We operate to save mother and child; the future should not be allowed to influence that object. If it is deemed best to sterilize her it can be done at a subsequent laparotomy with far less risk.

Doctor Coffey's contention that premature labor is not induced often enough should be strongly emphasized. The induction of labor several weeks in advance of full term in cases of moderately contracted pelvis is preferable to a section at term. The mortality rate should be almost nothing and it is a simpler and safer procedure in the hands of the general practitioner who does the great bulk of the obstetrical work.

Doctor Breistein's suggestion that it be a hospital requirement to have a consultation before a Caesarean operation is good. Why not also require every operator to report such operations to the monthly staff meeting for discussion, the same as we do with all mortalities?

EDWARD N. EWER, M. D. (251 Moss Avenue, Oakland)—Obstetricians who take pride in the art of their subject will agree that Caesareans are over-much the fashion. This condition came about largely through rather general adoption of the operation for quick delivery in eclampsia. Carl Braun had stated the convulsions usually stopped after delivery. Dührssen claimed this result in 94 per cent and Ohlshausen in 85 per cent. What more natural than that Caesarean, an easy

quick operation, should look attractive when accouchment force and high forceps had become discredited.

Caesarean for eclampsia has accounted for a mortality of 16 per cent in well-equipped maternities in Great Britain, and 32 per cent in the country at large (Fitzgibbon). At the Rotunda, where they do not Caesareanize, the death rate for twenty years under their conservative method of treatment has been only 8 per cent. Equally good results are reported from many sources. In view of these facts, it is high time for Caesarean section as routine treatment for eclampsia during the height of the toxæmia to be frowned upon. Next the operation was seized upon for the solution of almost every obstetric difficulty, and the dire results are shown in Doctor Maxwell's figures.

Distocias, due to faulty rotation, like deep transverse arrest, are too often treated by section. I find with the Kielland forceps their handling from below is usually easy and safe.

I believe, with careful judgment, the indications for Caesarean section may be broadened to include many cases of placenta previa.

The indications in pelvic obstruction as outlined in Doctor Maxwell's paper are sound in every particular, and should be carefully studied and adhered to.

I wish to put in a word for the low Caesarean, which, I believe, has many advantages over the classical variety. If it is safer in the presence of infection, it is to be preferred in all cases, for if 50 per cent of all Caesareans are attended with a febrile puerperium, as is generally stated, the possibility of infection must always be conceded. Furthermore, the dictum "once a Caesarean, always a Caesarean" need not be urged for the low operation. There is no more danger of future rupture than there is after vaginal hysterotomy.

CLASSIFICATION AND RESULTS OF TREATMENT OF HAY-FEVER *

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A study of 190 patients with allergic coryza.

Patients with vaso-motor rhinitis and non-seasonal hay-fever are in most cases sensitive to food or animal emanation proteins.

The intradermal is more reliable than the cutaneous method for testing sensitiveness.

A patient not sufficiently relieved by pre-seasonal treatment should be treated through the season, and the following year the patient should receive an increased amount of pollen extract.

OUR object in presenting this paper is first, to classify the patients referred to the department because of symptoms of hay-fever; second, to give the results of our treatment.

By hay-fever we mean allergic coryza caused by pollens, which indicates a hypersensitive reaction on the part of the patient to pollen protein. Cooke designates by the term "allergic coryza" that symptom complex which arises from a hypersensitiveness of the mucous membrane of the upper respiratory tract and usually of the eye.

Vaso-motor rhinitis, a term commonly used, merely refers to a pathological condition, and when these patients are studied, most are found hypersensitive to proteins. Hansel, in a group of one hundred cases of non-seasonal vaso-motor rhinitis, found approximately half of them to be sensitive to various proteins.

Dunbar, in 1905, was the first to use plant pollen in the treatment of hay-fever. He attempted to pro-

*Presented at the 1924 Annual Meeting of the Utah Medical Association, Salt Lake.

duce an anti-toxin in the horse. Since that time the literature and work on protein sensitization has been most extensive, and has rapidly changed our conception of the etiology of hay-fever and asthma.

The natural result of such rapid advance has been considerable confusion. One of the questions presented is that of anaphylaxis. Is hay-fever an anaphylaxis phenomena? The view advanced by Coca seems most acceptable. The word "anaphylaxis" is reserved by him for those reactions produced in the human, or in the animal, after an artificial hypersensitiveness has been produced; while allergy applies to the reactions occurring in individuals naturally hypersensitive from the absorption of the specific protein. Anaphylaxis is a true antigen-antibody reaction. There is no proof that allergy is of this specific nature. This distinction is fundamental when considered from the standpoint of therapy. In anaphylaxis complete desensitization is always possible and perhaps permanent. In allergy desensitization is only partial, and has not been found to be permanent.

Because of this essential difference, Cooke proposed the word "hyposensitization" to distinguish the lessened sensitiveness induced in allergy from the state of desensitization in anaphylaxis. We have no definite knowledge of what actually takes place in the process of hyposensitization.

We have adopted a classification of coryza, combining those used by Cooke and Walker. This includes coryza of both allergic and non-allergic etiology. This paper does not consider any cases or study of the non-allergic coryza.

The role of calcium metabolism in hay-fever and other allergic conditions is of interest. Pottenger is of the opinion that in asthma particularly there is a calcium deficiency which makes the neuro-cellular mechanism hyperirritable. Novak and Hollander, in their study, conclude "that certain cases of hay-fever and asthma show a low blood calcium, but that calcium therapy alone does not influence these conditions." There is, however, a possibility that calcium thyroid and parathyroid metabolism may be definitely associated with protein sensitization.

We can dismiss the role of bacterial proteins as a cause of hay-fever in our cases, because we had no patients in whom absorption of bacterial proteins was proven to be the cause of the clinical symptoms. Autogenous vaccines were used in some cases with marked benefit, but we do not consider their action as allergic.

METHODS OF DIAGNOSIS AND TREATMENT

Diagnosis—The success or failure in treatment of hay-fever is naturally dependent on proper diagnosis as to causative agent. A careful history is of great assistance, giving as it does much important information as to the age of onset, duration, family history, seasonal character of symptoms, date of onset, etc. Most of the patients were between 20 and 40 years of age, while the duration of symptoms were in the largest percentage of cases from one to twenty years.

It is estimated that 10 per cent of all persons are sensitive to proteins, 1 per cent being sensitive to pollens. Of these, about 40 per cent (in our service 34.7 per cent) gave a history of direct in-

heritance of allergy. Fifty-two and one-tenth per cent gave a history of other allergic symptoms of asthma, eczema, and urticaria. A careful physical examination is always done. Special care is taken in the examination of the nose and throat, and any obstruction is cared for surgically. Hay-fever per se is not sufficient cause for intranasal surgery.

According to the history and date of onset of symptoms, the patients are grouped. The time of appearance of the predominating fall type of hay-fever is August 15, and it lasts until frost. The spring type lasts from approximately May 30 to July 20. The mixed group had symptoms of hay-fever both spring and fall.

The patients classified as non-seasonal had symptoms of hay-fever, but their time of appearance had no connection with the seasons. The potential group were patients sensitive to pollen, but who had no history of hay-fever. We had no patients with hay-fever due to tree pollen. None of the patients had history of onset of symptoms at time of pollination of trees. The time of hay-fever varies with the locality and time of pollination. Local botanical surveys are important in determining these factors, and the abundance of the various pollens.

Our methods in testing for sensitiveness to foreign proteins are both cutaneous and intradermal. Food and animal emanation proteins are usually applied by the cutaneous methods as follows: An abrasion is made by the Von Pirquet scarifier, and on this area is placed the dry protein extract. A drop of one-tenth normal sodium hydroxide is added, making a solution of the protein. If there are no indications other than a history of seasonal hay-fever, approximately fifteen to twenty cutaneous tests are applied. Where indicated, as in the non-seasonal hay-fever, as many as ninety cutaneous tests have been applied.

The intradermal method is carried out with a tuberculin syringe and a solution of the proteins, 2 minims of a 1-500 solution of the protein being used. It is introduced into the superficial layers of the skin. In male patients these tests are applied on the flexor surface of the forearm; female patients, the anterior aspect of the thigh. We have found that the intradermal method will often give a positive reaction when the cutaneous test is negative. A positive test with either method is indicated by the appearance of an urticarial wheal with pseudopos. In reading our results, we have found that it is impossible to adhere to any fixed rule with regard to the wheal reaction. One individual will give a wheal reaction of 1½ cm. in diameter and with no pseudopos, while another individual, no more liable to develop symptoms from the same group of pollens, will give a 3 cm. wheal reaction with numerous pseudopos.

We have found that it is a valuable criterion to distinguish between the various tests made, and the proteins to which the patients does not react acting as controls. Where numerous tests are applied in a very sensitive individual, considerable reaction may appear both general and local. When this does occur, the prompt administration of adrenalin in amounts up to 2 cc. (intravenous if necessary) will usually prevent any serious consequences; although Lamson has recorded two deaths from the intradermal protein tests.

The pollen, or proteins, to which the patients show the greatest amount of reaction are the ones most apt to give symptoms. Naturally, wind-borne pollens are usually at fault. Nevertheless, patients at times show definite hay-fever reactions to pollens, not wind-borne, from which they come in contact, such as that of dandelion, goldenrod, and rose.

It is important that all pollens to which the patient reacts should be known, as the treatment with one pollen does not protect against another, in spite of the frequent statements to the contrary. As Bern-ton has shown in such a closely related group as the short and giant ragweeds, treatment with one does not give protection against the other. Of our 130 cases of fall hay-fever, all except one reacted to pollen of the short ragweed. In all but one case, ragweed pollen, either alone or in conjunction with other pollens, was used for treatment of this group.

The spring hay-fever in this vicinity is largely due to timothy, June grass or red-top pollens. The mixed group is a combination of both spring and fall pollens.

METHOD OF TREATMENT

In our treatment of the patients with hay-fever (seasonal allergic coryza) we have depended entirely on hyposensitization with the pollen extract. From the clinical data and sensitization tests the pollens responsible for the patient's hay-fever are determined, and extracts are used for treatment.

We offer nothing particularly new, but suggest simplicity in the treatment of hay-fever patients. Success of treatment can best be judged by clinical results and the patient's eagerness to return for therapy each season. In 1921, twenty-one patients were treated for seasonal hay-fever. Of this number, eleven, or 52 per cent, returned for treatment in 1922 and the same number again in 1923. In 1922, a total of forty patients were treated. Of this number thirty-one, or 77 per cent, returned for treatment in 1923, and most of these patients are again returning for treatment in 1924. When we consider many patients probably left the city and some were referred to their local physician for treatment, the percentage of returned patients is unusually high. There were no "cures." The freedom from hay-fever, as produced by hyposensitization with protein extract, is only temporary. Protein treatment must be resumed each season. It is possible that continued pre-seasonal treatment may develop a partial permanent tolerance for the offending pollen proteins.

To date we have used the acetone insoluble residue of the pollens in making our extracts. This season, 1924, we are using the method described by Coco. It is beyond the purpose of this paper to discuss the various methods of preparation of the extract. However, in order to obtain satisfactory clinical results it is absolutely necessary that one know the strength of the solutions used, graduated to an adopted standard. The nitrogen standard basis, assuming necessary precautions are taken to prevent deterioration of the extract, has many advantages, and more accuracy in dosage is possible.

In the cases reported we attempted to simplify the treatment and conserve the time of the patient

by starting treatment with a 1:10,000 dilution of the pollen extract. A 1:100 solution of the pollen extract is prepared by taking 0.1 gram of the acetone insoluble residue in 1 cc. of normal saline to which is added a drop of creosote. From this solution, strengths of 1:500, 1:1000, 1:5000 and 1:10,000 are prepared by addition of the indicated amounts of normal saline.

It has been our experience that it is perfectly safe and reasonable to treat patients with more than one pollen extract, if indicated.

The average initial dose in treatment has been 0.3 of a cubic centimeter of the 1:10,000 pollen extract solution. The dose is increased according to the patient's tolerance. If reactions occur, no increase in the amount of pollen extract is given at the next treatment. Adrenalin given with the pollen extract does not affect the success of the treatment. We have considered no patient sufficiently treated who has not received at least one subcutaneous injection of 0.5 cc. of the 1:100 pollen extract. The average number of injections required to reach this maximum injection was ten. We have no severe general or local reactions. Minor reactions of urticaria, hay-fever, or asthma were controlled by adrenalin.

The fall group of patients being the larger in number, the results can be considered a better average.

The best method of treatment is pre-seasonal, finishing the course of injections at the approximate date of beginning of hay-fever season. If the patient is not fully relieved, the treatment should be continued through the pollen season. Patients who appear for treatment during the season are treated in the same manner, except the dose of pollen extract used is smaller and the increase in amount is less rapid. It is surprising the amount of relief these patients receive from this seasonal treatment. If a patient treated pre-seasonal does not have sufficient relief, we continue the treatment throughout the season.

In regard to the patients classified as potential hay-fever subjects, no treatment was indicated. It is very possible, however, that most of these cases would develop clinical hay-fever if they came in contact with sufficient of the offending pollens. As long as their environment prevents this, and the local resistance in the upper respiratory tract is not lowered, they will probably continue to be free of hay-fever symptoms. The group of patients with symptoms of hay-fever, due to foods and animal emanation, were not treated. Hay-fever of this nature is best illustrated by case histories.

CASE A. F.—Came for relief of frequent head colds and marked sneezing. The spells of sneezing were most frequent and distressing at time of arising in the morning. Sensitization tests were negative to pollens, but were markedly positive to chicken feathers, goose feathers, and dog hair. Removal of contact with feather pillows gave relief. Hyposensitization should be considered if symptoms continue to the point of uncomfortableness.

CASE A. C.—Woman, age 50. Was first seen in the nose and throat department because of a persistent vasomotor rhinitis, with irritating nasal discharge. Protein sensitization tests were entirely negative, except for a characteristic reaction to the intradermal test with whole milk protein. Patient discontinued the use of milk and milk products, with complete relief. These illustrate well

allergic coryza due to proteins of foods or animal emanation.

One of the most interesting cases in the potential group of hay-fever patients was referred because of epilepsy (we have carried out protein sensitization tests on a large number of these patients). This patient was sensitive to ragweed, timothy, several food and animal emanation proteins. In this case patient had an attack of grand mal immediately after the sensitization test. Since removing contact with the positive proteins, however, this patient had only one light attack over a period of two months.

Further case histories are given to illustrate the other groups:

CASE A. M.—Boy, age 15, appeared with hay-fever symptoms of three days' duration, with no previous hay-fever. Protein sensitization tests were negative, except for dandelion. No treatment was given, except instructions to avoid contact with dandelion. No further hay-fever occurred.

CASE J. M.—Male, age 70. Hay-fever of twelve years' duration, sensitive to ragweed and rye. Treatment was completed June 25, a date too early to afford protection against fall hay-fever. Patient returned August 20 with hay-fever.

CASE W. E.—Fifty-five years old. Active pulmonary tuberculosis. Hay-fever of twenty years' duration, sensitive to ragweed and timothy pollen. Had better than 75 per cent relief. There was no aggravation of pulmonary condition, although patient had reaction to one or more treatments, with resulting generalized urticaria.

CASE J. S.—Fall hay-fever, sensitive to ragweed pollens. Came to clinic August 1. Stated he had finished treatment elsewhere this year for fall hay-fever. Gave a marked local reaction with generalized symptoms of hay-fever to an intradermal injection to 0.2 minim of 1:1000 solution of ragweed, which indicated treatment had not been completed.

SUMMARY AND CONCLUSION

1. A study of 190 patients with allergic coryza is presented.
2. The predominating type of hay-fever found in this vicinity is of the fall type, and in practically all cases due to the pollen of the short ragweed.
3. Patients with vaso-motor rhinitis and non-seasonal hay-fever are, in most cases, sensitive to food or animal emanation proteins.
4. Pre-seasonal treatment is the method of choice.
5. The intradermal is more reliable than the cutaneous method for testing sensitiveness. A 1:500 dilution extract was used.
6. Treatment has been with the acetone insoluble extract of the pollens.
7. It is fair to consider from the results obtained with the treatment of these patients that any patient correctly diagnosed as to the offending pollen and fully treated, receiving a maximum injection of 0.5 cc. of a 1:100 dilution of the pollen extract (1/200 gm.) can be assured of relief. In our largest number of cases, the fall hay-fever group, 82 per cent obtained over 75 per cent relief. Of this same group, 46.8 per cent were given over 90 per cent of relief.

A patient not sufficiently relieved by pre-seasonal treatment should be treated through the season, and the following year the patient should receive an increased amount of pollen extract.

SOME FEARS OF ENDOCRINE ORIGIN

By EDWARD HUNTINGTON WILLIAMS, M. D., *Los Angeles*

Whatever the mechanism involved in their production, the goal of what may be termed physical type of fears is the same, namely, the fear of death or bodily injury.

We are still in the stage of modified empiricism—of "scientific guessing," if you please—but a condition that frequently is the forerunner of actual scientific deduction and application.

DISCUSSION by Harold W. Wright, San Francisco; F. S. Marnell, Stockton; H. Lisser, San Francisco; Clifford A. Wright, Los Angeles.

IN OUR modern conception of the causes of disease, to speak of "endocrine" fears seems tautological, since fears, like the other emotions, are so intimately dependent upon the ductless glands. Moreover, the single word, "fear," is far too comprehensive a term, except as indicating a general group of conditions. For example, diffidence is undoubtedly a form of fear; so, also, is the sensation one experiences when his auto skids. The bashful boy is distressed and afraid in the presence of a single stranger, and he is afraid in the presence of impending death, as in the case of the skidding auto. But it is difficult to reconcile the idea that the same set of emotion-making anatomical structures are involved in producing these widely divergent sensations. Probably the same set of structures are involved, but all of them cannot be involved to the same degree in each instance.

I think we have very precise evidence of this in certain cases of morbid fears in which the state of the blood pressure is a symptom. We have the high tension, fearful misgivings of certain individuals, and the low-tension, depressed forebodings of another type. Both of these individuals are correctly referred to as fearful and afraid, according to our present conceptions. Indeed, their ultimate mental reactions may be almost identical. Yet it is highly improbable that the mechanisms producing these reactions are the same.

It may be pointed out that, whatever the mechanisms involved in their production, the goal of what may be termed physical type of fears is the same, namely: the fear of death or bodily injury. Such is not the case with the bashful or diffident. Often it is not the case in persons who have a fear of open spaces or closed-in places, or a hundred other morbid fears, which really do not threaten or portend death or bodily pain, and which the afflicted person may recognize as having no such import. And yet these sensations obtrude themselves, even though ruled out by reason. In such cases, it seems to me, a very different gland mechanism is at work from these cases where there is a normal fear of an actual danger. It is almost self-evident. But in most cases of this kind it is not always possible to put our finger on the exact location of the focus of the trouble, although our recent advances in endocrine knowledge is an earnest that presently we shall be.

I have had under observation and treatment for some little time several patients whose symptoms and response to treatment suggest that the cause of their fears is of pituitary origin—or, at least, that they are not the type of fears that one expects from

adrenal origin. Let us consider for a moment the sort of thing an adrenal disturbance stirs up.

We are all familiar with the action of adrenin when injected into the blood, as described by Cannon and others, that is, dilation of the pupils, erection of the hairs, constriction of the blood-vessels, inhibition of the activities of the alimentary canal, and the liberation of sugar from the liver. Also, there is likely to be paleness, trembling, twitching of the lips and gasping for breath, with changes in the blood pressure.

This composite gives us the classical picture, as well as the physical and chemical indications, of fear in which the adrenals are dominantly involved, either as cause or effect. It is the picture of fear as the term is applied ordinarily, an actual fear of definite bodily injury. Perhaps it would be permissible to call it the carnal type of fear, a kind that characterizes the fear in the lower animals and about the only one that such animals ever experience. It is a terror in which the emotion of indefinite worry plays no part: there is actual, tangible danger, not merely an indefinite, imaginary one.

In contrast to this type of fear, which seems caused or accompanied by pretty definite endocrine reactions, is the morbid, indefinite type of worry about, and fear of, some intangible thing, that can be explained away by scientific or common-sense deduction. Yet reason does not dispel it, at least more than temporarily. A little jest in one of the humorous magazines, a short time ago, suggests the type of thing I have in mind. The jest in question is this:

Two girls, sisters, in their early twenties, are strolling along the street. One sister is the phlegmatic type, the other sister thin and nervous, the typical worrying kind. As they walk aimlessly along, the thin sister says, mournfully:

"Oh, dear! I'm just worried to death about something."

The phlegmatic sister, surfeited with these perennial worries, replies somewhat petulantly: "Well, for heaven's sake! What in the world are you worried about *now*?"

The thin sister hesitates a moment, and then replies sheepishly: "Why—er—for the life of me I can't remember."

Now, this case, which is really authentic, although used as magazine copy, portrays a type of worry, or fear, if you please, with which we are all familiar. We see patients repeatedly who experience this vague apprehension, a fear and dread of a mysterious, impending danger, but an emotion so indefinite that they admit readily "there isn't really anything to worry about or be afraid of."

To me, such cases suggest an endocrine disturbance—are really cases of endocrine fears, as I am using the term here—but probably not the kind of fear that can be attributed to adrenal malfunctioning. Frequently, the characteristic adrenal symptoms are lacking, and in addition there are positive symptoms that point rather definitely to disturbances in other glands, such as the pituitary.

I am fully aware, of course, that in referring symptoms to this or that specific endocrine gland

action, I am taking liberties with our present knowledge of these glands. However, there are certain clinical symptoms and therapeutic reactions which seem to confirm our present conception of the action of some of these glands; and a certain number of patients receive benefit by treatment based on this conception. We are still in the stage of modified empiricism—of "scientific guessing," if you please—but a condition that frequently is the forerunner of actual scientific deduction and application.

I wish to give briefly the history of a case which, from clinical evidence at least, seems to bear out the idea that her fear symptoms were not those of adrenal disturbance primarily, and whose condition was definitely improved by treatment directed to some of the other endocrine glands. The case is one of a highly intelligent, cultured, and educated woman, now 57 years old. Her family history is negative, except that her mother was a rather timid and nervous type of woman. Her menstrual periods began at thirteen, were rather painful, but otherwise normal. She was of medium size, but well developed. She was always sensitive, rather timid, but not unusually so. Her first break came when she was 18. It was rather a mild depression, with headaches of a boring character in the top and anterior part of the head, which came on suddenly at irregular intervals, continued for a few hours, and stopped rather abruptly. Ordinary remedies did not affect them.

Mentally, she was depressed and somewhat irritable during these attacks, whereas ordinarily she was cheerful and exceptionally placid in her mental attitude. Her chief source of worry at this time was that she would not be able to accomplish certain things, some of them trivial in character, such as getting her dresses ready for a journey, or even doing the necessary shopping to get the dresses. This condition persisted for about three months, gradually disappearing, finally leaving her in a somewhat exalted state.

Following this first attack she had repetitions at intervals of not more than two years, each attack lasting from three to six months. All were very similar to the first one, although later in life they became more severe in character. In none of them, however, was she actually insane or obliged to be confined for treatment.

She married at twenty-five, and although her marriage was a happy one, and she naturally being very affectionate, she was frigid sexually. She became pregnant three years later, and her only child, a girl, is a robustly normal and delightful woman. Her husband is the stable, affectionately devoted type that must inevitably influence for the better any morbid condition of the purely mental type—that is, if there really is any such thing.

Yet none of these things—her married life, pregnancy, or menopause, which began at forty-five and was completed without apparent change or discomfort—seemed to influence her attacks of apprehensive and delusional depression. There was this modification when she was about thirty-five, however, namely: an increase in the severity of her headaches. Frequently, the headaches would waken her at night and last for several hours. At about this time there

was an increased tendency to hairy growth on the upper lip and chin. She was always myopic, but without astigmatism, and she wore properly adjusted glasses.

Between the age of fifty and fifty-three she had six attacks, lasting an average of five months each, the attacks coming on very gradually. In one of these, the second before the last, and the first in which I ever attended her, the delusional character of her fears bordered very closely on actual insanity. Thus, she heard workmen in the basement, was fearful that they were making preparations to harm her, and found great difficulty in reasoning this idea out of her mind. Also, in her last three attacks she developed an abnormal fear of death—an emotion entirely at variance with her normal attitude.

In addition to her peculiar and abnormal fears, there were certain and pretty constant symptoms that suggested pituitary, thyroid, and perhaps ovarian disturbance, rather than much disturbance of the adrenals. At least this was the impression of Clifford Wright, after considering these symptoms. Thus, there was an easy fatigability, such as we see often in asthenic cases with low blood pressure; yet her blood pressure was always normal, from 140 to 145 systolic. She lacked the power of sustained effort, particularly during the attacks. The masculine type of hair on the face in this otherwise delicate and effeminate woman, and sexual frigidity, suggests sex gland disturbance with pituitary trouble. And, also, the boring, explosive type of headache not dependent upon any gastro-intestinal condition or eyestrain, was a hint that the difficulty might be pituitary.

In this connection the nature of her obsessions—her fears—suggested pituitary trouble of a chronic nature, if the theory is correct that misfits between the gland and its fossa result in "compulsions, obsessions, and lack of inhibition." And, anyhow, we had presented a case that gave at least a strongly suggestive picture of fears of endocrine origin. Moreover, since no other forms of treatment had proved of any particular benefit heretofore, it seemed worth while trying the experiment of attempting treatment along the lines suggested by the possible endocrine involvement. She was, therefore, given a combination of ovarian substance and thyroid by mouth, and antuitrin hypodermically.

This treatment was started just at the time that one of her attacks seemed imminent. She was showing the mental symptoms that heretofore had never failed to herald an attack, particularly the fear about her wearing apparel, which in her case was pathognomonic. She was also having the characteristic headaches daily, but at irregular intervals.

Within a week after treatment was started, her headaches had become less frequent and much less severe. She was less depressed and much less fearful. And before the end of the first month it was evident that the attack had been aborted—or, at least, she had no headaches, none of the characteristic fears, and less fatigability—was, in fact, in a normal state of health physically and mentally. A week before that time the ovarian and thyroid treatment had been stopped, but the antuitrin was continued for two more weeks, a total of six weeks.

It has now been three years since she has had a fully developed attack, by far the longest period she has ever had since her first girlhood experience. During these three years, however, she has had four periods when there was a return of the headaches and the fears, but which were dispelled almost at once by a modification of the first treatment. In these later attacks the antuitrin was pushed to a greater extent, since that seemed to act almost as a specific in controlling the headaches.

Now, I am fully aware that one case does not prove anything to any degree of certainty—the woman was approaching an age when her attacks were likely to cease anyhow. But I have observed closely similar symptoms in younger persons that also responded to this type of treatment. More important for our purpose here, however, is the fact that the fear symptoms of these cases seemed to be definitely of endocrine origin, not purely "psychic," as had been diagnosed repeatedly.

Here is another case, seen in consultation with Dr. Ernest Bryant Hoag, of quite a different general character, but in which, as in the one just cited, the dominant mental symptom was a morbid fear. This case is a young man, now twenty-three years old. He is six feet three inches tall, rather slender, but well proportioned. Until his fifteenth year he was an unusually bright and active boy and of average size for his age. Beginning with that year, however, and without any discoverable cause, he grew seven inches in eight months, and has grown very little since then. His most rapid growth during that period was one inch in three weeks. Toward the close of this period he had several fainting spells, and many other attacks of protracted weakness. His mother reports that at that time his physicians put the patient to bed for four months on account of some heart difficulty, probably myocarditis with enlargement.

His heart is normal at present, systolic blood pressure between 118 and 124, pulse rate between 90 and 100. He attempted school after recovering from his heart difficulty and, although bright in his studies, he became exhausted so easily and so profoundly that he had to give up attendance, but continued his studies at home. He has very great mechanical ingenuity, is an omnivorous reader of good literature of all kinds, and is industrious most of the time.

His muscular tone appears good; but he has periods of great weakness, which is about his only abnormal physical symptom. His chief complaint is an all-defined fear that something will happen to him if he leaves the house or goes out into crowds, as on the streets. The very thought of going out on the street brings on this weakness.

By this time I feel sure that every physician here has drawn a perfectly characteristic mental picture of this boy—the psychoneurasthenic type that any trained observer can diagnose almost at sight, and whose personality is rated by neighbors and friends somewhere between "queer fish" to "plain crazy." But here is the surprising thing: This boy is not insane, not erratic, not even "queer." He appears, talks, and acts in a perfectly normal manner, although physically he seems to have the weakness of a person convalescing from a recent illness.

As to his morbid fears, he recognizes fully that they are purely imaginary—knows that there is nothing really for him to fear. And it is not timidity in the sense of diffidence, as he mingles and talks with the guests at his home. Yet this dread of the indefinable something, which he realizes does not actually exist, is such that he cannot overcome it to the extent of venturing far from his home.

It seems to me, therefore, considering the history of this case, that there is an endocrine basis for this young man's emotional state, which, for want of a better term, we call "fear." He is under treatment at present along the lines suggested by this conception, but sufficient time has not elapsed as yet to draw any definite conclusions.

Let me say, as a closing word, that I realize fully the inadequacy and dearth of really scientific data in considering my present subject. I surely do not intend to convey the impression that there is anything final or conclusive presented here, but rather some desultory observations about an interesting subject that I hope may incite enlightening discussion.

Pacific Mutual Building.

DISCUSSION

HAROLD W. WRIGHT, M. D. (Flood Building, San Francisco)—The two cases reported by Doctor Williams are of considerable interest and arouse speculations which could lead to nothing but difference of opinion. But these two case reports do not seem to be at all convincing on the side of the author's thesis. The relation between fear and certain rather vague endocrinopathic physical signs and symptoms is not very clear in either of the reports. In the first case, particularly, one is struck with familiar psychological signposts of an early acquired phychoneurosis which in its more acute phases bordered on a manic depressive psychosis and one cannot read this report without wondering how much more might have been learned by a more complete life history of the patient; certainly her fears were specific enough to be interpreted as symbolic of some definite mental complex. In some of the more modern psychiatric hospitals where there is enthusiasm for clinical research from every point of view many cases of apparently unwarrantable fears, as well as other psychotic symptoms, have been satisfactorily explained after the recovery of the patient on purely psychological grounds and have been shown to be due to an attempt by the patient to overcome or get around difficulties in personal adaptations to the environment, the psychosis being a way out of such. For example see Strecher's report of twenty recovered patients in the American Journal of Psychiatry for April, 1924.

In the second case reported by Williams attention is called to the fact that the fear of going out on the street succeeded a period in which the patient had had fainting attacks which were said to be due to an actual cardiac deficiency. May the subsequent fear not have been more likely due to suggestion instilled at that time?

As to the relation of emotions, such as fear to glandular activities, much work has been done by Crile, Cannon and others and their reports tend to confirm the belief that glandular dysfunctions are the result of fear and not vice versa. While it is true that we see emotional effects in one direction or the other in cases of hyperthyroidism or myxoedema, in hypo-pituitarism also, it is also true that we see many patients with such glandular disorders who are not emotionally affected thereby to any unusual degree. *In any neuropsychiatric disturbance there may exist several coincidental conditions and we need to be ever mindful of giving every factor consideration, but at the same time careful to estimate the personality as a whole.*

F. S. MARNELL, M. D. (Stockton State Hospital, Stockton)—The two interesting cases presented by Doctor Williams are of a nature to arouse considerable discussion. Both appear to be of the neurotic type of mental leaners, who always find some excuse to develop their

psychotic tendency. Freud explains them one way; Cotton gave them a physical base, now the trend is toward gland defects. *My experience with gland therapy leads me to believe, except in a few well recognized types, that the mind controls the glands more than the glands control the mind.* Most types of neurosis react well to any method of treatment that builds them up physically and leads their minds away from themselves. The woman acts like a neurotic of the self-protective class, who, when relieved of her menstrual and sexual stress by the menopause, reacted to the necessary mental suggestion accompanying her treatment. I believe the doctor gives too much credit to the medicine and not enough to his skillful handling of her mental processes.

The young man has a definite phobia with an explainable cause: The fear developed during his heart trouble led to a fear of being away from home and those who might secure aid for him in another attack.

In trying to explain the mechanism of the milder type of mental disturbance we are more inclined to look for something mysterious, than to give sufficient value to our ability to help the patient to reason correctly. A placebo is a wonderful remedy if we believe in it and transfer that belief to the patient.

H. LISSER, M. D. (Fitzhugh Building, San Francisco)—Whether one is inclined to agree or disagree with Doctor Williams' theory of the endocrine origin of fears, I gladly admit a genuine pleasure from the perusal of his paper. Not all of us possess a similar gift for expressing strange and novel thoughts in as pleasing and graceful a manner. Moreover he has disarmed some of the criticism that is the invariable lot of the pioneer, by modestly and frankly admitting that adequate scientific proof of his contention is not yet available, nor probably will be for a considerable time, if ever. However, it would seem to me unwise to dismiss his theory abruptly, quite as much so as it would be to gulp it down eagerly. In other words, the attitude of Mendel appeals to me—that of "the prepared open mind," which, in the present state of our knowledge, forbids either the rejection or acceptance of the author's theory. *A cynical intolerance is no more constructive than an ignorant credulity, and we have had too much of both in endocrinology.*

For my part, I confess to finding Doctor Williams' ideas rather intriguing, perhaps because I could duplicate his experiences many times, but have never dared to present them formally, perhaps for fear of ridicule. The rather magical relief of emotional disturbances coincidentally with the improvement of an endocrine disorder makes the conclusion somewhat tempting that the one is related to the other. It is, indeed, a difficult matter to prove, except in outspoken cases. No one will contest that the melancholia, emotional lethargy and mental torpor associated with myxedema may be relieved by thyroid extract, and that the emotional agitation, phobias and even mania of exophthalmic goiter may disappear through Lugol's solution and thyroidectomy. But the milder forms of ductless gland disease are not readily diagnosed with assurance and the same uncertainty applies to some of the disturbances in the realm of psychiatry. At least Doctor Williams' approach to their solution is more pleasing than some of the psychiatric dissections that expose an emotional interior as revolting as some of the findings at autopsy.

CLIFFORD A. WRIGHT, M. D. (2417 South Hope Street, Los Angeles)—This paper of Doctor Williams, as well as several others he has written on this subject, are of special interest to me, for I have had the opportunity of seeing some of his patients. He has been one of the first to attach due importance to the definite relationship between neuro-psychiatry and the study of the endocrines. His deductions are surely no less plausible than many we are expected to believe in regard to mental complexes, personal adaptations, etc.

The ground has been pretty thoroughly covered, but to reiterate—we are all well acquainted with certain fears and other nervous phenomena in some of the endocrine types of individuals. Like Doctor Lissier, we have not reported some of these cases, "perhaps for fear of ridicule." We have all observed the morbid, depressed, mental reactions of the hypothyroid and the excitable, even manic, state of mind of many patients with

exophthalmic goiter, and recognize them when we see them. No less certain, however, are many of the mental reactions that we see in pituitary types, and one of the most frequent conditions at the menopause is depression with uncertain phobias or fears. In some of these cases the disappearance of nervous phenomena can only be accounted for by the administration of glandular products—and it is no more unusual to see these patients greatly benefited than it is to see other normal reactions, such as we see in the effeminate boy with Froelich's syndrome—who will not take his own part and who does not have the proper attitude toward his fellow students—completely changed by the proper pituitary therapy. One case which I had under treatment—a married woman—would always (about ten days after her period) be wakened out of a sound sleep at night with a terrible spell of fear; she would rise from her bed and rush from her room into the open, temporarily losing control of herself. This was diagnosed under the head of so-called "Epileptic Equivalent," and while not relieved by the use of luminal, was relieved by luminal and ovarian products.

Briefly, I might call attention to three patients—two pituitary and one a combination of thyroid and gonad insufficiency. One of the pituitary patients was afraid that he was going insane and had carefully studied the matter out. Another had indefinite fears, being afraid to ride in a street car, or an elevator, or being where there were crowds of people. Both of these patients were relieved by treatment. The other, a successful wholesale man, was afraid to drive his car alone; to play golf. He would frequently go to the door of a prospective customer and be compelled to turn around and leave. He had dry skin, poor nails, constipation, and other symptoms of hypothyroidism and a definite history of loss of sexual activity.

It seems that this, and other works by Doctor Williams, are steps in the right direction.

LIPIODOL IN THE DIAGNOSIS OF CHEST DISEASE

By HOWARD E. RUGGLES, M. D., and LLOYD BRYAN, M. D.,
San Francisco

DISCUSSION by *Clain F. Gelston, San Francisco, and Harold Brunn, San Francisco.*

THE value of lipiodol in the diagnosis of inflammatory processes in the lung was first demonstrated by Sergent and Cottenot. They found that intratracheal injections of this fluid were harmless and gave beautiful casts of the bronchial tree. Other workers have extended the application of this procedure to a variety of chest conditions in adults and children.

There are two methods of injection. In one, a large curved trocar is introduced through the cricothyroid membrane under local anesthesia and the oil injected through it into the trachea. The second consists of cocainization of the larynx and the introduction of the solution into the trachea under direct observation. In our experience, the latter is the more satisfactory method. It is quickly accomplished, can be done in the office, the average patient is perfectly comfortable, there is little tendency to cough and the material is easily retained for a length of time, permitting adequate observation in several positions. In one instance, the introduction of 30 cc. of the oil was watched under the fluoroscope. With the patient upright, the bronchi of both lower lobes were completely filled before coughing began, and afterward he was watched in prone, supine and lateral positions, in an effort to outline a possible

cavity in an upper lobe, without discomfort or marked cough reflex.

Laryngologists prefer to inject patients in the upright position, with the result that only the lower bronchi are visualized. The material is heavy, as it consists of 40 per cent iodine in a vegetable oil and so drops directly into the most dependent portions of the lung. Most bronchiectatic cavities and bronchial dilatations occur at the bases and are, therefore, easily outlined. Lesions in the upper lobes are filled with difficulty. If possible the patient should be so placed that the suspected area is below the level of the trachea and the injection made slowly in this position. When only small amounts of the oil are used (under 30 cc.) in a single, continuous injection, one portion of a lobe may receive it all and when once placed it does not tend to spread throughout adjacent areas, but is gradually coughed up through the bronchi. Multiple injections and the use of larger quantities tend to equalize its distribution. Thirty to forty cubic centimeters are necessary for adequate visualization in adults. It is a good plan to turn the patient from side to side, and stand him upon his head over a chair or bed in an effort to drain the lesion before attempting to fill it.

In the normal individual the fluid gives a thin coating to the larger bronchi, and in filling the smaller ones produces a diffuse, flocculent shadow which is characteristic. Dilated bronchi are obvious, and the multiple grape-like masses in small bronchiectatic cavities are easily recognized. This is particularly valuable in lesions of the left base behind the heart and diaphragm, which are rarely seen in routine chest films.

The iodine remains in the cavities for long periods. Considerable amounts have been observed several months after injection, and it is still a matter of earnest discussion as to how much direct therapeutic effect may result from this iodization. No untoward effects have been noted following any of the injections. It might be supposed that persons susceptible to iodine would develop reactions to the considerable amounts some of them swallow in the process of clearing their bronchial tracts, but so far none have been reported.

The supply of the oil has been exhausted, due to a government ban upon its importation, apparently upon the ground that it is misbranded. Further work will depend upon renewed importations or the development of a similar product by an American firm.

Although Sergent warns against the injection of tuberculous patients because of the chance of producing congestion and reactions, it would seem that careful trials of the method in selected cases might lead to the perfection of a technic which would be safe and perhaps of value in diagnosis and therapy.

135 Stockton street.

DISCUSSION

CLAIN F. GELSTON, M. D. (380 Post Street, San Francisco)—I have naturally been much interested in the use of iodinated oil in investigating the bronchial tree in children since my work with Armand-Delille in Paris, who had applied the methods of Sergent and Cottenot. The opportunities offered seem to me not to be confined entirely to those cases of gross pathology, although, naturally, these are the most spectacular, and, of course, of

a great deal of value from the standpoint of lung surgery.

Should it ever be possible, however, to procure the necessary subjects, a most valuable contribution would be given to the study of the bronchial tree in the low grade chronic respiratory infections of both children and adults. In many cases these are, unquestionably, to my mind, accompanied by a certain degree of bronchiectasis, probably of the cylindrical variety. Should this investigation be possible, the work of Tallermann of St. Louis on the etiological relationship of lung fibrosis to bronchiectasis would be proven.

In the hands of the French observers, the route through the crico-thyroid membrane was found more feasible in children than the transglottic.

We are all pleased to learn recently that a substitute for lipiodol, and one equally satisfactory, is now on the market, so that these extremely important investigatory methods need not be given up.

HAROLD BRUNN, M.D. (384 Post Street, San Francisco)—I have been very much interested in the use of lipiodol in chest conditions from the time that Doctor Gelston returned from Europe with this method from the clinic of Arnaud-Delille.

As soon as we could obtain the lipiodol we immediately began using it in our chest cases for diagnostic purposes. At first we used the cannula method. This method is done as follows: A point over the crico-thyroid membrane is chosen and cocaineized with 1 per cent novocain. A small curved cannula made for the purpose is passed through the crico-thyroid membrane into the trachea. This can be done quite painlessly. The trocar is then removed and about 5 cc. of 1 per cent of novocain is slowly injected into the trachea in order to counteract irritation. Following this, the lipiodol, warmed so that it will run more freely, is very slowly injected into the trachea.

It is well to lay the patient on the side which it is desired to inject, although both sides can be done at the same sitting very frequently. We soon found that at first we used too small an amount of lipiodol, and latterly it has been our habit to use about 10 cc. first, then to wheel the patient into the x-ray room, having everything ready to take a picture, and inject 20 cc. more, taking the picture immediately thereafter before the patient begins to cough. Some patients are much more easily controlled in this than others. In some it is quite difficult to prevent coughing at the crucial moment. This usually spreads the lipiodol as a flocculi throughout the bronchi.

Lately, through the assistance of Herbert Cohn at the San Francisco Hospital and Carson Martin at the University of California Hospital, we have been able to get wonderful pictures by having the substance dropped through the larynx after complete cocaineization. We have found the greatest use of the method in our work in the diagnosis of bronchiectasis.

Before the injection it is well to have the patient empty his lungs by turning him upside down. The same holds good of lung abscesses but these are seldom visualized with the lipiodol. For some reason it seems quite difficult to get the lipiodol to enter a lung abscess cavity. We have had several cases of bronchiectasis on the left side in which the x-ray, before injection, appeared quite normal, but which came out very beautifully after the injection, showing fingerlike cavities behind the heart. In none of the cases that we have used it has there been any symptoms of iodism or any untoward result. In one of my cases in which I performed a lobectomy of the lower lobe for bronchiectasis the lipiodol still remains in the other part of the lung, now a period of six months.

I consider the method practically harmless and a great help in the diagnosis of certain lung conditions.

Students Work for Education—Of the 10,000 students who are in attendance at the University of California this year, 7500 must aid themselves financially by securing work of some sort, according to Mrs. Leslie W. Ganyard, manager of the Alumni Bureau of Occupations, who says her organization expects to be called upon by 1500 or 2000 of these students for assistance in securing work to defray at least a part of their college expenses.

THE RELATIONSHIP OF METABOLIC TOXINS TO DERMATOSES

By O. V. SCHROETER, M. D., Los Angeles

As dermatologists, we have seemed to be much more concerned with skin pictures, with variations of skin pictures and with dermatologic symptomatology and pathology, than with the mysterious perpetrators of cutaneous injury.

We must seek out the site of toxin formation, the conditions under which toxins are formed, their intimate character, and their effect at the site of deposition.

There is a mutual interdependence of microbic nutrition and potential microbic action. The food of the host is an important factor both in controlling the kinds of bacteria that multiply in the intestinal canal and in determining the nature of the products these bacteria form while they are resident therein.

DISCUSSION by Samuel Ayres, Los Angeles; Anstruther Davidson, Los Angeles; Harry E. Alderson, San Francisco.

IN A RECENT paper I sketched skeletally the pathology of toxic dermatoses. I endeavored to show therein that there are different degrees of toxic action which are expressed in different degrees of pathology on the skin surface, that this toxic action finds its expression through the capillaries, and I indicated that the etiology of this condition was toxin carried in the blood stream.

It has been my effort here to seek what light we now have on the metabolic origin of these toxins, their character, their insignificance or importance with relation to the causation of the urticarias, erythemas, and purpuras. It is surprising that so little has been done in the way of clinical research into the etiology of these diseases of the skin. As dermatologists, we have seemed to be much more concerned with skin pictures, with variations of skin pictures, and with dermatologic symptomatology and pathology rather than with the mysterious perpetrators of cutaneous injury.

The study of such a problem concerns branches of the broad field of medicine rather foreign to dermatology itself. We must seek out the site of toxin formation, the conditions under which toxins are formed, their intimate character, and their effect at the site of deposition. In all this we have isolated facts, and we have hypotheses; from them we must gather such knowledge as we can, with a view to a better understanding and care of the toxic dermatoses.

Of course, I am here assuming only the area of metabolic activity in the etiology. I feel sure my assumption is well founded. The first and most logical place of introduction of intracorporeal toxins is the alimentary tract, and years before the day of bacteriology proper, scientists studied the question of alimentary toxemia. Outstanding among these is Bouchard, who made numerous experiments, in an endeavor to accurately incriminate secretions and excretions and faulty metabolism in the production of certain symptom complexes. He might be aptly called the "father of auto-intoxication." Conditions in the bowel are admittedly favorable for the production of decomposition products and for the production of pathological biological chemic substances. We might conceive the production of these to be based on faulty digestion of foods or upon the action of certain elements of the intestinal flora upon

foods; the latter outweighs the former greatly from a pathological point of view. As we study the various phases of these processes of enteric bacterial life and faulty metabolism, certain definite biological and chemical facts emerge.

Arthur Kendall has studied the biochemistry of the microbes themselves. It is analogous to that of living matter anywhere. Protein is the substance to which all else is added in life and upon and within which the vital story of life plays itself. Nucleoproteins are chemically prominent in the bacterial substance. The specific protein of all living things is a multitudinous combination of amino acids, of which some twenty are now known. These are acids in which one H atom is replaced by the radical NH_2 . With the exception of nitrogen-fixing microbes and nitrifying organisms, the bacteria of the bowel (as elsewhere) require, or utilize more readily, amino N for their structural needs. Nitrogen must be present for their biologic requirements; N, in fact, is the very cornerstone of life. A series of H condensations in which amino acids or complexes thereof, together with carbon, hydrogen, oxygen, and inorganic salts are woven into protoplasm. From this living material must the toxins of organic life be produced. For microbial catabolism, there are two great energy-containing substances available in the food of the host—carbohydrates and proteids. There is oxidizable C contained in each, but the substances resulting from the intracellular vital combustion of this carbon may be widely different. The same organism may produce harmful or harmless substances as it uses the carbon of carbohydrate or of proteid (peptone). Again, different bacteria produce different toxins on the same media; for instance, the diphtheria bacillus on peptone and meat extractives forms the diphtheria toxin, and the bacillus coli produces indol thereon. If ordinary glucose is added to the media before inoculation, the diphtheria bacillus produces lactic acid and not the toxin and in place of the indol, the colon bacillus produces acidic products, mostly lactic acid. This without any structural change in the microbes.

There is a mutual interdependence of microbial nutrition and potential microbial action. The food of the host is an important factor both in controlling the kinds of bacteria that multiply in the intestinal canal and in determining the nature of the products these bacteria form while they are resident therein. Undesirable microbial activity may be of at least two types:

1. Causing harmful protein derivatives, as in putrefaction.
2. Causing irritant acidic substances, as in fermentation, such as butyric, lactic and acetic acids in unusual quantities. As to the difference in putrefaction and fermentation, we will leave this matter as irrelevant here.

Thus, as curative measures, dietary regulation and the deliberate introduction of bacteria inimical to the growth of harmful types have been introduced.

The study of the chemistry of bacterial metabolism—true of cellular metabolism in general—is in its formative state; it must await the development of new chemical methods. Complete analyses of pro-

tein materials always leave a very wide margin of unknown amino acids.

We have considered the products of the growth of intestinal bacteria in a general way. Before taking up the next step, the ingesta, as a source of toxin, bound up with this bacterial growth, permit a few words with reference to the bile. My experience would give decided importance to the deleterious effects on the skin of bile retention. I vividly recall an elderly patient who came with a cutaneous disturbance, much resembling a chronic scabies—skin scars were very numerous from seven years of scratching, and the skin showed many papules and scratch-marks. About the time I had uncovered the hepatic area as guilty, the patient took to her bed with acute cholecystitis, whereupon the skin cleared as if by magic and the itching ceased. Pruritus is, often enough, the only manifestation of a low-grade toxemia, transitory or persistent. Bouchard showed that bile itself is about six times as toxic as urine, but that, while at first the cholates salts were suspected, it was found that the biliary coloring matter was the important toxic agent and that the intoxication arose from the setting free of toxic substances which entered into the composition of the cellular elements. It should not be forgotten, however, that we have also a deficient splitting of the fats due to absence of bile in the duodenum. This causes an intensification, it has been supposed, of the putrefaction in the large bowel, and even already in the small intestine. Pancreatic juice has been shown by Müller to have little effect on the digestion and absorption of fats. What is really important, however, in this bile deficiency is the fact that the fats, not being properly split, digested, expose the bowel to the effect and the system thus, to the absorption of acrid butyric and other fatty acids. And it has been contended by good authority that it is this, and not putrefaction proper, that particularly gives the offensive odor to the stools in such cases.

The intestinal secretion is an alkaline liquid which has a fermentative effect on carbohydrates and aids the pancreatic secretion in converting starches into sugar. Disaccharides are converted into absorbable monosaccharids. It has been shown by experiment that digestion can be carried on in the bowel in the absence of most of all of the secretions and bile. Bacteria supply the deficiency. The direct products of abnormal carbohydrate fermentation are acetic, formic, propionic, butyric, valerianic, lactic, and succinic acids. The presence of such or their products in the blood conceivably act as irritant capillary poisons.

It is, however, the proteids that play the important role in the metabolic toxemia of the toxic dermatoses. The small intestine, and particularly the large intestine, are capable of passing the products of putrefaction into the blood. There has been much controversy, however, since the day of Bouchard as to how harmful these may be and as to what disposition is actually made of them by the tissues. As stated, in considering bacillary metabolism, so, of course, is it true that the amino acids are the integral feature of proteid food as of protoplasmic chemistry. The waste products produced by the combustion of the proteids are much more difficult to dispose of than those of the sugars,

starches, and fats. And we are now particularly concerned with the metabolic protein toxin, whether of bacillary or digestive origin and its effect, than any classification of its method of production. Perverted nutrition may conceivably lead to the development of new substances which may be toxic. Bouchard, in 1882, showed the presence in feces of the alkaloids of putrefaction, and Brieger, in 1883, showed that such alkaloids may be formed during the act of peptonization. It has been shown that an aqueous extract of putrid matter is very toxic, and that of fecal matter slightly so; the alcoholic extract of putrid matter, however, is not very toxic, but that of fecal matter is decidedly so. The amins are formed from ammonia by replacing H with an alcohol radicle, which might explain the toxicity of alcoholic fecal extract. Since Bouchard, many experiments have been done in an endeavor to clarify the question of auto-intoxication. While putrefaction plays a part in the toxicity of feces, it is less than often supposed. We can conceive it as an indisputable fact that certain toxins can be and are developed in the intestinal tract, that they are a result of fermentative and putrefactive processes on carbohydrates and proteins, and that, from a toxic standpoint, the latter are the most important. What these toxins are, we have indicated. Since the products skatol and indol have been proven of questionable importance in auto-intoxication, renewed interest has followed the demonstration that certain of the amino acids derived from the breaking down of proteins are able to furnish exceedingly toxic amins by the removal of one CO_2 complex. In this way, from tyrosin, a crystallizable amino acid, there is produced tyramin; from tryptophan, indolethylamin and from histidin, a decomposition product of the protamin of sturgeon testes, histamin, the latter all very poisonous. The chronic injection of these has been shown by Harvey to produce serious symptoms. Some of these products have been formed by the activity of bacteria derived from the feces, and some have been found under special circumstances in the intestines.

Facing, then, the question of metabolic toxemia squarely, conceding here and denying there the result of experiment or clinical incrimination of certain discoverable entities, and admitting a certain proven, or, as yet undeniable residue, these complex products, the first-born of a new and more wonderful chemistry admittedly, then, swept into the vital circulation, what is the last link in the chain of phenomena that inscribes on the skin the wheal of urticaria, the rosy patch of toxic erythema, the varied picture of eryth. multiforme or the alarming extravasations of the purpuras?

I have reiteratingly mentioned the capillary as the end-station of toxemia and the basis of dermic pathology of this type. H. H. Dale of London, in an admirable article, states that the capillaries, with their intimate relation to and constant chemical interchange with the tissues, must be especially exposed to any influence on the vascular tonus which the products of metabolism may exert. CO_2 , credited with a potent vaso-dilator action, has not been demonstrated to have a pronounced effect on capillary tonus. Taking histamin, a poisonous product of protein decomposition just mentioned, Dale has

shown that it has a potent toxic action on the capillary in very great dilution, causing loss of tonus and exudation. He has further shown that this toxic effect on the capillary has been nullified or much mitigated if the animal is previously given an injection of adrenalin. In short, it has been found that histamin, by experiment too, and adrenalin are antagonistic to each other. Pituitrin had a similar action.

So here again we are dragged back to the glorious contemplation of the combat and defense between the poison of organic life and the forces of the living organism contained in the blood. Is it not a fair conclusion, then, when we see adrenalin, the vital extract of a living organ, injected into the circulation, nullifying the effect of a poison derived from the decomposition of organic vital matter, is it not, I say, a fair conclusion to maintain that an overdose of a proteid amino acid or amin in the circulation, or the want of proper hormone in the circulating cases, permits the phenomena of the toxic dermatoses by allowing the effect of such a toxin on the capillary wall? And is it not a further fair conclusion that our treatment of these cases should be in the administration of proper dosage of these hormones as well as in combating the source of the condition in the body? The logic of this is already strikingly shown in the beneficial effect of adrenalin in cases of urticaria.

Plain muscle contraction and loss of capillary tonus occurs as the central feature in the action of a large class of protein poisons. These poisons must have their usual origin in the alimentary tract. In addition, there are possible acidic, irritative poisons, the product of fermentation. The effect of the protein poisons has been shown to be effectively combated by certain hormones, particularly adrenalin and pituitrin, which are derived from glands of internal secretion and, therefore, normally supplied the circulation in health. Insufficient amount of hormone, or overdose of protein or acidic toxin not destroyed by the beneficent action of the liver, results in the deposition of the toxin in the cutaneous termini of the circulation, the capillaries, producing the lesions of the toxic dermatoses.

1002 Union Bank Building.

DISCUSSION

SAMUEL AYRES, JR., M. D. (Westlake Professional Building, Los Angeles)—Doctor Schroeter deserves credit for directing the attention of dermatologists to some of the recent contributions of biochemistry. Of course, we all know perfectly well that we should keep our minds focused on the etiological factors of skin disorders, but it is so easy to settle down into the false security of complicated nomenclature and to feel that we have performed our full duty when we have made a careful diagnosis.

Pronouncing a diagnosis on any one of the numerous members of the toxic dermatosis group is only the most elementary step in handling the individual patient. The cause, even though often undeterminable, should be searched for diligently and every new advance in biochemistry or internal medicine which has any bearing on the subject should be enlisted. Modern medicine no longer tolerates the mere treating of symptoms and most of the toxic dermatoses are nothing but cutaneous symptoms. Symptoms must be relieved as an incidental procedure, but the main attack should be aimed at the underlying derangement, to restore normal function and to prevent recurrences.

A recent valuable contribution which Schroeter did

not mention was the work of Alvarez and confirmed by Donaldson, who showed that all the symptoms of auto-intoxication, such as headache, delayed reaction time to touch, sight and hearing, increased basal metabolism, increased blood sugar, increased neuromuscular fatigue, elevated blood pressure, may all be produced by mechanical distention of the lower bowel, entirely independently of toxic absorption. Packing the rectum with cotton pledgets in a group of individuals experimentally substantiated the hypothesis. This does not prove that the absorption of the toxic products of putrefaction or fermentation may not also lead to derangements of function. Presumably the distention of the bowel operates through the involuntary nervous system in producing its effects.

ANSTRUTHER DAVIDSON, M. D. (419 South Alvarado Street, Los Angeles)—The author's desire to elucidate the influence of metabolic disturbances on the skin is rather timely, as the tendency at present is to ascribe the majority of the cases of dermatitis to local or extraneous causes.

Doctor Schroeter has, I think, unduly stressed protein poison as a causative factor. While affections like urticaria are the local expression of an acute anaphylaxis as T. B. and syphilis are examples of chronic anaphylaxis due to a protein poison, many of the affections such as eczema and acne are probably chemical, rather than protein in origin. The rash that follows acetanilid and other chemicals is caused by the chemical forming with the colloids insoluble products. In eczema and acne the chemical products resulting from errors in carbohydrate metabolism are probably the chief factors.

There is not at present sufficient evidence to convict the bacteria of the intestines of playing an important part in the causation of skin diseases. The presence or absence of certain forms is so manifestly dependent on "soil conditions" that their influence can only be of secondary importance.

HARRY E. ALDERSON, M. D. (240 Stockton Street, San Francisco)—From a purely clinical standpoint it has been recognized for years that various dermatoses, particularly those mentioned by Schroeter, are due to so-called toxins. These diseases have been treated more or less empirically, but with the idea of eliminating those mysterious toxins, with considerable success. Biological chemistry is now clarifying the situation and placing therapy in many of these troubles on a more scientific basis.

The relationship of impaired liver functions to cutaneous disturbances has been recognized for years. Intense itching, associated with even very slight icterus, is a common occurrence. Similar phenomena in connection with abdominal malignancy are likewise well known. We appear to be on the threshold of discoveries that may explain more definitely the mechanism or some of these processes. As Schroeter states, there are many chemical products resulting from the breaking down of foods or bacteria which are capable of producing cutaneous symptoms. These symptoms may be manifested in the form of a frank eruption, or the skin may show increased vulnerability. There occur alleged "occupational dermatoses" which are due principally to these causes. Altered functions of various internal organs may be responsible for the breaking down of proteins and formation of toxins. Disturbed thyroid activities, and functional disturbances of other ductless glands in many cases constitute the main etiological factors. And so it may be said that the dermatologist, to be really successful, must be, at all times, an internist.

DOCTOR SCHROETER (closing)—I want to emphasize that toxic dermatoses, of course, must, in their last analysis, be the result of toxins and toxins are chemical, whether bacterially produced in the throat, as in scarlet fever, in the bowels, or introduced by ingestion like acetanilid. All toxic dermatoses have characteristics which stamp them as such to every dermatologist, and whether produced by drugs or an undetected internal factor, they all have a striking resemblance in basic character. While the group of toxic dermatoses have, of course, been long recognized as a group of skin diseases, yet the specific production and modus operandi of the toxins have been hitherto, and are still, dark in many particulars. It has been my poor effort here to submit something more definite as to these matters and to incite more interest in the chemical and laboratory study of these toxins and their action.

MASTOID SURGERY *

By CULLEN F. WELTY, M. D., San Francisco

I believe that indications for and the type of operation for chronic suppuration may be selected as clearly in the near future as we today differentiate in findings and methods between the acute and the radical operations.

A patient who has had the radical mastoid operation needs attention three or four times a year as long as he lives. Without such attention, trouble will follow and, if neglected too long, reoperation may be necessary.

DISCUSSION by John LaRue Robinson, Reno, Nevada; D. H. Townbridge, Fresno; J. W. Green, Vallejo.

BECAUSE of the many different operative procedures devised for acute and chronic suppuration of the mastoid process, it might be in keeping to tell you what I have been doing for some ten years past. Various operations have been tried; different dressings, as well as the technique of the operations.

Probably the individual surgeon will have better success with his own technique. There are many ways in which failure can come. So when I go into detail, it is absolutely necessary for you to carry out in detail everything that I may say. A part cannot be selected and another discarded, for I am going to make some very striking statements and, in a way, hold myself responsible for your performance, provided you fulfil the instructions.

To make this a little more striking, I am going to say that I have not lost a patient following an acute mastoid operation during a period of fifteen years, either in my city and county hospital service or among my own private patients. Many times my patients were not selected by myself, but were forced upon me because of the position I occupied.

In an acute otitis with temperature, tenderness and increased white blood count following an incision of the drum membrane, with increasing difficulties and a decided bulging of the posterior superior wall (the most reliable symptom of all), something must be done to relieve the pent-up pus. The interval that may be covered by such a process of reasoning is from three days to two weeks.

If at the end of two weeks or later there is a pulsation of the pus through the perforation, without any other symptom, the surgeon may be perfectly sure that he will find pus in the mastoid. If at the end of two weeks, or later, there is bulging of the posterior superior wall, without any other symptoms whatsoever, it is certain that the mastoid is full of pus. Facial paralysis is always an indication for immediate operation during the course of an acute otitis, and there are many other conditions quite familiar to all ear surgeons that should be considered to be clear indications for operative interference.

A condition that stands out alone in diagnostic value and was called attention to by me fifteen years ago, is that an acute otitis should not be allowed to exist for a period of more than six weeks without operation because the hearing is so likely to be impaired, or a permanent perforation remain that will be an annoyance for the balance of the individual's life. I consider it criticizable negligence to allow an acute otitis to become chronic, and I be-

*Read at the Annual Session of the Nevada Medical Association, Reno, September, 1924.

lieve the time will come when medical authorities will so consider it. In hesitating about doing an unnecessary operation, it is well for the surgeon to bear in mind that a good surgeon will not damage a healthy ear, but by delay every now and then a patient will be lost.

The indications for the acute mastoid operation are based largely upon clinical symptoms and history, coupled with a few definite findings. If a patient suffering from an acute mastoiditis does not improve steadily from day to day, surgical interference is positively indicated. This holds good any time, from the third day to the fourteenth day of the disease; after that the patient belongs in another class to be judged in another way. My technique for the acute mastoid operation contemplates the removal of every individual cell. Every cell that can be found with an instrument I call a searcher (not as large as the end of a pin) is removed until hard bone is encountered everywhere. The attic is opened freely and all cancellous bone removed from this area.

When every individual cell has been removed with a hand burr, chisel or other instrument, the cavity is packed with plain gauze. The ear is packed with plain gauze; a few stitches are taken at the angle and the head bandaged. An ice-cap is applied constantly to the operated ear for twenty-four hours and the wound is dressed in four days, provided everything remains satisfactory. Should the patient have fever following operation, such as I have described, one of three conditions are present in order of frequency—remaining cells carrying infection, beginning of an acute infectious disease, or cerebral complication, the most frequent of which is thrombosis of the lateral sinus.

Under favorable conditions it will be found that the discharge from the ear has ceased entirely at the first dressing. Loose packing is then reinserted in the ear; gauze is removed from the wound and loose gauze is inserted; gauze fluff is added and bandage again applied for two days, when the second dressing is done. The wound should continue to be dressed every second day, so long as it remains free from pus. As soon as pus appears it is dressed daily until it is again free from pus. In the event of oversized granulations developing, they are removed with a small curret, or cut down with nitrate of silver fused upon a probe and the silver neutralized with salt solution. If granulations fail to develop, a thick pack of iodoform gauze is inserted; changed daily until the granulations are normal, and then the part dressed with plain gauze. During the past ten years, under such treatment I have never found it necessary to reoperate a single, individual case in a series of about four hundred cases. (As this paper is about to go to print, I have had to reoperate one of my acute cases. The detailed history of this case would be too complicated to go into at this particular time.)

The radical mastoid operation I believe has come to stay. I do not see how it can be improved upon. However, I do not believe that every case of chronic suppuration of the middle ear (chronic after one year), especially in children, should have the radical mastoid operation.

Some ten years ago I did the acute mastoid opera-

tion in a series of twelve cases with chronic suppuration of the middle ear. Many cases were excluded. The only cases that were accepted were free from vertigo, tinnitus, headache, cholesteatoma, facial paralysis, and free from disease of the promontory or attic wall.

In this series all recovered but one, and it was found at the second operation that he had cholesteatoma. This must have been overlooked at my examination or at operation, or it was so small at the time that it was not seen. Ever since that time I have been using the same reasoning in deciding the kind of operative procedure in given cases for children (up to 12 years of age).

Certain operations for chronic suppuration of the middle ear impress the surgeon by their results, and I am not so sure but what in carefully selected cases, such as I have spoken of before in children, some adults might be successfully treated by surgery. I believe that indications for and the type of operation for chronic suppuration may be selected as clearly in the near future as we today differentiate in findings and methods between the acute and the radical operations.

When we differentiate between the various operative measures for the cure of chronic suppuration of the middle ear, some few lesions stand out alone and cannot be cured by any other procedure than the radical mastoid operation. These include cholesteatoma, facial paralysis, caries of the promontory, caries of the attic wall inside or outside, vertigo or any cerebral or cerebellar symptoms. The operation must remove the lesion; nothing short of that will suffice. This, I believe, will become the accepted condition governing operative procedures for chronic suppuration of the middle ear. Furthermore, I expect to see the gradual disappearance of chronic suppuration of the middle ear by the improvements that have been brought about in the preliminary care of acute otitis and mastoiditis. I am not going to enter into a discussion of the indications for the radical mastoid operation, because we have specific indications established by most of the textbooks of otology. The only cases warranting disagreement are those in which a specific indication does not exist. I refer to the cases that have a chronic discharge from the ear and do not have other symptoms or demonstrable lesions. Some of these patients are cured by treatment, but they do not remain cured. Probably 5 per cent of the cases cured without operation remain well. So, after trying for a short time to bring about a successful issue, I am ready to recommend the radical mastoid operation, or one of the surgical procedures for the cure of chronic suppuration. For these patients (who comprise the great majority) have been very satisfactory in every way. Among this class of patients I have never had one regret the operation. I am more enthusiastic about the radical mastoid operation than ever before.

I do not believe I have had more than four or six patients who were not cured. However, a patient who has had the radical mastoid operation needs attention three or four times a year as long as he lives. Without such attention trouble will follow, and if neglected too long reoperation may be necessary.

By the use of the graft described by me some ten years ago, the whole of the after treatment is very much simplified; the hearing is better and the patients make a much quicker recovery. It may be possible that the resistance to debris is not so good. However, it is a question. I have lost four patients of approximately six hundred operated upon—one from brain abscess and three from purulent meningitis.

210 Post Street.

DISCUSSION

JOHN LARUE ROBINSON, M. D. (Reno, Nevada)—Doctor Welty was made an honorary member of this Society in 1904; I think the first honorary member of the Society. He has contributed much to our enjoyment and enlightenment during the past twenty years, and we always appreciate his contributions.

The doctor's paper just read, I think, expresses the advanced thought of today upon the subject. The one point, however, I would like to touch upon is the method of dressing. For several years I have used a perforated rubber drainage tube in lieu of gauze, because: It seems to me more humane; my cases have dried in much shorter time; we have less scarring.

Recently, I had a paralysis of the right rectus following an acute mastoid operation, which gave me considerable concern. I sought, in vain, help from every angle possible for an explanation. In relating the circumstance to Doctor Welty, he immediately suggested that it might be "Gradinigo's Syndrome," which was reported in *Laryngoscopy*, 1924. I now believe that my patient belonged in that classification.

Welty speaks positively concerning the proper procedure in chronic suppuration of the middle ear, and I am inclined to believe that most of us come to the same conclusion after years of experience.

D. H. TROWBRIDGE, M. D. (Fresno)—I wish to congratulate Doctor Welty on a very complete and interesting paper in which I agree almost entirely. He has expressed my ideas almost exactly as regards the treatment of mastoid infections, and I agree heartily with him on his line of treatment. Particularly, I agree with him in not neglecting to operate upon an ear that has been discharging for four or five weeks, which, having been properly treated, refuses to heal at the end of that time. I think it was Dench who claimed that any ear that discharged for two weeks had involvement of the mastoid. I would not say that every ear in which the discharge does not cease in four or five weeks would not eventually get well, but I do feel that any patient with an ear that has discharged for four or five weeks is much safer with a simple mastoid operation than to have it left in a discharging condition. Not only safer as a matter of life and death, but much more likely to have good hearing than if allowed to discharge for several weeks longer, even if at the end of that period the ear has become perfectly dry, as it will also be more or less permanently deaf.

There is very little danger from a simple mastoid operation if done by a skillful surgeon. On the other hand there is certainly much danger in waiting indefinitely since almost every year aurists of large experience observe several cases of meningitis which rapidly succumb. These fatalities could be avoided, as Welty points out, by early operation.

In my experience of about eight hundred mastoid operations, I cannot recall any bad results from any simple mastoid operation. Like Welty, I can say I have never lost a patient as a result of simple mastoid operation, but I have lost patients where the operation was complicated by meningitis or brain abscess that had already begun before I operated, and I have come to feel that one is hardly justified in operating upon mastoids where meningitis is already established, even although it is very slight. The only reason I would operate in a case of this kind is that occasionally in children where meningitis apparently exists, the symptoms have cleared up following operation. To illustrate, during the past winter a woman suffering from considerable pain was referred by her family physician to an aurist who did not con-

sider the fact that her ear had been discharging for six weeks, or that she was suffering severe pain over that side of her head, sufficient to indicate mastoid involvement, since there was no tenderness on pressure over the mastoid, and even in the face of the severe pain and chronic discharge he neglected to operate. About five weeks later the patient was sent to me, but at the time I saw her the woman had a well-marked meningitis and soon succumbed to the disease. I am satisfied that an early simple mastoid operation would certainly have saved her life.

I wish to accentuate Welty's statement concerning thoroughness of operation. Every mastoid cell, whether diseased or healthy, should be removed if possible. Theoretically a perfect mastoid operation is one in which all of the cells are destroyed and the contents of the mastoid bone removed down to the inner table. If this is accomplished, the condition clears up earlier, healing is more rapid and there are fewer recurrences.

A case in point is one in which I did a radical operation this past winter, on a patient who had had a simple operation by an aurist about a year previously. Upon opening the mastoid cavity I discovered that only about one-half of the cells had been removed at the previous operation. This patient had suffered intense pain for several months as well as complete loss of hearing because he had had an incomplete simple operation, whereas a complete removal of all of the mastoid cells would have saved his hearing entirely and effected a cure at the time.

For the last four or five years I have ceased to use the gauze pack. After the first dressing, which is usually on the third day, I insert into the wound a specially selected, thin-walled, soft rubber drain of pure gum. This has a large caliber almost one-quarter of an inch in diameter and is inserted well upon to the top of the wound and is made shorter from time to time as the wound heals. In some cases I have been able to remove the drain within two weeks, others require a longer time. I am satisfied that this method of dressing is practically painless and I am equally sure it shortens the period of healing very markedly.

In conclusion, it is my opinion that if we have more simple mastoid operations, in a few years we will have very few radical mastoid operations to do.

J. W. GREEN, M. D. (Vallejo)—Doctor Welty has covered the ground of mastoid surgery in a more able manner than I could present it, but, I believe, he has omitted a most important detail when he fails to mention x-ray studies of his operative mastoids. In my own practice this is a routine part of examination in all cases where it is possible to obtain good pictures. I know that it is not absolutely necessary in making a diagnosis of mastoiditis and neither is it absolutely necessary to have this information in all cases to help determine when to operate; but I have seen two cases in which there was no discharge from the middle ear at any time and no mastoid tenderness or swelling which would help one to arrive at a diagnosis. One of these had been diagnosed typhoid fever and the other incipient tuberculosis. The x-ray is just as important as the laboratory findings in these cases. So much for its help in the unusual cases.

Concerning the ordinary case: A good x-ray tells you the comparative size of the mastoid cells, whether or not there is a marked process and great breaking down of the cell walls, whether there is anomalous placing of mastoid cells (such as extension toward the occiput). A study of both the normal side and that which is diseased will tell you (because in health, both sides develop exactly alike unless there has been previous inflammation) whether there is sinus thrombosis, peri-sinus abscess, subdural abscess and in many cases brain abscess. One is, occasionally surprised to note the enormous size of the mastoid in young children. All this information is of immense value prior to the operation.

It is a fact that early operation will prevent the serious complications and a good surgeon will not injure an ear, even if he should operate in a case which would have recovered without operation, but I have found it wise to operate only and when my best judgment advised me to do so. Every surgeon of experience has this additional sense of intuition. Procrastination has no place in mastoid surgery.

Discharge from an acute otitis media, which does not cease within two weeks after free paracentesis, gives me great concern, as there is one of two conditions present in these cases, mastoiditis or granulations within the middle ear cavity, or both. In all these cases a simple mastoid operation is indicated.

Complete removal of all mastoid cells invariably results in a cure, and I have used a different method of closing the wound and dressing than the one recommended by Welty for the past five years. I close the wound with clips or silk worm and place a cigarette drain of small size directly into and by the shortest route to the mastoid antrum. The wound is allowed to fill with blood prior to suturing. The drain is removed on the third day and many of these wounds heal in ten days or two weeks. This method has been termed the "blood clot" operation. This operation has been successful many times, even in the presence of a demonstrated "hemolytic streptococcus infection."

I am not so enthusiastic concerning the radical mastoid operation. Many chronic otitis cases may be cured by the simple mastoid technique. Perseverance with local treatment will, many times, cure a long established chronic otitis media.

In closing my discussion, to return to the matter of the x-ray, the picture is valuable only as the experience of the interpreter is based upon correlation of the findings at the operating table and the reading of the actual anatomy shown.

THE CALIFORNIA STATUTE AUTHORIZING THE COURT'S EXPERT: ITS HISTORY AND FUNCTION

By ANDREW STEWART LOBINGIER, M. D., Los Angeles

INTRODUCTORY NOTE

Doctor Andrew Stewart Lobingier, serving as chairman of the Medico-Legal Committee of the California Medical Association and the Los Angeles County Medical Association, has led the forces of medicine for sixteen years, in efforts to bring about improvement in our laws governing medical expert evidence.

California now has a new law that gives promise of better things. Doctor Lobingier and Mr. Oscar Mueller, representing the Bar Association, who worked with the medical committee, are jubilant over the passage of the new law.

In transmitting the story of the long fight and a copy of the new law, published below, Doctor Lobingier writes:

"We are the first state in the Union to have achieved this legislation, and I think you will pardon me if I seem a bit enthusiastic over it.

"We are so proud of our victory that Mr. Mueller has proposed that we make an effort to interest the bar and medical associations of a number of Eastern states in the passing of similar legislation.

"I have made the report you requested as succinct as was consistent with the record, and would appreciate a prominent insertion in California and Western Medicine, with editorial comment from yourself, which I feel certain will be commendatory."

While not perfect, this law is the best that could be gotten, even with the active participation of the League for the Conservation of Public Health. It is a step in the right direction, and if courts, attorneys, and physicians will co-operate in its enforcement, disheartening and reprehensible scenes, which have too frequently characterized the administration of justice, will become less frequent.—
EDITOR.

SIXTEEN years ago, on motion of the writer, the Los Angeles County Medical Association voted to request the council of the association to appoint a committee to confer with the committee on New Legislation of the Los Angeles Bar Association and act jointly with it in proposing an Act which should regulate the giving of expert evidence.

It was believed by this joint committee that a bill

could be framed which would, to a great extent, correct the evils which have rendered the giving of expert testimony in our courts humiliating and worthless.

As chairman of the Medical Committee, the writer was invited to deliver an address on Medical Expert Testimony at a dinner given by the Bar Association to the Justices of the Supreme Court of California on the evening of October 15, 1909. The address was published in the Southern California Practitioner and in the California State Medical Journal.

The argument set forth that the expert witness, as usually called by plaintiff or defendant, became a biased advocate for the side which employed him. That our system of taking expert evidence was archaic, expensive, and obstructive of the ends of justice.

In certain foreign countries the expert witness was selected by the court and thereby became an officer of the court, and was chosen from the most competent and accomplished representatives of a given profession. The testimony of such a witness, answerable to neither side, but only to the high court which called him, was characterized by sincerity, dignity and fairness, free from bias or prejudice and, as far as could be, was a dispassionate statement of scientific fact.

Repeated efforts had been made in the various commonwealths of the republic to have enacted statutes which would in some such manner clothe the expert witness with authority and freedom which would facilitate the giving of such scientific testimony without prejudice to either side, a candid statement of scientific truth without bias. All such efforts had, and have until this time, proved futile. Certain members of the Bar, certain corporations which had a singularly obtuse slant on the merits of this legislation and, strange to say, certain presumably scientific members of the learned professions interested, opposed the enactment of any such statute. The result has been a long, stubbornly contested effort for more than twenty years in America, with final defeat in every instance except our own.

The first bill drafted by our joint committee and presented for passage in 1911 had reference only to the giving of medical expert testimony.

It was rejected by the Legislature because it was said to be class legislation and should have regulated the giving of all expert testimony of whatever kind.

A new bill was then drafted governing the giving of expert testimony of every profession or business and presented to the Legislature in 1913. It passed the Senate and failed in the House, owing to the vast number of bills at that time before the Lower House. The same bill was presented in 1915, passed both Houses, and was vetoed by the Governor. As this same executive was continued in office for another term, and as he was known to be unfriendly to such an Act, we concluded not to present the bill again as long as he was in office. The war then intervened and our interests and energies were elsewhere engaged. In 1921 the same bill was again presented, passed both Houses, and was again vetoed, but by another executive, who admitted "he had no personal objection to the bill, but

had been advised by certain attorneys that it was undesirable legislation."

Nothing was done thereafter until this year—1925. Mr. Oscar Mueller, representing the Los Angeles Bar Association, had been with me most actively in all our efforts to get this bill enacted into law. Mr. A. H. Koebig, representing the Society of Engineers; Dr. Thomas J. Orbison and Judge Frank Oster had also given sympathetic and valuable assistance.

In 1914, Mr. Mueller and I, at our own expense, visited various cities of the state and made addresses before bar and medical associations in behalf of this legislation. On invitation, we addressed a joint meeting of the San Francisco Bar and Medical Association. From time to time we made reports as chairmen of our several committees to our local and state associations. This year we determined to make one final effort to secure the passage and executive approval of the bill. Senator Jones of San Jose, always a loyal and indefatigable worker for the bill, did the most to make possible its passage in the Senate. At one time it was tabled in the Judiciary Committee of the House and seemed destined to fail of passage, but it was finally taken up and put through. Letters favoring its passage were written by university presidents and justices of the Supreme, Appellate, and Superior Courts, and sent to Sacramento. When Governor Richardson signed this bill he was kind enough to say publicly, "he considered it one of the best enactments of this Legislature."

What will be the effect of the statute in facilitating and dignifying the giving of expert testimony in the courts of California?

1. It will greatly reduce the number of experts called in a case and have thus a distinct economic value.

2. It will facilitate and expedite the trial of a case when the court calls its own expert.

3. It will dignify expert evidence, for the court's expert is an officer of the court and free from prejudice for or against plaintiff or defendant.

4. It does not invade the right or privilege of plaintiff and defendant calling their own experts.

5. It secures the expert of the court at a reasonable and just compensation, shared by the litigants and the state.

Finally, for eight or ten years Superior Judges of this city have, with consent of opposing counsel, called the court's expert with the greatest satisfaction to all and to very great economic advantage. So that long before the Act passed into law, the courts here had abundantly proved its practical value by showing its reasonable and just merits in the trial of their civil and criminal cases.

Recently, in the criminal case of the People vs. Young, the court called two alienists to pass upon the sanity of the defendant. The result of this first instance of record where the statute providing for the court's expert has been put into effect will be awaited with much interest.

Merritt Building.

THE NEW LAW

An Act to amend the Code of Civil Procedure of California by adding thereto a new section to be numbered and known as Section 1871, relating to experts, their appointment by the court, or a judge thereof, and provid-

ing for their compensation and manner of examination as witnesses.

The people of the State of California do enact as follows:

Section 1. A new section is hereby added to the Code of Civil Procedure of California, to be numbered and known as Section 1871, and to read as follows:

— Whenever it shall be made to appear to any court or judge thereof, either before or during the trial of any action or proceeding, civil or criminal, pending before such court, that expert evidence is, or will be required by the court or any party to such action or proceeding, such court or judge may, on motion of any party, or on motion of such court or judge, appoint one or more experts to investigate and testify at the trial of such action or proceeding relative to the matter or matters as to which such expert evidence is, or will be required, and such court or judge may fix the compensation of such expert or experts for such services, if any, as such expert or experts may have rendered, in addition to his or their services as a witness or witnesses, at such amount or amounts as to the court or judge may seem reasonable. In all criminal actions and proceedings, such compensation so fixed shall be a charge against the county in which such action or proceeding is pending and shall be paid out of the treasury of such county on order of the court or judge. In all civil actions and proceedings such compensation shall, in the first instance, be apportioned and charged to the several parties in such proportion as the court or judge may determine and may thereafter be taxed and allowed in like manner as other costs. Nothing contained in this section shall be deemed or construed so as to prevent any party to any action or proceeding from producing other expert evidence as to such matter or matters; but where other expert witnesses are called by a party to an action or proceeding they shall be entitled to the ordinary witness fees only, and such witness fees shall be taxed and allowed in like manner as other witness fees. Any expert, so appointed by the court, may be called and examined as a witness by any party to such an action or proceeding or by the court itself, but when called shall be subject to examination and objection as to his competency and qualification as an expert witness and as to his bias.

Such expert, though called and examined by the court, may be cross-examined by the several parties to the action or proceeding in such order as the court may direct. When such witness is called and examined by the court, the several parties shall have the same right to object to the questions asked and the evidence adduced as though such witness were called and examined by an adverse party.

The court or judge may at any time before the trial or during the trial limit the number of expert witnesses to be called by any party.

THE PRE-OPERATIVE PREPARATION AND SURGICAL TREATMENT OF CHRONIC SPLENIC ANEMIA (BANTI'S DISEASE)

By LEO PECCI BELL, M. D., *Woodland, California*

Splenic anemia patients, in a well-advanced state, should be splenectomized as soon as possible after careful preparation by transfusion and rest. If splenectomy is resorted to before an advanced degree of cirrhosis has taken place, complete and permanent cures are obtained. Great care should be observed not to operate in a state of acute thrombo-phlebitis with temperature.

WHEN discussing the function of the spleen and its diseases, I am reminded of the story W. J. Mayo so frequently tells of the professor who asked a student to describe the function of the spleen. He stammered and stuttered and finally said that he had known but had forgotten. Whereupon the professor replied: "I am sorry you have for-

gotten because you appear to be the only one who has ever known."

It is definitely known that the spleen and liver of the foetus are blood producers; the liver up to about the fourth month, the spleen up to the fifth month. But, before birth, they lose the power of producing red blood and the spleen becomes a destroyer of debilitated red cells. The spleen begins to show senile changes at puberty, and after this time is more likely to show pathologic change.

Anatomically, the spleen is closely associated with the foregut. Its blood supply, which comes from the celiac axis, is altogether too large for its own nutrition. Moreover, when the arteries enter the spleen they lose their outer coats and become sinuses in which only the endothelium lies between the splenic pulp and the vessels. The fact that the splenic veins do not primarily enter the general circulation but become part of the portal circulation suggests that, whatever may be the action of the spleen on the blood, it is not completed and the splenic blood must pass through the liver to be acted upon there before it can enter the general circulation.

The sympathetic nervous system provides a close network about the splenic artery and its branches, and this in turn connects with the solar plexus and so with the adrenal glands. The vagus enervates the muscle fibers in the connective tissue. There has been some experimental work on the possible relationship between the spleen and the thyroid and thymus glands, but it is not conclusive.

Gaskill has proven that the spleen has very little anatomic nerve supply and deduces from this fact that it has no important internal secretion, since all organs of internal secretion have an abundant anatomic nerve supply. As proof of lack of internal secretion the normal spleen can be removed without any apparent disturbance.

Splenic anemia was first described by Gretsels in reporting a case from the clinic of Professor Greisinger, who had recognized lymphatic anemia and splenic anemia, and who used these names in his clinical dissertations to distinguish them from a large group of pseudo-leukemias, so-called. Banti, by collecting the pathological studies of Lodi, Concato, and Franzoline and the clinical studies of Greisinger and Gretsels, and by his clinical observations and necropsy studies in three cases, further separated this disease from a large group of splenomegalies. By his description of a disease which has been given his name, Banti stimulated investigation of disease of the spleen and particularly of splenic anemia.

Osler classifies splenic anemia as a primary disease of the spleen of unknown origin. It is characterized by progressive enlargement. Attacks of anemia are accompanied by a tendency toward hemorrhage, small in some cases, and by a secondary cirrhosis of the liver, with jaundice and ascites. That the spleen itself is the seat of the disease is shown by the fact that complete recovery follows its removal.

Rolliston, discussing this group described by Osler as "Primary Splenomegaly With Anemia" under separate headings, "Chronic Splenic Anemia" and "Banti's Disease," says he considers chronic splenic anemia as presenting the following characteristics:

(1) Chronic splenomegaly, which cannot be correlated with any recognized cause; (2) the absence of enlargement of lymphatic glands; (3) chronic anemia with low color index; (4) the absence of leucocytosis and usually the presence of leukopenia; (5) the liability of copious gastro-intestinal hemorrhage from time to time; and (6) prolonged course without any tendency to spontaneous cure. Splenectomy is usually curative.

Rolliston, in discussing the relation between Banti's disease and splenic anemia, says: "The title Banti's Disease is now often used as synonymous with splenic anemia even by those who fully recognize that it is a sequel or terminal stage of splenic anemia, and does not occur in all cases even when unduly prolonged."

Rollins claims that Banti describes three stages of the disease named for him: (1) the preascitic stage in which splenic enlargement is present with or without anemia; (2) the transitional stage, of which the most prominent symptom is diarrhoea and at which time anemia and blood changes are found, the liver is somewhat enlarged and jaundice may be present; (3) the ascitic stage, or Banti's disease proper.

The normal function of the spleen is considered to be chiefly that of a mechanical filter, which removes from the blood degenerated red blood cells and toxic agents above colloid size, such as microorganisms and debris, on which it acts before sending them to the liver for further detoxication and elaboration. It also develops lymphocytes.

The spleen, when chronic splenic anemia develops, acts as a focus of infection, being a storehouse for infection whose toxic materials are dumped too rapidly into the liver, causing a cirrhosis to take place. It also undergoes changes of function which cause an overdestruction of red blood cells.

The relation of the spleen and liver in action has been compared to the glomeruli and tubuli of the kidneys, for the spleen extracts certain products which it passes on to the liver for disposal. This is true not only of waste products, but also of certain substances which the liver must return to the body to maintain normal life. With regard to the latter function, the spleen may be considered as a "scraping plant," where the worn-out blood cells are delivered to have removed from them whatever may be of further service to the body.

Gato, in animal experiments, found that the amount of pigment in the bile was relatively diminished after splenectomy, both with and without the administration of hemolytic agents.

The spleen assists in producing immunity. This is indicated by experiments in which Morris and Bullock have demonstrated that splenectomized rats were more susceptible to ordinary infections, and to sublethal injections of live bacteria, than were others on whom abdominal castration had been done for controls. It is well known that the spleen can filter parasites of disease from the blood, but it cannot destroy these organisms. Probably the most striking example of this is the accumulation of plasmodia of malaria, the ague-cake of the tropics. The same is true of the spirochaeta pallida. The enlargement of the spleen in typhoid fever and chronic infections is

due to the accumulation of bacteria and the reaction to infection.

The spleen apparently does not initiate the pathologic processes with which it is concerned, but acts as a secondary agent.

Thus the spleen in splenic anemia shows marked fibrosis, including thickening of the capsule and trabeculae and changes of a fibrotic nature in the reticula. Endophlebitis is also sometimes to be found. The spleen pulp itself is greatly increased in amount, chiefly due to increased number of venules. Wartkin believes that in many, if not in all, cases of splenic anemia the underlying condition is obstruction in the splenic and portal circulation most commonly due to thrombophlebitis. The action of the spleen normally may be likened to that of a filter, removing not only old red cells, but also bacteria from the circulating blood, and we must suppose the ordinary acute splenic tumor to be, in part at least, in connection with this function. If the splenomegaly is the result of the isolation of malarial organisms, or of tubercle bacilli or the spirochetæ of syphilis or other organisms, then we have a specific disease and we regard the enlargement of the spleen as merely one of the body protective measures. There must be, however, many similar splenic reactions against various bacteria or toxins. If this be pronounced, of fairly long standing, and accompanied by anemia of marked grade, we group the cases as splenic anemia or Banti's disease. This, at least, is the present status of the matter. This theory practically infers that the anemia is a secondary matter, and that the splenic enlargement is the primary thing. We could, of course, refer the anemia to hemorrhages, except for the fact that they are not constant and, in fact, are absent in some cases, showing very low red counts. The red cells of splenic anemia do not show an increased fragility. W. J. Mayo leans to the opinion that a fibrotic spleen destroys more red cells and that, in the absence of any special stimulation of the bone marrow, anemia must result. He suggests, too, that the disease changes may bring about reductions of the pigment production and thus actually reduce the hemoglobin balance.

In an exhaustive study, Krumbhaar considers that all diseases of the blood in which anemia is produced depend on the dynamic standpoint of the constant interplay of the blood-forming and blood-destroying apparatus, termed the hemolytopoietic system, and the adjustment there spoken of as the hemolytopoietic balance. The question, considered in regard to the anemia of splenic anemia, is whether this condition is due to an excess of blood-destruction or to a paucity of blood-formation. In considering the cause of the anemia the chief factors are the bone marrow, spleen, liver, lymph nodes and reticulo-endothelial apparatus. By the close inter-relation of this system and the taking over of the function of one by another in disease, Krumbhaar explained the rapidity with which the blood picture approaches the normal after splenectomy.

In the Bradshaw lecture for 1920, Sir Berkeley Moynihan draws attention to the fact that the spleen is not a specialized organ with one or two particularly developed functions, but is one of a group of organs more or less interdependent. Failure to recognize this is, perhaps, the chief reason

why the splenic functions have for so long remained obscure. Moynihan's conception of the problem is more illuminating, in that he considers the spleen to be closely connected with and, in fact, a part of four important systems of the body.

(1) *The spleen as a part of the hematopoietic or blood-making system.* Formation of red and white cells takes place in the spleen only during embryonic and early post-natal life, as a rule. In infections and leukemia, however, the spleen may take part in the production of white blood cells. The relation of the spleen to the bone marrow has already been discussed.

(2) *The spleen as a part of the reticuloendothelial system.* We have already described the endothelial cells as lying loosely in the reticulum of the spleen pulp. The liver also has certain large phagocytic cells, the star cells of Kupffer which are endothelial in nature. They are known to proliferate after removal of the spleen, and they may take up iron pigments. Lymphatic glands also contain phagocytic endothelial cells, which multiply after splenectomy. The bone marrow, too, contains somewhat similar cells. Thus, these structures seem definitely related morphologically, and we can more easily understand why blood pigment is found in the liver, lymph glands, and bone marrow when hemolyzing poisons are administered. It has been found, in studying the immature bodies of cholera, that the spleen and long bone marrow contains the largest proportions of these substances. Various other experiments on animals indicate that the spleen is an important power in resisting infective processes.

(3) *The spleen as a member of the digestive system.* All the blood of the spleen passes into the liver, carrying hemoglobin within the bodies of the wandering cells. The spleen, therefore, stands in an important relation to the liver. It is known, of course, that synchronous with digestion there is a slow expansion of the spleen, but what bearing this change may have upon so-called digestive leucocytosis is not clear. It is stated that splenic extracts cause intestinal peristalsis. A further connection with the digestive system lies in the probability that the spleen takes part in purin metabolism.

(4) *The spleen as a part of the sympathicoendocrine system.* It is assumed that the spleen has a sympathetical endocrine function, but it is impossible to prove it.

In a detailed resume, Connors considers cases of splenomegaly which may be classified from diagnostic standpoint into acute and chronic. I shall discuss here only chronic forms, the most important of which, from a differential standpoint, are myelogenous leukemia, lymphatic leukemia, Hodgkin's disease, chronic malaria, hemolytic jaundice, polycythemia-vera, pernicious anemia, Gaucher's disease, Von Jaksch's disease, syphilis (hereditary and acquired), tuberculosis, kala-azar, chronic infections, Still's disease, purpura, hepatic cirrhosis, obstruction to the portal vein, Amyloid disease, and tumors.

The diagnosis of splenic anemia depends on the existence of splenomegaly, varying degrees of anemia of the secondary type, usually leukopenia and a relative lymphocytosis, and the frequent occurrence of gastric and intestinal hemorrhages. Because of the hemorrhages, the condition is often diagnosed as gastric or duodenal ulcer, the splenic enlargement, even

though considerable, being overlooked or disregarded. It should be emphasized that in cases of gastric or intestinal hemorrhage, splenic anemia must be eliminated as a cause. In the later stages of the disease (Banti's disease) the existence of a very large spleen and ascites, due to the associated hepatic cirrhosis, together with the foregoing findings, usually suffice to make the diagnosis. Sometimes it will be impossible to separate the condition from primary hepatic cirrhosis with splenomegaly; the existence of a large liver and a comparatively small spleen or an atrophic liver with rather a small spleen, especially if ascites is present, favors a diagnosis of hepatic cirrhosis. Occasionally syphilis presents such a picture. Norris, Symmers, and Shapiro believe that all cases of so-called Banti's disease are due to syphilis.

The pathological findings and clinical records of sixty-nine patients with splenic anemia on whom splenectomy was performed at the Mayo Clinic from November 14, 1905, to September 1, 1920, were reviewed by Chaney in great detail. The most important points in his findings are as follows:

1. A composite picture of the pathological findings in the spleen in splenic anemia was found to be one of generalized fibrosis. There were no findings in the splenic tissue which would enable the pathologist to make a positive diagnosis of splenic anemia, yet the abnormality was as characteristic of this disease as in other diseases producing splenomegaly.

2. The average weight of the spleens was found to be 1015 gm.

3. The average age of the patients with splenic anemia was 33 years, and the number of males about equal to the number of females. There was apparently no familial tendency.

4. Their most common complaints were mass in the left abdomen, gastric hemorrhage, and weakness.

5. While abdominal pain was rarely given as the chief complaint, the histories brought out the fact that thirty-two of the patients had attacks at some state of the disease. In many instances the pain was probably due to perisplenitis.

6. In sixty-nine patients the average erythrocyte count was 3,700,000 Hg., 53 per cent; leucocyte count, 4990; coagulation time and the fragility tests were normal and the Wassermann tests and the stool examinations were negative.

7. A comparison of the number of lymphocytes in the differential count showed that the average was within the limits of normal. A lymphocytosis did not seem to be a characteristic in this series.

8. In the study of the liver tissue in the cases of splenic anemia, thirty showed a definite cirrhosis, but in none was the liver entirely normal.

9. Twenty-four of the patients with cirrhosis had ascites.

10. Twenty-three and three-tenths per cent of the patients with cirrhotic livers died within forty days of the operation, while within the same length of time the death rate of the remaining patients was only 12.8 per cent.

Zaccarelli, in 1549, and Ferrerius, in 1711, have been accredited, by some authors, with removal of the spleen, but these cases have been discredited by others for lack of sufficient detailed records. The

earliest authentic cases of splenectomy are those reported by Quittenbaum of Rostock in 1826, Kuchler of Dermstadt in 1855, and Spencer Wells of London in 1866, each reporting a case of splenectomy.

In each case the patient died a few hours after operation. Plan, in 1867, did the first successful splenectomy from which the patient recovered.

From Collier's table of twenty-nine cases of splenectomy reported from 1549 to 1881, we find a mortality rate of 72.4 per cent. Van Wert's thesis of 1897 records 274 cases with 104 deaths, or a mortality rate of 37.9 per cent.

Modern surgical methods and proper selection of cases have reduced the mortality in splenectomy from all causes. Giffen, in 1921, reported a series of seventy-three splenectomies for splenic anemia in which nine deaths are recorded, a mortality rate of 12.3 per cent.

To illustrate what has been accomplished by splenectomy in splenic anemia, I would like to cite three cases from our clinic which present the three types of cases described by Hollins.

During the last two and one-half years, six cases of splenic anemia have been encountered, illustrating the types of the disease, progress, and operative cures.

CASE REPORTS

Mr. E. W. Age 33. Superintendent Water Company. First observation on January 8, 1924.

Present Illness—Following a fall in December, 1919, patient was ill three days and complained of weakness. Following this he had a very severe hemorrhage, vomiting blood and also passing a considerable quantity by bowel. At this time he was confined to bed for fourteen days. X-ray diagnosis was negative. His second hemorrhage was in August, 1920, at which time he vomited blood and was in bed one week. In May, 1921, the third hemorrhage occurred. Fourth hemorrhage January 4, 1924, at which time the patient passed blood by bowel two days. Since the first hemorrhage, the patient has complained of weakness, but feels that this has not been progressive. No symptoms referable to ulcer. No genitourinary, cardio-respiratory, or sensory symptoms.

Physical Examination—General Appearance: Sallow and anemic. Throat: Infection of tonsils, second degree. Teeth: Dental sepsis, second degree. Blood pressure, 110/80. Abdomen: Slightly tender in upper left quadrant. Liver: Palpable; not markedly nodular. Spleen: Enlarged eight to ten times.

Temperature, pulse and respiration, normal.

Laboratory Findings—January 8, 1924, Hg., 42 per cent; r. b. c. 2,800,000; w. b. c. 4300; color index .7 plus; number cells counted 200; polys 48 per cent; small lymphs 31; large lymphs 16.5; large monos 2; transitional 2.5; slight anisocytosis; slight poikilocytosis; moderate polychromatophilia; coagulation time 6 minutes; fragility .28 per cent to .30 per cent increase in resistance. Blood Wassermann negative. Urinalysis negative.

On January 11, 1924, this patient was transfused with 450 cc. of blood, the indirect sodium citrate method being used, and six days later (Jan. 17, 1924) splenectomy was done. The following findings were made at operation: Stomach showed large vericosities over fundus and under pyloric end—no sign of ulceration of stomach. Liver showed little cirrhosis compared to average case of Banti's Disease. Gall-bladder was thick-walled, emptied easily and there were no stones. Spleen six to eight times normal size, with extensive adhesions over the surface, and was covered with thick plastic exudate of greyish color. The patient had an uneventful post-operative course and was dismissed on the fifteenth day post-operative in very good condition. By the first of March he felt very well and was allowed to resume light work. May 19, 1924, Hgb. 82 per cent, r. b. c. 5,140,000, condition excellent. Early in September, 1924,

the patient reported again for observation: hgb. 86 per cent; r. b. c. 4,650,000. Had resumed heavy work and felt himself entirely well. Very well at present time.

Mr. F. B. Laborer. Age 28.

Present Illness—Five years ago onset of present trouble began with a sudden attack of vomiting blood. Considered hemorrhage quite severe; was in the army and did not stop drill work. After this time felt fairly well until one year ago when he again had a severe hemorrhage from the stomach—this did not weaken him greatly. He felt normal after vomiting and continued to work. The third attack of vomiting was March 27, 1923; of the same nature and also passed blood by bowel; no marked weakness following this attack.

Physical Examination—Seems in good physical condition except for some pallor. Throat: tonsils atrophic. Abdomen: Spleen freely movable about 4 inches below costal margin. Liver enlarged about 4½ inches below costal margin. Blood pressure 165/90.

Laboratory Findings—March 29, 1924, Hgb. 45 per cent; r. b. c., 1,130,000; color index, 1.9 plus; w. b. c. 4400; 200 cells counted; small lymphs, 25.5; large lymphs, 2.5; large monos, 2; trans, 3; polys, 66.5; basophiles, .5; slight anisocytosis; moderate poikilocytosis; slight basophilic stippling; moderate polychromatophilia; bleeding time 10 minutes. March 29, 1924, transfusion of 400 cc. of citrated blood was given. April 3, 1924, w. b. c. 3400; Hgb. 50 per cent; r. b. c. 3,470,000. April 16, 1924, splenectomy done; liver markedly cirrhotic; spleen five times enlarged, plastic lymph exudate over entire surface. Marked vericosities over stomach and diaphragm; no free fluid. Usual splenectomy done.

Reaction following splenectomy excellent. Convalescence was entirely uneventful. Within two months, the patient was working again, and has had no trouble. Recent Hgb. is 75 per cent; r. b. c., 4,500,000. Has had one hemorrhage since July 1, 1924, by bowel, moderately severe. Apparently not affected by hemorrhage and working again, as before.

Mr. E. L. M. Age 29. Examination, October 30, 1922. Complaint: Weakness and loss of appetite.

Present Illness—About 7 years ago began to lose weight and have a feeling of dragging and loss of ambition, with marked weakness on exertion. Would gain weight for a time and feel better; later would lose again. Has grown slowly and progressively worse with greater loss of strength. Night sweats for six months; no temperature or chills. Bleeding from gums and nose. No vomiting of blood or passing blood by bowel. Has noted enlargement of abdomen for last two years.

Physical Examination—Poor physical condition; sallow and emaciated. Teeth: pyorrhoea and dental sepsis III. Spleen very large, extending to umbilicus, and quite painful. Abdomen distended to a moderate degree.

Laboratory Findings—October 23, 1922. Hgb. 44 per cent; r. b. c., 3,860,000; w. b. c., 14,200, group III. On admission malarial parasites were demonstrated. The patient was given a course of intravenous salvarsan and intravenous quinine with one course of Deep Therapy over the spleen, over a period of six weeks. The night sweats disappeared and he felt much better, but the spleen grew larger. No transfusion given.

Splenectomy on October 4, 1922. Spleen densely adherent to diaphragm and lateral wall and about ten times normal size. Usual technique of operation. Considerable hemorrhage. Liver markedly cirrhotic. No gallstones. For six months following operation, patient had to be tapped five times, but finally began to get better and has gradually improved in strength. Has been working as foreman on a ranch for the last year. July 18, 1924, white count 5600; 31 small lymphs; 4 per cent large lymphs; 62 per cent transitionals; Hgb. 80 per cent; r. b. c., 4,130,000. Very well at present time.

Mrs. J. E. K. Age 29. October 10, 1922.

Present Complaint—Rapid heart and weakness for about four years, with palpitation of heart, excitability, tremor of hands following exertion—all symptoms mild in degree. Marked loss of strength. About three years ago began to have enlargement of upper abdomen which continued for six to seven months and gradually receded.

Physical Examination—Teeth, marked dental sepsis.

Heart, moderate dilatation, systolic murmur over base and apex. Spleen enlarged three to four times. Considerable pallor.

Laboratory Examinations—Hgb., 23 per cent; r. b. c., 3,150,000; leucocytes, 4400; cells counted, 200; small lymphs, 23 per cent; large lymphs, 1.5 per cent; large monos, 2.5; trans, 4.0; polys, 68.0; eosin, .5; baso, .5; slight anisocytosis; moderate poikilocytosis; slight polychromatophilia. Urine examinations negative. The patient was given a transfusion of 500 cc. of citrated blood and advised to have all foci of infection removed as she had many bad teeth. Her tonsils were negative and there was no history of previous tonsillitis. Since this time the patient has improved very markedly in strength and activity. Has been kept on iron at intervals. Present Hgb., 72 per cent; r. b. c., 4,200,000; spleen and liver about comparable in size. Size of spleen has diminished until it is just palpable under the costal border. Blood picture about the same.

Miss H. S. Age 40. May 9, 1924.

Present Illness—January 11 began to have diffuse abdominal cramps and severe vomiting and chill; high white count 13,000; temperature 102. Operated elsewhere January 23, 1924; chronic appendix; liver and gall-bladder normal. Patient seemed to go into uremia afterward. April 2 had recovered sufficiently to be taken home. Hgb., 50 per cent. For two weeks stationary; some tendency to diarrhoea. April 28 some blood in vomitus; some acute pain in abdomen. On entry into hospital May 4, 1924, spleen was palpable 3 cm. below costal margin. Blood count: Hgb. 35 per cent; r. b. c., 2,410,000; slight poikilocytosis; moderate polychromatophilia; w. b. c., 6200; 200 cells counted; polys, 71.5; small lymphs, 21.5; large lymphs, 2.0; large monos, 2; trans, 2; eos, 1. Blood urea normal. P. S. T., normal. Transfusion of 500 cc. of citrated blood. Feces examination negative. Wassermann negative. Fragility increased. X-ray of chest negative. Since leaving the hospital has had a very severe hemorrhage with more transfusions. Was then diagnosed as toxic ulcer elsewhere. Has had two hemorrhages and two transfusions since leaving hospital. Blood shows same picture.

Miss H. G. Age 6. November 6, 1924.

Present Illness—April, 1923. At this time parents noted nose bleeds as often as four or five times in twenty-four hours. The child became languid and tired and did not wish to play with others, though she apparently had no particular weakness. Skin and whites of eyes, yellow.

The initial attack of jaundice lasted about two to three months. Since that time attacks of two to three days' duration every month or so. No pain at beginning of P. I., but shortly began to complain of severe colicky pain under umbilicus and the longer attacks of pain were usually associated with the jaundice mentioned. In addition many transient attacks of pain. Constant tenderness under umbilicus; occasional tenderness in pit of stomach. Vomited during early stages of this illness, with the attacks of pain and jaundice, but, during last eight months, has been nauseated with attacks without vomiting. Temperature ranging from 99½ to 101½, the latter being in August and September. Temperature rise usually in morning. Enlargement of the abdomen was first noted at the time of onset of the P. I.

Physical Examination—General Appearance: Child in good flesh and nutrition; seems somewhat anemic. Throat: Enlargement of tonsils with infection. Blood Pressure: Systolic 95; diastolic 50. Abdomen: When lying flat there is a definite enlargement of the upper left abdomen. On palpation spleen extends down to about 1½ inches above the umbilicus. Moves freely to about ½ in. of navel. Seems slightly tender to touch. Liver extends down about 1 to 1½ inches below costal margin. Slight tenderness below and around umbilicus. Temperature: Slight rise.

Laboratory Reports—Blood count; r. b. c. 3,450,000; Hgb. 65 per cent; color index .95; w. b. c., 3150; polys, 50 per cent; small monos, 49 per cent; large monos, 1 per cent. Blood examination: No parasites found. Slight anisocytosis, moderate poikilocytosis. Reticulated cells, 0.6 per cent. Myelocytes, none found. Urinalysis negative. Feces examination, negative. Urine examination for bile,

negative. Blood Wassermann, negative. Fragility test: Complete hemolysis, .32 per cent (NaCl); beginning hemolysis, .42 per cent (NaCl).

Diagnosis—Banti's disease (splenic anemia) chronic appendicitis. Immediate operation recommended, but, to date has not been performed. Child to return in March for splenectomy.

In considering this group of splenic anemias, it should be borne constantly in mind that the basic pathology of the spleen is generalized thrombophlebitis, resulting in secondary anemia, the initial onset coming as an acute thrombo-phlebitis, following most commonly influenza, or follicular tonsillitis. The probable bacteria is the streptococcus, which has a particular attraction for lymphoid tissue. Many spleens are found enlarged in influenza if a careful examination is made in severe cases. The fact that all individuals who have respiratory infections do not develop splenic anemia is due to resistance of the individual to streptococcus infections. The streptococcus, incysted in lymphoid tissue following an attack of follicular tonsillitis may result in rheumatism and endocarditis. Thus, when in an individual with lowered resistance the spleen is infected and repeatedly fed with more bacteria which it constantly strains out from the blood, fibrotic changes are initiated and the spleen itself becomes a focus of infection, the excess blood destruction probably being a toxic action from bacterial growth within the spleen. When these toxins, generated by the spleen, are poured into the liver, parenchyma cell destruction of the liver takes place and the destroyed parenchyma tissue is replaced by fibrous tissue. As the anemia becomes pronounced, the fibrosis and liver destruction increase until the ratio of liver destruction exceeds liver regeneration; then hepatic insufficiency and ascites occur. Remissions and exacerbations are caused by acute respiratory infections, bringing about a flare-up of thrombophlebitis.

The splenectomies reported are striking examples of this syndrome of development. In all, the respiratory or streptococcic etiology was the most probable. In one of the unoperated cases (Mrs. J. E. K.) there has been a marked improvement on one transfusion and removal of the focus of infection in the teeth. All have exacerbations of their anemia, with thrombo-phlebitis of the spleen following respiratory infection.

No case of splenic anemia should be splenectomized until careful and sufficient observations have been made. It is my belief that splenic anemia can be arrested in its early stages by removal of foci of infection, such as infected teeth and tonsils, which are the portals of entry of the streptococcus. The resistance of the individual at the same time should be strengthened by transfusions.

Splenic anemia in a well-advanced state should be splenectomized as soon as possible after careful preparation by transfusion and rest. If splenectomy is resorted to before an advanced degree of cirrhosis has taken place, complete and permanent cures are obtained. Great care should be observed not to operate in a state of acute thrombo-phlebitis with temperature.

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THE RELATIONSHIP OF THE CLINICAL PATHOLOGIST TO SURGICAL PRACTICE *

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The investigation of the end results of disease by Hunter and the physicians of his time gave impetus to the scientific investigation of disease. With the advance in the art of surgery there has been a parallel advance in the science of pathology, although in the early days of development the two were but remotely related. The extension of vision by the lens has cemented their union until the clinical pathologist has become indispensable to the progress of surgery. The necropsy pathologist will continue to correlate clinical, operative, and anatomic findings, seeking the truth, so that surgical deaths shall not have been in vain.

BY THE sense of sight and through the institution of methods of extending vision, it has become possible to explore still further the mysteries of disease, its cause and manifestations, and to base therapeutic measures on scientific principles.

The science of pathology and the art of surgery possessed little in common until the latter part of the nineteenth century. John Hunter definitely established the science of gross pathology, securing his specimens at necropsy, and made possible the teaching of pathology, not only from clinical subjects, but from actual material removed from the cadaver. Hunter's investigations revealed the ultimate result of disease and afforded opportunity for the study of effects of disease on the various organs of the body, in the gross and by the unaided eye. While the principles of magnification of vision by the microscope were evolved in the seventeenth century, before Hunter's time, yet magnification had not attained a power of more than 270 diameters and aided little in the examination of tissue. However, even so, the latter part of the seventeenth century disclosed the usefulness of the microscope in the cellular description of green plants, the malpighian corpuscles of the kidney, red blood cells, spermatozoa, and so forth. But not until the middle of the nineteenth century was knowledge of morbid anatomy based on the knowledge that the cell was the living unit. The description of the cell nucleus, the nucleolus, and protoplasm led to the cell theory of Schieden and Schwann and to Virchow's "cellular pathology," which was but the application of the cell theory of the botanist to human structures in disease.

The art of surgery, which is older than the science of pathology, owes its early advancement to the knowledge of gross anatomy and pathology, and to the later extension of vision by means of the microscope and various instruments for visual examination of the eye, larynx, esophagus, urinary tract and rectum, and by means of the roentgen ray.

Progress of surgery was retarded in the early days by the suffering occasioned by operative measures, and operations were resorted to only in dire necessity. However, with the discovery of anesthetics, surgery received a new impetus, and the access to the abdomen, chest, and head thus afforded, revealed diseased tissue within these cavities in life that hitherto had been seen only at post mortem. While

* Read by invitation at the meeting of the California Medical Association, Yosemite, California, May 19, 1925.

necropsy examination continues to add to our knowledge of pathology the study of disease in living tissue, made possible by surgery, enables us to obtain more knowledge of the progress of disease, and to institute more efficacious treatment.

Surgery has made possible the study of disease in living tissue, and such study has guided, to a considerable extent, the development of surgery. One is so much dependent on the other that the surgeon can no longer render the patient the greatest benefit without the closest co-operation with the clinical pathologist. The surgeon of today has had abundant opportunity to study gross and microscopic pathology, and the greater his knowledge of pathology, the more reliable is his judgment. However, situated as the surgeon is, he must usually base his judgment on only his knowledge of gross pathology. The inadequacy of familiarity with gross pathology alone is forcefully illustrated by MacCarty's statement that, of 47,434 surgical specimens removed at the Mayo Clinic, 18.2 per cent required microscopic diagnosis, and, further, that 5.7 per cent of all surgical cases which afford surgical specimens have tissue removed for diagnosis during operation, and that microscopic examination of 2.65 per cent of all such specimens does not corroborate the clinical or pre-operative diagnosis. Of these cases, 60 per cent require quite different surgical procedures as a result of the microscopic diagnosis. In spite of considerable knowledge of microscopic pathology, the surgeon, because of his immediate duties, does not have the opportunity to apply that knowledge at the moment, and must depend for the desired information on the clinical pathologist, who should be prepared to supply it without delay. Such pathologists are not numerous, for too often the pathologist is one whose training has been in the study of fixed tissues, to the exclusion of tissues freshly removed from the body.

Progression from the diagnosis of fixed tissues to proficiency in the microscopic diagnosis of fresh tissues demands study of fresh tissue cells. Wilson and others have described rapid methods of preparing fresh tissues for microscopic examination, requiring only a few moments. Inasmuch as the exact determination of the nature of many lesions requires microscopic examination, and since the surgical procedure is so often dependent on the microscopic diagnosis, immediate examination of fresh tissue is indispensable, not only to the surgeon, but to the best interests of the patient. This is particularly true in the diagnosis of malignant lesions. Evidence is not lacking that dissemination of neoplastic cells occurs when a malignant lesion is incised, and microscopic examination of the fixed tissue delays the operation for several days. However, MacCarty and Sistrunk have shown that there is no risk of dissemination in waiting a few moments for microscopic diagnosis in order that the surgical procedure may be governed by the diagnosis of the fresh specimen.

Many methods are available for making clinical diagnoses, yet Cabot has reported an error of approximately 50 per cent in clinical diagnosis. The frequent necessity of removing glands for diagnosis, excising breast tumors for diagnosis, performing diagnostic curetments, and so forth, illustrates the

difficulties of clinical diagnosis. Diagnosis of many pathologic conditions can be made before operation; others can be diagnosed during surgical exploration before tissues are removed, and some can be diagnosed grossly after tissues are dissected and removed; but, as MacCarty has reported, there is a certain percentage which cannot be diagnosed positively without microscopic examination.

In order that the pathologist may become proficient in the diagnosis of fresh tissue, he must have access to all fresh tissue so that he may study the normal and the pathologic, and the intermediate stages between the two. The study of gradations is particularly necessary in the diagnosis of suspected malignant lesions, for they are not of mushroom growth—benign one day and malignant the next. MacCarty has shown that parenchymal germinative cells of some organs undergo certain morphologic changes, and has described the epithelial hyperplasia as primary, secondary, and tertiary, defining these changes, respectively, as benign, doubtful, and malignant epithelial growths. In giving his opinion after microscopic examination, the pathologist requires the surgeon to have sufficient knowledge of gross pathology to be able to excise a representative specimen for examination. Malignancy may be actually present, and the microscopic examination by the pathologist fail to reveal it, unless a representative specimen of the diseased tissue is presented.

The educational campaigns conducted by the American Society for the Control of Cancer can accomplish their purpose only through the institution of methods of diagnosis which will lead to the early recognition of the absence or presence of malignant lesions. That accurate clinical diagnosis is not always possible, is admirably pointed out by MacCarty, who utilizes tumors of the breast for this purpose. He shows that in 20.6 per cent of the cases the clinical diagnosis is not indicative of the true pathologic condition, an uncertainty illustrated by the terms "nodule," "tumor," "mass," "growth," and so forth. Furthermore, he states that 16.7 per cent of all clinical diagnoses of tumors of the breast are incorrect, so far as malignancy and benignancy are concerned, and that 5.5 per cent of all clinical diagnoses of malignant conditions of the breast are incorrect. With educational propaganda these errors of diagnosis are increasing, and they are legitimate errors, for in but a small percentage of instances is it possible to make a correct clinical diagnosis of the exact pathologic process in the breast early in its development, on account of the absence of clinical manifestations by which it may be recognized as benign or malignant. Only by early excision of tumors of the breast is early diagnosis possible. After excising the tumor the surgeon or pathologist may be able to make a diagnosis on gross appearance, but MacCarty has shown that 18 per cent of all carcinomas of the breast have not been positively diagnosed by the clinician or surgeon and have required microscopic diagnosis. It is unquestionable that even careful clinicians and excellent surgeons make such mistakes. To correct such clinical errors and supplement the diagnostic ability of clinician and surgeon demands the services of an expert clinical pathologist for the examination of the fresh tissue. When the diagnosis is questionable or the significance of the

clinical manifestations or gross appearance is in doubt, the scope of the surgical procedure depends on the pathologist's verdict.

No longer may the surgeon who has not readily accepted the advantages of fresh tissue diagnosis fortify his objections with the statement that when he has been in doubt from clinical manifestations and gross examination of tissue the pathologist has also been in doubt. In studying fresh tissue, the pathologist has been enabled to study living cells and has observed those cellular changes which occur during the intermediate stages of development of a lesion from benignancy to malignancy; and he who is adequately trained is not in doubt in the recognition of such changes. Considerable difference of opinion may exist among pathologists expert in the microscopic examination of fixed tissues, but it is unquestionable that cellular degeneration, by virtue of the length of time since the death of the tissue, even though fixed, may be partly responsible for the disagreement. It would seem that pathologic processes and nomenclature will be standardized only through the study of fresh tissue.

It has been a frequent clinical observation, in following the post-operative results of the treatment of malignancy that some patients live much longer than others, even though the lesions were of approximately the same degree of development and were treated by the same methods of excision. MacCarty, Powell, and others have shown that such microscopic manifestations as lymphocytic infiltration, fibrosis, hyalinization, and cellular differentiation exert a marked influence on post-operative life, and that the average post-operative life is longer when these factors are present singly or in combination. These observations suggest that such activities play a significant part in the natural defense mechanism against cancer after it has once developed.

Broders has indicated that cellular activity exerts a marked influence on the progress, clinical manifestations, and ultimate results of treatment of cancer. He has utilized cellular differentiation as a means of grading the degree of malignancy in epithelioma, classifying malignancy under four grades, each dependent on the amount of differentiation of the epithelial cell. The most highly malignant epithelioma shows little or no tendency toward cellular differentiation. If about three-fourths of the epithelial cells are differentiated and one-fourth undifferentiated, the malignancy is graded 1; if the differentiated and undifferentiated cells are about equal, it is graded 2; if the undifferentiated cells form about three-fourths and the differentiated about one-fourth, it is graded 3, and if there is little or no tendency toward cell differentiation, it is graded 4. The number of mitotic figures and the number of cells with single, large, deeply staining nuclei, play an important part in the grading. Clinical application of this method of grading has shown that those epitheliomas in grade 1 are indolent in growth, tend to remain localized lesions without an early tendency to metastasize, and possess little tendency to recur after removal, whereas those in grade 4 are rapid in growth, extend locally, metastasize at an early age, and tend to recur after most radical removal.

In the correlation of the microscopic grading and

post-operative results in several thousand patients treated, Broders has shown that excision of epitheliomas showing malignancy of grades 1 and 2 is accompanied by a high percentage of cures, while those of grades 3 and 4 frequently recur within five years following radical excision. Broders' contribution marks a most important advance in correlating the science of pathology with the art of surgery. Determination of the degree of malignancy of a given tumor by examination of the fresh tissue, obtained by non-operative methods before operation, or obtained during operation, helps in determining the justifiable magnitude of operation and a relative prognosis. The application of this or other means of determining the degree of malignancy makes possible the standardization of methods of treating malignant lesions and of judging the relative merit of various forms of treatment for the different types of malignant disease.

NECROPSY

Supplementing diagnostic ability, presenting methods of measuring degrees of malignancy, and supplying a means of relative prognosis, the clinical pathologist has come to occupy a permanent position in relation to the most efficient practice of surgery. However, in order that errors in surgical judgment may be minimized, causes of failure of technical procedures recognized, and causes of death ascertained, necropsy examinations are essential after all surgical deaths. Too often such examination is looked on merely as a means of determining the cause of death. In view of the gross inaccuracy of vital statistics, this is just cause for necropsy, but in order that the surgeon may improve his diagnostic and surgical judgment he must seek the exposition of his errors of omission or commission, which can be obtained only in the carefully conducted necropsy. Inasmuch as but a small proportion of post-operative fatalities are coroners' cases, it is possible to obtain necropsy only through appeal. The frequency with which consent for necropsy examination is obtained is usually directly dependent on the sincerity of the desire for such examination. The surgeon who has exercised his best diagnostic and surgical judgment and operated in perfect sincerity and with confidence of a favorable result, possesses sufficient temerity not only passively to allow necropsy but sincerely to desire and actively seek it. His efforts are usually fruitful. Wilson has shown that as the value of necropsies to the progress of surgery became apparent, post-mortem examinations at the Mayo Clinic increased from 22 per cent in 1904 to 95 per cent in 1915, an average of about 85 per cent having been maintained since then.

Necropsy not only discloses causes of death and facts by which surgical judgment may be enhanced, but often shows that certain important features of disease, perhaps not recognized by clinical examination or surgical exploration, have been contributory causes of death. Furthermore, it often discloses a remote distribution of the primary disease which may be impossible to determine clinically or by exploration. The surgeon who welcomes necropsy will profit by what he sees, his perspective of disease will be broadened, his diagnostic and surgical judgment

ripened, and an opportunity to measure his surgical limitations afforded.

The necropsy pathologist may contribute to a better selection of patients for operation, a reduction in mortality rate, and a reduction in post-operative complications, if he has the opportunity to present the complete picture of all tangible morbid processes at formal pathologic conferences attended by all physicians associated in the care of the patient. The presentation of the case history, clinical diagnosis, operative procedure, post-operative course, and necropsy findings leads to an otherwise unobtainable perspective of disease, and affords opportunity for complete correlation of clinical, operative, and post-mortem findings. Criticism by the necropsy pathologist of the judgment exercised in technical procedures and subsequent management in their relation to anatomic findings at necropsy, not directed as a personal attack but in a friendly, impersonal, not undebatable manner, is received by the surgeon and clinician in the same spirit, and may contribute to the enhancement of service and to the benefit of mankind.

SUMMARY

The investigation of the end-results of disease by Hunter and the physicians of his time gave impetus to the scientific investigation of disease. With the advance in the art of surgery there has been a parallel advance in the science of pathology, although in the early years of development the two were but remotely related. The extension of vision by the lens has cemented their union until the clinical pathologist has become indispensable to the progress of surgery. The necropsy pathologist will continue to correlate clinical, operative, and anatomic findings, seeking the truth, so that surgical deaths shall not have been in vain.

MANAGEMENT AND TREATMENT OF BURNS

By H. J. RING, M. D., *Ferndale*

I HAVE tried all the standard treatments and about every new method for the treatment of burns presented to the profession during the last forty years, as opportunity offered, with the result that I have finally adopted a certain way or method of handling all burns of every degree of severity, and I now obtain uniformly good results in every patient where a cure is possible. The principles to be observed in all burns of every degree are as follows:

1. To overcome and relieve the pain as quickly as possible.
2. The immediate application of a permanent dressing.
3. A permanent dressing that will preserve and conserve as much injured tissue and skin as possible, and overcome the shock from the injury.
4. Dressings that are removable and that may be renewed without pain or injury.
5. Dressings that will prevent sloughing, pus formation, and bad odors.
6. Early restoration of function without defects.
7. Due consideration of cosmetic effects.

All these principles are covered by just two varie-

ties of dressings, both simple and effective and ever ready at hand, as needed at either home or hospital. The first and immediate dressing to be used is a paste of bicarbonate of soda (either chemically pure or the commercial kitchen brands) with cooled, boiled water, applied directly to cover the entire burned area and made to stay with gauze or bandages saturated with the same paste. More paste is then applied over the bandages to make a complete thick, moist layer over the entire injured surface. The parts are then covered with a light towel wet with a saturated solution of the same soda, and finally the whole is enclosed in oiled muslin or oiled silk, with just sufficient bandages to retain all the dressing in place. The oiled silk or muslin covering should be opened at regular intervals and the dressings again saturated with cold saturated solution of the bicarbonate of soda, always properly prepared. The dressings must be kept moist to prevent the soda from drying and caking. The paste dressings are renewed once a day, employing a saturated solution to remove any cake or crusted soda, and using care not to wash or disturb the injured skin blisters or other tissue. The second and subsequent dressings are made, applied and kept moist, as described for the first one. These dressings should be continued, with daily renewals, for at least four or five days in every case, and in deeper burns until beginning separation of the destroyed tissue. The first dressing quickly relieves the pain and overcomes shock. Its continuous application acts to conserve and restore injured skin and other tissue, prevents the acid fermentative processes present with other dressings in the separation of destroyed tissue, thereby also preventing fever, bad odors, pus formation, and infection. Blisters must never be opened because, if left alone, skin formation will take place under every dried blister and thus diminish the danger of scarring. Should blisters break, continue the soda dressings until the old skin flattens to the level of normal skin and until beginning separation of destroyed tissue in the deeper burns when it may be discontinued and the second permanent dressing applied, which is a simple ointment, as follows:

R Bismuth Subnit $\frac{5}{16}$; Ung. Zinci Oxid. $\frac{5}{8}$; ft. Ung. (This oxide must always be prepared from benzoinated lard, never from vaseline.)

Sig: Apply direct to the skin, open sores, or denuded surfaces, or on gauze, to completely cover all parts affected. It may be renewed once or twice daily, without removing what may be adhering to skin or other parts, but adding fresh or new to keep all involved parts constantly covered. In case of painful, irritable deep sores at the time of separation of dead tissue, the addition of from one to two grains of sulphate of morphia to every two ounces of ointment, according to age of patient, will give entire relief and should be discontinued after a few days' use. This dressing prevents pus formation, serous oozings, and bad odors. It is clean and very comfortable to the patient, allows free movements of parts, and produces the best possible restoration of function and cosmetic effects, without adhesions or contractions, and must be continued until good, healthy, strong skin again covers the area affected. Oiled silk or muslin should be used outside of the other dressings until all sores are entirely healed. In

case of too prolific or redundant granulations in deep burns over large areas, apply a little of a 20 per cent solution of argyrol when renewing dressings, once a day or every other day as may seem necessary, and with this dressing you will rarely need to resort to skin grafting, even on extensive raw open surfaces.

MORTALITY RATES OF CARCINOMA OF THE UTERUS IN CALIFORNIA

By ALFRED BAKER SPALDING, M. D., *San Francisco*

In California, with an annual total number of deaths of from 52,000 to 54,000, it has been found that the total cancer mortality averages about 8½ per cent, which means an annual cancer death rate in the neighborhood of 4500.

It does not seem probable that cancer starts from a single cell, but rather that simultaneously many cells in a particular upset environment develop about the same time malignant characteristics.

DISCUSSION by Frank W. Lynch, *San Francisco.*

OUR ideas on the incidence and the mortality rates for cancer are based at present upon statistics gathered by various boards of health, by some hospitals, and by life insurance companies. The gathering of these statistics is an exceedingly complicated matter and calls for much expert understanding. Not until recently have any satisfactory figures been published. These corrected statistics have come chiefly from the larger insurance companies. At first glance it appears that malignancy is becoming alarmingly more frequent and some conscientious statisticians believe that cancer is increasing at the rate of 2 per cent a year. This impression is due in part to the fact that the older statistics report that only about forty individuals per hundred thousand died annually from the disease, while now many cities report over 100 annual cancer deaths per 100,000 population. In the United States the registration area for vital statistics is quite extensive and is most conscientiously supervised. Still, it suffers from unavoidable errors incident to the various factors which cause a physician to render, at times, an incorrect certificate as to the cause of death. Even with our own limited experience, we know of patients who have died of carcinoma of the uterus whose certificates of death state, with truth, that they died of heart disease or of an accident.

In California, with an annual total number of deaths of from 52,000 to 54,000, it has been found that the total cancer mortality averages about 8½ per cent, which means an annual cancer death rate in the neighborhood of 4500. Of these cancer deaths, the genital organs furnish 14½ per cent.

San Francisco presents an unique situation, in that it ranks highest in cancer deaths by a very wide margin, rating 132 annual cancer deaths per 100,000 population, while the combined average of nine other cities of the United States is only 104 per 100,000. Los Angeles ranks seventh, with a rate of 102 per 100,000 population. Due to this fact, San Francisco has been selected as a city that would prove interesting for cancer research and through the Hoffman Survey, the San Francisco Board of Health is now getting ready to carry out this work along very elaborate and comprehensive lines.

Doctor Frederick L. Hoffman has requested that the local medical profession assist him in a San Francisco cancer survey, by replying to a questionnaire regarding every cancer patient under treatment during the year 1924. These questionnaires are somewhat extensive, and will require considerable careful work on the part of the attending physician, but the result to be obtained is so important that we all should be more than willing to assist in this work.

To me, it does not seem probable that cancer starts from a single cell but rather that simultaneously many cells in a particularly upset environment develop about the same malignant characteristics. Just how long it takes for these few malignant cells to develop a noticeable cancer tumor that is histologically characteristic and produces symptoms noticed by the patient is unfortunately an unknown factor. Possibly what we speak of at the present time as a pre-cancerous stage is this early stage of cancer development. The duration of the disease from the onset of noticeable symptoms, such as hemorrhage, to the death of the patient is better known. While the course of the disease may, in one case, be very slow and in other cases very rapid, the usual time noted is somewhere in the neighborhood of two years. That has been our experience at Stanford, with a few cases observed where no treatment for the cancer had been carried out.

The patient is certainly fortunate who has a microscopical diagnosis of early carcinoma of the uterus, but the patient who comes for treatment a year after symptoms develop or who has been subjected to improper and incomplete surgery, with all the visible evidence of ulcer formation, or, still worse, cancer recurrence, is, in our experience, in a practically hopeless condition, so far as cure is concerned. So far-reaching is this that it seems justifiable and ethical to inform women over 30 years of age of the importance for routine pelvic examination at reasonable intervals, even though no symptoms exist.

Pinch very justly deprecates the statement at times appearing in the lay press that radium and other forms of radiation therapy are a failure and suggests that the term "cure" for advanced cancer cases be changed to "arrest of disease." Radiation therapy is an invaluable addition to our armamentarium for the care of the cancer patient. It is undoubtedly curative when used early enough, and frequently patients with advanced cancer have lived in comparative comfort after such treatment when all other resources of medicine and surgery had been exhausted. However, the only cures I have to report have been obtained with patients operated upon early by radical complete hysterectomy, in some cases aided by radium or x-ray either before or after operation. In the early stage of the disease, with this form of treatment I have 31.2 per cent of cures without recurrence in from three to seven years, with a series of thirty-two patients. The immediate operation death following hysterectomy was six, or a mortality of 19 per cent. This is somewhat higher than that usually reported, and is due in part to the inexperience of early clinic years. The last immediate mortality following hysterectomy was on March 1, 1918. During the past six years we have

had at Lane Hospital no immediate fatalities which can probably be accounted for by better staff organization and improved technique. With no other form of treatment have we succeeded in curing a patient for three or more years that ultimately did not die or have a recurrence, although we have two of forty-two radium-treated patients alive and free from recurrence since 1921, as against two of seven patients treated by operation alive and free from recurrence for the same length of time.

My present preference in choosing a method for treating the early case of carcinoma of the uterus is to treat the patient with radium and x-ray before operation; in about five weeks to do a radical hys-

terectomy with removal of parametrium and to avoid post-operative radiation, except for the treatment of recurrence. All suspected cancer patients are subjected to a diagnostic curetage and excision of cervix specimen, inserting 100 mg. of radium while awaiting a frozen section diagnosis. If found malignant, the radium is left in the uterus from twenty to thirty hours. The radiation department advise in each case as to the need of deep x-ray therapy. When deep x-ray therapy is used, we usually divide the treatment into two stages, with one-day interval. In an average case, the factors are approximately as follows: With a target skin distance of 50 cm., 300 to 450 milliamperes minutes

CANCER OF UTERUS
CHART I

Body 16								Cervix 95								Body and Cervix 7							
August, 1912, to April, 1921								April, 1921, to April, 1924															
Treatment	No.	Av. Age	Stage			Auxiliary		No.	Av. Age	Stage			Auxiliary			No.	Av. Age	Stage			Auxiliary		
			1	2	3	Rad.	X-ray			1	2	3	Rad.	X-ray				1	2	3	Rad.	X-ray	
Abd. Hysterectomy.....	32	47	20	8	4	11	2	7	48	1	4	2	7	6		42	48	3	9	30	40	29	
Radiation	16	45	3	6	7	16	1	0	0	0	0	0	0	0		0	0	0	0	0	0	0	
Pac. Cautery.....	8	48	0	3	5	1	0	1	48	0	0	1	1	0		0	0	0	0	0	0	0	
Percy Cautery.....	3	44	0	0	3	1	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	
Vag. Hysterectomy.....	1	39	0	1	0	0	0	1	41	0	0	1	0	0		0	0	0	0	1	0	0	
Untreated	6	51	1	0	5	0	0	51	46	4	13	34	48	35		51	46	4	13	34	48	35	
Total	66	45	24	18	24	29	3	51	46	4	13	34	48	35		117	45	28	31	58	77	38	
34% operable; 50% had Hysterectomy								8% operable; 15% had Hysterectomy															
Series Total.....	117	45	28	31	58	77	38	117	45	28	31	58	77	38									
24% operable; 34% had Hysterectomy																							

CANCER OF UTERUS
CHART II

August, 1912, to April, 1921						April, 1921, to April, 1924				
Treatment	No.	Opera- tive Mortal.	Total Dead	Aver. Cancer Life Months	Living with Recur.	No.	Opera- tive Mortal.	Total Dead	Aver. Cancer Life Months	Living with Recur.
Abd. Hysterectomy	32	6	18	41	1	7	0	2	15	1
Radiation	16	0	10	20	2	42	1	15	21	11
Pac. Cautery	8	0	6	19	0	0	0	0	?	0
Percy Cautery.....	3	0	2	12	1	1	0	1	24	0
Vag. Hysterectomy	1	0	1	20	0	0	0	0	?	0
Untreated	6	0	5	31	1	1	0	1	17	0
Total	66	6	42	24	5	51	1	19	19	12

Of 66 cases in the first group: Immediate mortality from Hysterectomy, 19 per cent. One patient died 6 years and 2 months after Hysterectomy. One patient is living with recurrence 4 years and 8 months.

CANCER OF UTERUS
CHART III

APPARENT CURE AT LAST VISIT											April, 1921, to April, 1924				
August, 1912, to April, 1921															
Treatment	No.	No. Cured	Number of years after operation								No.	No. Cured	No. yrs. after oper.		
			1 yr.—	2 yr.X	3 yr.X	4 yr.X	5 yr.X	6 yr.X	7 yr.X				1 yr.—	2 yr.X	3 yr.X
Abd. Hysterectomy	32	13	3	0	2	3	1	1	3	7	4	2	2	2	0
Radiation	16	4	4	0	0	0	0	0	0	42	16	14	2	2	0
Pac. Cautery.....	8	2	2	0	0	0	0	0	0	0	0	0	0	0	0
Percy Cautery.....	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Vag. Hysterectomy	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Untreated	6	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Total	66	19	9	0	2	3	1	1	3	51	20	16	4	4	0

Thirty-two Hysterectomies gave 3 to 7 years cures in 31.2 per cent. Thirteen Hysterectomies had radium as auxiliary. Six were carcinoma of cervix. One was carcinoma of body.

are given through a round port 25 cm. in diameter centered over the front of the pelvis, a $\frac{3}{4}$ mm. copper filter and 200,000 volts being used. On the following day a similar port is radiated over the back.

The accompanying charts state graphically my private and clinical experience with the 117 cases of cancer of the uterus treated from August, 1912, to April, 1924. With the patients treated before 1921, 71 per cent either died or had recurrence. Fifteen per cent were without recurrence from three to seven years, while 14 per cent were without recurrence so long as traced, being lost track of, however, before the three-year period was reached. Fifty per cent were operated upon, of whom 31.2 per cent were cured and 19 per cent died as a result of operation. Since 1921, radium and deep x-ray has been used more extensively, and only 15 per cent of the patients have been operated upon. The time is too short to judge fairly the comparative value of radiation versus operation, and the problem is more complicated because since using radium and deep x-ray therapy, although more patients are being received for treatment, a much larger percentage of the patients show advanced cancer growth. Of twenty-five patients dead after radiation treatment, the life duration was less than with twenty patients dead after operation. However, of the twenty-five patients dead after radiation, one died of an accident, one of a heart lesion, five had had incomplete operations by outside doctors before radiation treatment, and two died following hysterectomy by their family physicians after radium.

The prognosis for early cancer of the uterus is so good and a fatal outcome for advanced carcinoma of the uterus, regardless of treatment, is so sure that the greatest hope for reducing the apparently increasing cancer death rate seems to lie in more frequent routine examinations by the family physician, the prevention and eradication where possible of all local and general irritations, the earliest possible pathological diagnosis in suspicious cases and in proven cases, the pre-operative use of radium and deep x-ray followed in a few weeks by complete radical removal of the uterus and parametrium.

Stanford University Hospital.

DISCUSSION

FRANK W. LYNCH, M. D. (University of California Hospital, San Francisco)—I believe that a statement of some of my findings would be of interest in connection with Doctor Spalding's paper, because, first, my observations agree absolutely with his and secondly, because the tables from our respective clinics undoubtedly represent a very considerable proportion of the uterine cancers in San Francisco during the period covered.

Since July, 1915, I have treated 218 patients for carcinoma of the uterus, but, for present purposes, will exclude all the cases that were neither radiated nor operated. We will begin our series in March, 1916, when I did the first radical operation in the present group. Between that time and October, 1923, I have treated 168 uterine cancers by operation or radium or in combination. The series should be closed January, 1920, to permit a study of cures, since I cannot discuss any case that has stood less than five years from the standpoint of cure. Our series, however, is so small that it probably will never be large enough to permit the discussion of the broad question of cures.

The chief trouble with small series is that a few unusual cases give false values. Ours may well suffer

from such a reason. Yet few may ever hope to present a series as large and well controlled as Wertheim's unsurpassed group of 1500. Our material presents 168 cases divided as follows:

TABLE I

148 carcinoma uterine cervix, 114 no previous operation for cancer, 34 operated for cancer by others, sent in for post-operative radiation.
20 carcinoma uterine fundus.

CARCINOMA OF UTERINE CERVIX

TABLE II

Primarily operable, 30 (26 per cent of 114).
Refused operation, 2.
Operation contra-indicated, 5.
Operated by radical method, the majority with pre-operative or post-operative radiation, 23.
(Four deaths—17 $\frac{1}{3}$ per cent.)
Radiated only, 7.

TABLE III

Operated between March, 1916, and Dec. 31, 1920, 19.
Died from operation, 4.
Died from cancer, 4, at 9 months, 1 year, 1 year, 3 $\frac{1}{2}$ years.
Died from intercurrent disease, apparently free from cancer (no autopsy), 2. One stroke at year, 1 pneumonia at 5 years.
Lost, 4, but well at 2, 2 $\frac{1}{2}$, 3 and 3 years after operation.
Living and well, 5, at 3, 4, 5, 5 $\frac{1}{2}$ and 7 years after operation.
Four cases of the nineteen were known to have been clinically well at least five years (21 per cent). Nine of the nineteen were well for a minimum of three years: one dying later from cancer; one at five years from pneumonia; two have been lost; and two are still short of a five-year period of observation.

TABLE IV

Operable cases radiated only, 7.
Deaths from treatment, 0.
Died from heart attack, symptom free from cancer, 1, at one year.
Died from cancer, 3, at 3, 3, and 3 $\frac{1}{2}$ years after treatment.
Clinically well, 3, at 3, 4 $\frac{3}{4}$ and 5 years after treatment.

TABLE V

Inoperable cervical carcinoma, made operable by radium, 4 living at 1 year with recurrence; 22 months, with recurrence; 2 years and 5 $\frac{1}{2}$ years.
The first two were operated when the growth appeared to be recurring, since it did not again respond to radium. The last two were operated while the growth appeared to have been controlled by radium.

TABLE VI

Inoperable cervical carcinoma radiated only, 80.
Lost, 2.
Dead, 64; 44 in first year, 9 in second year, 4 in third year, 7 in fourth year.
Living, 14; 7 less than 2 years, 3 in third year; 3 in fourth year; 1 in fifth year.

TABLE VII

Cancer of cervix operated elsewhere, radiated by me, 34.
Living, 5, at 1 year, 2 $\frac{1}{2}$ years, 3 years, 3 $\frac{1}{2}$ years, 5 years.
Dead, 29, 4 only lived more than 2 and less than 3 $\frac{1}{2}$ years.

CARCINOMA OF UTERINE FUNDUS

TABLE VIII

Carcinoma of uterine fundus, 20.
Operated radically, 9.
Operative death, 1.
Dead from disease, 1, in 6 years.
Lost track of 2, both well at 1 year.
Living with recurrence, 2, at 1 and 2 years.
Living and well, 2, at 3 and 7 years.

REPORT OF RESULTS OF INSULIN TREATMENT IN A CASE OF PREGNANCY COMPLICATED BY DIABETES MELLITUS AND FUNNEL PELVIS.

By LINDSAY PETERS, M. D., *Alameda, California*

ALTHOUGH diabetes mellitus is a widespread affliction, its occurrence as a complication of pregnancy is rare, because diabetic women are generally infertile (Lublin). In the statistics of Van Noorden, pregnancy occurred in only 5 per cent of 427 diabetic women of child-bearing age.

When, however, true diabetes mellitus does occur during pregnancy, either as a new development or as a condition antedating the pregnancy, its effects are very often disastrous either for the mother or the child, or both. Although in a certain proportion of cases the child is carried to or near term without serious results, in the majority of cases the disease is aggravated by pregnancy, and commonly results in coma and death. In 1908, Offergeld collected sixty-three cases from the literature where diabetes complicated pregnancy. Of these patients, 30 per cent died in coma, and 66 per cent of the children died. Thus, before the era of insulin, death of the mother and the fetus in utero were quite common, and when the child was born alive it was apt to be premature and puny and sometimes hydrocephalic or affected with congenital diabetes. Hydramnios is a frequent complication, which results in death or premature birth of the infant. De Lee, while pointing out that "insulin will enable us to tide diabetics along in pregnancy until the child is viable, it will help the patient to withstand the effects of labor (used prophylactically), and it is a positive aid in diabetic coma," cautions, nevertheless, that "one must not expect too much from it, because certain cases of diabetes are aggravated by the pregnancy and will not clear up until the pregnancy is removed." He advises that, on account of the need of experience, all cases of pregnancy diabetes should be put on record, especially those treated with insulin.

I have been able to find in the literature only three reported cases in which insulin was used to combat diabetes complicating pregnancy: Wiener reports a case, with hydramnios, in which the child was still-born, but the mother's life was saved by the use of insulin. Reveno reports a case of diabetic coma in pregnancy in which, with insulin treatment, the mother recovered, but the premature infant died after sixteen hours.

Ambard et al. observed "a woman, aged 35, with grave diabetes, who gave birth (eighth month) to an infant with diabetes (12 gm. sugar per liter of urine). The mother died in a few hours, the child after twenty-three hours. Necropsy showed lesions in the maternal and in the fetal pancreas. Evidently, the diabetes developed in the woman because the pancreas deficiency was not compensated by the affected fetal pancreas. The fatal outcome, after hyperglycemia had disappeared under insulin treatment, is ascribed by Ambard and his co-workers to lesions of the liver and kidneys, caused by transient acidosis."—Abstract in *Journal A. M. A.*, June 6, 1925, vol. 84, par. 1786.

The case here reported illustrates the beneficent effect of insulin in a diabetic patient who had previously lost a child at six months in a pregnancy complicated by hydramnios, but, incidentally, it is

also of interest as a striking example of marked contraction of the outlet of the bony pelvis in which a combination of favorable circumstances resulted in spontaneous delivery of a living, healthy child. Notwithstanding these two serious complications, either one of which gave grounds for anticipation of grave trouble, the pregnancy, labor, and lactation were exceptionally free from difficulty.

Mrs. M., aged 22 years, came to me February 24, 1924, in the fifth month of pregnancy. She had scarlet fever in early childhood, typhoid fever when about 12 years old, and during later girlhood her mother, thinking she had "drinking diabetes," had her urine examined, and this was reported negative.

There was nothing else of interest in her past history, except that she married in April, 1921, and in July, 1923, when 6½ months advanced in pregnancy, she gave birth to a dead child, which caused a considerable laceration. The stillbirth was said to have been due to "excess of fluid" (hydramnios).

The only things noteworthy in connection with the present pregnancy are that the last menstruation occurred October 10, 1923, and during the past three or four months there had been leucorrhoea, accompanied by soreness and itching of the vulva.

The outstanding findings on physical examination were: Fundus uteri at umbilicus; marked vulvitis, with profuse purulent discharge; large amount of sugar in the urine; pronounced funnel pelvis, with measurements as follows: Interspinous, 21.25 cm.; intercrystal, 27.5 cm.; bitrochanteric, 31 cm.; Baudelouque's diameter, 19 cm.; bisischial, 6.5 cm.; posterior sagittal, 8.5 cm. Diagonal conjugate not measured because of inability to reach the sacral promontory.

According to Williams, a bisischial diameter of 6.5 cm., with a posterior sagittal diameter not exceeding 8.5 cm., renders spontaneous delivery at term highly improbable.

By restricting the carbohydrates in the diet to a minimum, the sugar in the urine was much reduced in quantity and this, together with douches and local use of zinc oxide ointment, promptly eliminated the vulvitis, with its attendant itching. However, it was found impossible to maintain the patient's strength on the diet which was necessary to keep the sugar output small, so that on March 22, 1924, the use of insulin was begun. It was found that for a maintenance diet, 10 units three times a day, half an hour before meals, was required. This kept the patient in good condition and the urine either sugar-free or with only a trace of sugar. Insulin was continued until June 15, 1924, one month before the date calculated for maturity of the child, when labor began suddenly with severe uterine contractions at frequent intervals, attended with straining of abdominal muscles, like second-stage pains, which resulted, about four hours later, in expulsion of a female child in occipito-posterior position. During the delivery it was interesting to observe how amazingly the narrowness of the pelvic outlet was overcome by the moulding of the soft frontal bones of the premature child into the narrow cleft of the pubic arch, allowing the occiput to rotate forward over the perineum. It is evident that in this case the posterior position of the occiput was a favorable factor, allowing the frontal bones to become wedged into the narrow space between the pubic rami, with subsequent rotation of the occiput over the peri-

neum. In spite of the prematurity and small size of the child (six and one-half pounds), a moderate laceration of the perineum could not be avoided, on account of backward displacement of the head by the narrow pubic arch. Immediately after birth the head was seen to be greatly compressed laterally in its anterior portion, giving it a wedge shape. The soft tissues overlying the frontal region were purple from ecchymosis, due to severe pressure to which it had been subjected by the narrow pubic arch. The shape of the skull rapidly regained its normal contour and color, and the child thrived, being now apparently normal in all respects, although, owing to hypersensitiveness of the mother on the subject, I have not been able to obtain a specimen of the baby's urine for examination.

The mother had a normal convalescence, and has nursed her baby for nine months. After delivery it was found possible to keep the urine almost free from sugar by means of a restricted, low carbohydrate diet, without the use of insulin, but after about two months it became evident that the patient was undernourished and deficient in strength, so while on a visit to Canada, she, of her own accord, resumed the use of insulin, taking 20 units once daily and increasing the amount of carbohydrates in the diet. She rapidly became strong, gained weight, the skin had a good color, and she appeared and felt herself to be in perfect health. However, on February 17, 1925, she consulted me on account of a return of vulvitis, such as she had when she first came to me. She confessed to having substituted ordinary bread for gluten bread in her diet some time previously, but claimed that urine tests made daily showed no sugar present. She was catheterized at the office and the urine was found heavily loaded with sugar.

A laboratory test on March 7, 1925, showed: Glucose, 7.1 per cent; phenylhydrazine test positive for glucose; blood sugar, 374 mgms. per 100 cc. The specimen for blood-sugar test was taken four hours after breakfast, before which 8 units of insulin were taken. The blood sugar should have reached its lowest point at this time.

The laboratory report makes it clear that we were dealing with true diabetes mellitus and not lactosuria, alimentary glycosuria, nor the so-called renal diabetes which are frequently found in the gravid state.

In summary the case shows:

1. That in a patient who had hydramnios and a premature stillbirth in her first pregnancy, by the aid of insulin it was possible to carry her through a subsequent pregnancy to near term and for her to nurse her child without physical detriment.
2. That with high degree of contraction of the pelvic outlet spontaneous delivery of a premature but vigorous child, in occipito-posterior position, occurred.

We are receiving many compliments on the Medical and Surgical "Conversaciones." Several new ones are being started. If you want to take part in them, tell the editor about it.

TREATMENT OF ACNE VULGARIS

By ERNEST K. STRATTON, M. D., San Francisco

(From the Department of Dermatology and Syphilology, Stanford University Medical School)

X-ray is the best therapeutic remedy we have for the permanent cure of acne vulgaris.

The pustules and subcutaneous abscesses should be cleared up surgically and with the aid of vaccines before beginning x-ray therapy.

The amount of x-ray necessary to effect a cure can be greatly reduced if the hyperkeratotic layer of the skin is first removed by peeling.

In order to avoid the serious sequelae which sometimes follow the injudicious use of the x-ray, it is a better policy never to allow the combined fractional dosage to exceed a skin erythema dose, without giving the patient at least a two-week rest period.

FOR convenience and for the purposes of this discussion, acne is presented under three group headings:

Group I includes the juvenile or the most common form of acne vulgaris; Group II, the artificial acnes, caused from both internal and external irritants, such as the ingestion of iodides and bromides and the local applications of or contaminations with the tars, oils, paraffines, etc.; and Group III, acnes of obscure etiology, which do not respond satisfactorily to local treatment, and which occur, as a rule, in individuals over 25 years of age.

Juvenile acne vulgaris, by far the most common type of the disease, comprises some 8 per cent of all skin lesions. It appears first about the age of puberty in certain individuals who have an abnormal skin, as manifested by (a) a dirty yellowish or grayish coloration, (b) by accentuation of the pilo-sebaceous pores, and (c) by a slight thickening of the integument. This kind of a skin not only furnishes the necessary substratum for acne, but associated with it is a marked increase in the sebaceous gland activity. To this whole picture Darier has given the name "kerosis," and he believes these manifestations to be closely related to sexual development, as they are especially noted at two periods of life, namely, at the time of birth, when some infants are covered with a greasy epidermic covering known as vernix caseosa, and then again at puberty, when the genital function is becoming established.

There is formed in the sebaceous follicles, under appropriate conditions, a mixture of sebum and horny cells, cylindrical in shape, whose exposed surfaces become black, not by a deposit of dust as is generally believed, but through the oxidation of the keratin, and thus we have formed the primary lesion of acne vulgaris, commonly known as the blackhead or comedone.

Comedones, in addition to acting as foreign bodies, furnish by the very nature of their composition, an excellent culture media for many bacteria. The one most constantly present is the microbacillus of Sabouraud, which is morphologically identical to the acne bacillus of Unna. Irritants thus activated cause a dilatation of the vessels in the subpapillary zone about the follicles; there is an infiltration of round cells, and the result is the formation of the papule. This process usually goes on to formation of pustules, superficial or deep, depending, as a rule, upon the virulence of the secondary

invading pyogenic organisms. The usual benign character of the suppuration, its freedom from pain and its slow development is most generally due to the non-virulent staphylococcus albus. The different lesions are often associated in the same patient, thus explaining polymorphous acne, consisting of comedones, papules, pustules and, occasionally, subcutaneous abscesses.

The treatment of this type of acne should first of all be directed to the correction of any constitutional disturbance which may play an equally important part, such as habitual constipation, dyspepsia, improper diet. Sugars and starchy foods especially should be reduced because they have a tendency to increase sebaceous secretion.

On the whole, however, the relief of acne depends essentially upon intelligent local treatment. The first step is to get rid of the pustules and subcutaneous abscesses, which is best accomplished by incising them and maintaining drainage with a hygroscopic wet dressing, preferably alkaline. A formula for a satisfactory one is 8 per cent magnesium sulphate or sodium chloride, 8 per cent sodium bicarbonate, and 4 per cent boric acid solution. While many experienced dermatologists doubt the value of vaccine therapy in acne, I believe that it is especially beneficial as an aid in clearing up the pus. The best results are obtained with the use of the stock-mixed staphylococcus vaccines. Results are disappointing, however, in other than the pustular variety, in which I administer routinely this vaccine, as well as the combined acne vaccine.

After the pustules have disappeared there still remain papules, comedones, and a thickened skin to deal with. Therefore, the next indication is to get rid of the thickened skin; this is accomplished by peeling. There are many remedies for the purpose, and they can be incorporated in ointments, pastes, or lotions. Lotions are cleaner, and one consisting of 2 grains of bichloride of mercury, $2\frac{1}{2}$ drams each of salicylic acid and camphor in 3 ounces of alcohol, if applied twice daily after the skin is scrubbed thoroughly with soap and warm water, will cause the removal of the hyperkeratotic condition in from four to seven days.

The skin is then ready for x-ray therapy, and a surprisingly small quantity of it is needed to clear up the papules after the skin is first prepared as indicated. Begin with 10 per cent of an erythema-producing dose and give five weekly treatments, increasing the dosage 5 per cent each week. This is an effective, as well as a safe method of treatment. In the aggregate, such intermittent dosage does not exceed a single skin erythema-producing dose. Should the trouble prove recalcitrant, however, the roentgen treatment can be repeated after an interval of two weeks.

The comedones, which are the only remaining lesions to be dealt with, should be removed mechanically at least once a week by means of a Bronson curette, and followed after one month by .5 to .75 of a skin unit of unfiltered x-ray. This causes an atrophy of the sebaceous glands, and with the diminished output of sebum the comedones will disappear. Lotio alba or boric acid in alcohol is useful locally during the treatment of the papules and comedones.

The scalp should receive attention from the be-

ginning, as it usually presents an oily pityriasis which may be controlled with a 10 per cent sulphur and 5 per cent salicylic acid ointment, together with thorough shampooing. The result is practically permanent, the patient never having more than an occasional isolated lesion thereafter.

Artificial acnes, resulting from the ingestion of large quantities of bromides and iodides, may appear in the usual acne areas. The bromide eruption usually consists of rather large crusted papulo-pustules, which are easily recognized. The iodides, however, cause many small follicular papulo-pustules, sometimes closely resembling a true acne, but the fact that the lesions are all of the same type and not associated with comedones or a seborrhoea indicates inquiry as to possible drug ingestion. Drug eruptions are probably due to the irritation produced during the process of excretion of these chemicals through the sebaceous follicles. The treatment naturally demands the withdrawal of the causative agents. Locally, mild antiseptic lotions are useful, and the intravenous injection of normal salt solution will sometimes hasten their elimination.

The artificial acnes, resulting from various local agents, are produced by the mechanical occlusion of the follicular orifices. Workers in tar, oils, particularly paraffin oil, are prone to develop this type. The lesions may occur anywhere on the body. The treatment consists of thoroughly scrubbing the part with soap and water, the application of a mild antiseptic and soothing paste, and by protecting the skin from future exposures.

Finally, there is a group of acnes in which the cause is difficult to locate. Fortunately, they are not as numerous as are the other types, but after having treated some of them locally, as hereinbefore outlined, for periods of several weeks without obtaining the desired results, and then seeing them clear up immediately on the removal of an infected ovary, appendix, tonsils or teeth, I then realized that, even in their beginnings, they had not presented the classical picture of acne vulgaris. Such atypical acne is seen, as a rule, in women over 25 years of age. Usually the eruption is more or less limited in extent, and either localized on the chin—a very favorite site—or to circumscribed areas on both cheeks. These patients require certain aid by local treatment, but I believe their permanent cure depends on the removal of focal infections, endocrine imbalance or some other chronic condition which may be causing a reflex flushing of the face, follicular congestion and atony of the skin, all of which finally lead to seborrhoea, the formation of comedones, and ultimately to the development of acne lesions.

CONCLUSIONS

1. X-ray is the best therapeutic remedy we have for the permanent cure of acne vulgaris.
2. The pustules and subcutaneous abscesses should be cleared up surgically and with the aid of vaccines before beginning x-ray therapy.
3. The amount of x-ray necessary to effect a cure can be greatly reduced, if the hyperkeratotic layer of the skin is first removed by peeling.
4. In order to avoid the serious sequelae which

sometimes follow the injudicious use of the x-ray, it is a better policy never to allow the combined fractional dosage to exceed a skin erythema dose without giving the patient at least a two-week rest period.

490 Post Street.

SOME PROBLEMS IN THE MANAGEMENT OF TUMORS OF THE URINARY BLADDER

By PAUL A. FERRIER, M. D., Pasadena

Papillomas should be fulgurated.
Malignant papillomas should be given a trial with fulguration and radium implantation through the cystoscope.
Papillomas which do not respond to the above procedure, multiple or extensive papillomas, those around the bladder neck, cases with uncontrollable bleeding or intolerant to cystoscopy should be treated by open operation.
Small cancers, favorably located, should have a cautery excision with meticulous care to avoid implants.
Multiple cancers confined to the bladder, especially if they involve the sphincter, call for total cystectomy.
Radium alone implanted through the cystoscope has had many apparent cures and is worthy of further trial in the hands of those who are prepared to implant needles accurately throughout the growth.
Deep x-ray should cover the regional lymph nodes in every cancer of the bladder.
Manifestly hopeless cases should not be tortured by ineffective measures. Cystostomy, nephrostomy or nothing.
Large cancers, having a reasonable amount of normal bladder and sphincter and one uninvolved meatus, should be removed by diathermy, followed by implantation of radium needles, through every cubic centimeter of tumor base, screened radium topically, supplemented by deep x-ray therapy of the regional lymph nodes. This method should supplant extensive resections and is, I believe, the greatest recent advance in the treatment of extensive cancers of the bladder.
DISCUSSION by Wirt B. Dakin, Los Angeles; Granville MacGowan, Los Angeles; R. L. Rigdon, San Francisco; Frank Hinman, San Francisco.

GREAT advances have been made in the treatment of tumors of the urinary bladder—fulguration, radium, improved operative technique, deep x-ray therapy, diathermy. This discussion is an attempt to evaluate available therapeutic procedures in the light of pathology and accumulated clinical data, so that the best procedure may be adopted for each individual case.

The etiology is unknown. Analine workers show a higher incidence. Maude Hamilton attributes this to arsenic. Extrophic bladders are more liable to cancer, probably from embryologic fault. Chronic irritation from stone or infection does not seem to play a part.

We adopt Geraghty's classification:

Epithelial	Papilloma	Benign
		Malignant
	Adenoma	
	Cysts	
	Carcinoma	Papillary
		Squamous
		Schirrous
		Adeno

Connective Tissue	Sarcoma
	Myxoma
	Fibromyoma
	Fibroma
	Angioma
Muscles	Myoma
Heterotopic	Rhabdomyoma
	Hydatic cysts
	Dermoid cysts
	Chondroma
	Cholesteatoma

Granulomas and syphilomas must be excluded. Also a villous disease in which delicate streamers arise without pedicle directly from the mucosa. It has been associated with tuberculosis, has been cured by curettage, and is evidently inflammatory.

Epithelial tumors comprise nine-tenths of bladder neoplasms. The great majority of these are papillary or schirrous. Adeno-carcinoma and squamous cell carcinoma are rare and malignant. All are familiar with the difficulty in determining the malignancy of papillary tumors by microscopic diagnosis. Structurally the benign papilloma consists of blood vessels in a branching fibrous stroma, covered with several layers of long-processed, oval; regularly arranged cells, surfaced with normal transitional bladder epithelium. Any irregularity in the size, shape, staining qualities of these cells, the presence of multi-nucleated cells, numerous mitoses with nuclei rich in chromatin, are signs of malignancy, even without a break in the basement membrane. From the fact that ten areas from a tumor may be normal and the eleventh show such a picture, the pathologist's difficulty is obvious. So much so that clinical and cystoscopic data are often more reliable.

The following characters indicate malignancy:

- 1. A fusing or clubbing or tendency to ulcerate of the papillary projections.
- 2. Edema, dilated vessels, velvety patches or submucous nodules about the margin.
- 3. A sessile, lobulated, fissured or ulcerated tumor.
- 4. Very large or multiple involvement with necrosis and urinary incrustation.
- 5. Infiltration of the bladder wall, demonstrable by vaginal or rectal palpation or cystogram with air or opaque medium.
- 6. An intractable cystitis in the presence of tumor.
- 7. A poor response to fulguration.
- 8. Metastasis.
- 9. Finally, microscopic diagnosis of passed or excised tissue.

Metastasis is generally late. Extensive involvement may be found at autopsy, as in two of this series, without demonstrable metastasis. On the other hand, Geraghty reports four cases which showed distant metastases before the bladder wall was involved. The sacral glands are usually first involved, but the bones may suffer early, as in cancer of the prostate. Lower reports metastasis to the brain. Tumors of the anterior wall are more likely to recur than those of the base. Extension to the vesicles and prostate is early, but other extension is usually late.

All papillomas sooner or later become malignant. They may exist innocently for twenty-five years or show malignant histology for years, without infil-

trating the bladder wall. They may be removed and recur as benign or malignant and still not infiltrate the bladder wall. Reference must be made to the extraordinary difference in malignancy of tumors which may show identical histology. Indolent tumors may for no known reason acquire great malignancy.

SYMPTOMS

Hematuria is the warning in nearly all cases. Painless terminal hematuria is particularly suggestive. Casper states that in only three of 142 patients seen soon after the initial hematuria was the tumor large. The duration of symptoms in 181 cases coming to the Mayo Clinic averaged twenty-six months. Sixty-two cases reported by Thomas ranged from two weeks to twenty-five years, while symptoms had been present in seventy-five cases of Caulk for an average of ten years. Frequency and pain are generally late symptoms. It is plain, therefore, that one of the greatest problems in the management of tumors of the bladder is to induce the family doctor and the patient to regard every hematuria as an indication for an immediate diagnosis.

TREATMENT

Benign papillomas, and those in which malignant degeneration has not invaded the pedicle or bladder wall should be fulgurated through the cystoscope.

The following case illustrates the type:

B. R. W. Male, aged 50, referred by Doctor Heddens. For three months he has had slight irritability of the bladder with blood at the end of urination. Cystoscopic examination showed a definite pedunculated raspberry tumor 2.5 cm. in diameter, just back of the right meatus. No necrosis; normal mucosa about the base. Fulguration twice with the D'Arsonval current completely eradicated the growth. No recurrence was noted for two years.

If such growths do not respond promptly, fulguration should not be continued, as they are malignant and will be stimulated. Geraghty and others have found that some of these early malignant cases which are not readily amenable to fulguration will rapidly respond to it after the application of radium.

For fulguration some use the uni-polar current, but the majority prefer the bi-polar D'Arsonval current because it penetrates more deeply. Buerger snares the growth and fulgurates the base. Unquestionably, radium should be implanted in the base if malignancy is suspected. Recurrence was noted in 25 per cent of the cases at Beer's Clinic; 27 per cent at the Mayo Clinic; 29 per cent at Johns Hopkins. It comes, as a rule, within a few months and at the original site. Examinations at intervals of a few months should be insisted upon.

So far the treatment of bladder tumors is agreed upon. Beer states the following contra-indications to fulguration in papilloma:

1. Tumor not readily accessible as about the sphincter.
2. Uncontrollable bleeding.
3. Multiple extensive papillomas.
4. Intolerance of cystoscopy.

For such cases the open operation is necessary.

The further therapeutic armamentarium consists of:

1. Partial cautery resection with infinite care to avoid implantation of tumor cells; total resection in selected cases.

2. Radium implantation through the cystoscope or cystotomy.

3. Diathermy through the cystoscope or cystotomy.

4. Deep x-ray.

5. A combination of these.

Resection of the Bladder—Gardner, in 1915, collected eighty-six cases in which only the growth was excised with 76.3 per cent recurrence in three years, while in fifty-eight cases in which the bladder wall with the growth was taken, 43.9 per cent recurred after three years. Scholl reports in 216 operated cases at the Mayo Clinic 48.2 per cent alive on an average of 3.2 years. Lower, in sixty-one resections, found 67.2 per cent dead, half in the first year. Squier, in 1923, reported results with his segmental resection of the bladder; that is, taking that entire segment of the bladder which drains into the same regional lymphatics with the tumor. It is impossible to remove the regional lymphatics of the bladder. Twenty-eight of the sixty cases were alive from two to eight years; not appreciably better results than with the old method.

Squier, Beer, Thompson Walker, and others have developed a method of surgical attack, with especial reference to avoiding implants. The essentials of this method are:

1. With the patient in the Trendelenburg position, through a long extra-peritoneal incision, free the bladder to the trigone, deliver it, and pack about it.

2. To avoid flooding the wound with cancer cells, have the bladder empty.

3. Open at a distance from the tumor, holding the bladder with smooth forceps.

4. Cauterize deeply the tumors and do a wide cautery excision, including the ureter if necessary.

5. Unless the peritoneum has been opened, fill the entire wound with 70 per cent alcohol for five minutes. Two per cent silver nitrate can be used.

6. Transplant the ureter if necessary.

7. Sere the raw surfaces and close with drain.

No statistics are available, but method, we are assured, is producing better results.

Total Cystectomy—In cases of advanced or multiple carcinomas confined to the bladder, especially those invading the sphincter, total cystectomy is the operative procedure of choice. It should be done in two stages. Scheele has collected sixty-two cases of total cystectomy with thirty-two permanent cures. Transplanting the ureter into the bowel requires great technical skill, and infection of the kidney mars many good results. The safer, though disagreeable procedure, is nephrostomy or ureterosotomy, with ureteral catheters draining into bag.

In all surgical operations on the bladder, pre-operative conditioning of the patient, tests of renal function and heart function, and clearing up infection as far as possible, are of the greatest importance, a lesson learned from prostatectomy.

COMBINATION OF SURGERY, DIATHERMY, RADIUM AND X-RAY

Success with the open method, using the D'Arsonval current, 1500 milli-amperes and a spark gap of .5 cm., and a large burning electrode so as not to produce sparks has been reported by MacGowan, Kolischer, and Corbus. If one meatus is involved, ureteral transplantation will be required, or if the kidney be infected, nephrectomy. Thomas and Pfah-

ler have added the implantation of radium needles into the cauterized base, with subsequent x-ray of the regional lymph nodes, reporting in 1922 twenty-six patients so treated in the previous three years with, up to that time, two deaths and one untraced.

The following case illustrates this procedure:

L. H. Male, referred by Doctor Lockwood. He has had spells of blood in the urine for six years. Two years ago he had complete retention from clots, and now has a hemoglobin of 30 per cent. Blood transfusions were necessary before attempting even a cystoscopic examination. This revealed a necrotic, malignant papilloma seven centimeters in diameter at the base, back of the right meatus, with implants on the opposite wall. The bladder was opened, the growths completely burned away with a bi-polar current, fifty milligrams of radium in needles implanted in the primary base for twelve hours, which was supplemented by an equal amount of fully screened radium on the surface later. This was over three years ago. He has been working daily at his trade, and recent cystoscopic examination showed no sign of recurrence.

Radium Alone—Barringer, by endo-vesicle or suprapubic implantation of radium alone, reported, in 1922, eight of ten cases of small carcinoma free from growth from three months to four years, and twenty inoperable cases with the tumor removed from the bladder for a period of one month to four years, during which three recurrences and one death were noted.

Buerger, in 1923, reports favorable results with radium alone through the cystoscope. It is generally agreed that the best results are achieved by the burying of the radium in the growth. Holding the radium against the growth is generally ineffective and more damaging to the normal mucosa.

Barringer's method is to open the bladder, remove the growth by cautery, and bury one millicurie of radium emanation in a capillary glass tube for each cubic centimeter of tumor. The lethal effect barely extends one centimeter, and the danger of missing some cells is great. Braasch and Scholl found, in histologic study of tumors so radiated and removed, that there were nests of living cells incarcerated by areas of fibrosis. This possibility makes it necessary to supplement the buried, unscreened radiation by topical, screened radiation.

If the urine is diverted from the bladder, comparatively huge doses of radium can be given, bringing hope to hopeless cases.

In using radium, these elementary principles of radium therapy must be borne in mind:

1. That cancer cells are more susceptible to the first radiation than to any succeeding radiation. Those men who treat, for example, carcinoma of the cervix uteri will tell you that the full lethal dose should be applied within six weeks and that subsequent fractional doses do more harm to the host than to the tumor.
2. As a corollary to the first, if tumors do not respond promptly to an adequate dose, they are radium resistant and will never respond.
3. Recurrences after radium do not respond well.
4. There is an enormous difference in the radium susceptibility of any given tumor. Radium has a selective effect on germinating cells. A soft cellular tumor will respond more quickly. But, unfortunately, such a quick growth is evidence of poor resistance of the host, and unsuspected extension or metastases are likely to have occurred beyond the visible area. Experience shows that papillary carcinomas are more favorable than schirrous, squamous or adeno-carcinoma of the bladder.

5. Radium rays, exactly like light, decrease as the square of the distance increases. Therefore, a lethal dose at one centimeter is one-fourth of a lethal dose at two centimeters. This is so simple that a child can understand and yet it is constantly disregarded.

6. Determination of the effective dose must take account of the absorption of radium rays. Therapy with unscreened emanation implants, depends largely on the soft beta particles. Now, one millimeter of soft tissue absorbs half of these, ten millimeters nearly all. It is plain, therefore, that before the comparatively few hard gamma rays can greatly affect tissue at two centimeters, the center will be necrosed. The body can only tolerate a limited amount of the toxemia this necrosis entails. Hence the area radiated at one opening of the bladder is limited. *Radium, from which the soft rays have been screened, is effective at a greater distance. That this is true is proven by hundreds of cases in which permanent suspension of the function of the ovaries has been caused by 1500 milligram hours of screened radium in side of the uterus. Practical experience has shown that needles buried accurately 100 milligram hours per cubic centimeter of cancer, supplemented by screened radium, often succeed in complete destruction of the growth. To make sure of outlying areas and metastases a more general radiation is needed.

Deep X-ray Therapy—This is a drag net for the whole pelvis. Considering the fact that it is the only method of affecting the lymph nodes, draining the bladder, it should be used in every case of malignancy. Experience does not show that it can take the place of local treatment, but the results of local treatment have been shown to be better when supplemented by x-ray.

Palliation—In many advanced cancers, especially with metastasis, the greatest comfort and longest life will be obtained by diverting the urine with no local treatment of the bladder. X-ray, or radium, may stop bleeding in inoperable tumors.

This series comprises eighteen cases:

Benign papilloma	2
Malignant papilloma	1
Papillary carcinoma	5
Schirrous carcinoma	6
Adeno-carcinoma	2
Secondary adeno-carcinoma	1
Squamous cell carcinoma	1

It contains some interesting cases.

Mr. C. Aged 91. Referred by Doctor C. D. Lockwood. He had Bottini cautery operation nineteen years ago by Doctor MacGowan for prostatic obstruction. This relieved him for five years when the trouble recurred. Doctor MacGowan then did a perineal prostatectomy. This gave him about ten years of comfort when pain and obstruction at the bladder neck recurred. He was told at this time that the trouble was due to polypi, and these were removed by fulguration. This gave him some relief, but there has not been the previous comfort since. Recent cystoscopic examination showed further polypi, but also a nodular, slightly ulcerated mass 1x2x2 cm. above the sphincter. Except for a mild cystitis the bladder is normal. No signs of the prostate present.

On account of the intolerable frequency and pain at the bladder neck of a suprapubic cystotomy was done. The growth was found as described, very dense and ulcerated. Section by Dr. A. M. Moody showed it to be adeno-carcinoma. Radium needles were implanted, 1200 mgh.

Subsequent examination showed the growth to have disappeared. It is now three years, and at ninety-four he is active and without signs of recurrence.

Mrs. A. M. Aged 65. Had had bleeding from uterus two years prior to a heavy treatment of 8000 milli-

*For caustic action, radium has no advantage over diathermy. It is for that twilight zone of selective activity on cancer cells beyond the living point of normal cells that its action is invaluable.

gram hours of fully screened radium for an adenocarcinoma of the body of the uterus. The growth disappeared, the uterus became normal in size, and the patient was apparently in good condition.

Two years subsequent to this blood appeared in the urine and cystoscopic examination showed a cauliflower ulcerating carcinoma, extending through the floor of the bladder three centimeters across its base. In spite of the hopelessness of the condition the patient wanted radium, and 500 milligram hours of gamma rays were given against the growth. Thorough deep roentgen therapy was applied by Dr. Carl Parker. Now, one year after, the patient appears in perfect health, the urine is negative and cystoscopic examination shows only a silvery soft scar in the floor of the bladder.

W. H. H. Aged 69. Referred by Doctor Macklin.

Terminal hematuria first noted four weeks ago. No frequency and no discomfort whatever. Urine shows a little blood, no pus.

Cystoscopic examination showed in the center of the dome a tumor 2 cm. in diameter, slightly raised, without papillary projection, but with rugae. No ulceration and the border and remainder of the bladder are normal. It did not melt with fulguration, and tissue removed with the rongeur showed the histology of a rectal growth—typical columnar epithelium with goblet cells. It was believed, therefore, to be of allantoic origin.

Operation showed a growth about the size of a hen's egg outside the bladder, extending toward the umbilicus. In it was a cyst 3 cm. in diameter, filled with colloid material. The growth was adherent to the peritoneum, but did not involve it. Intra-peritoneal exploration showed no secondary growths. Sagittal section shows an infiltrating growth originating in the midline just above the bladder and extending through it at the urachal attachment. Microscopic section shows an adenocarcinoma with intestinal type of cells.

The post-operative course was uneventful. Deep x-ray therapy will be given.

Citizens Bank Building.

DISCUSSION

WIRT B. DAKIN, M. D. (756 Broadway, Los Angeles)—The word problem in the author's title of his paper is certainly very appropriate in dealing with nearly all bladder tumors, whether benign or malignant, with the one exception perhaps of small "young" uncomplicated papilloma. Any personal equations or observations on his part are surely well appreciated by those in close touch with this subject.

Too much importance can not be placed on the portion of his paper in which he endeavors to impress upon the family doctor and the public the seriousness of the first blood noticed in the urine. Another item of interest is the importance of having these apparently well treated and cured patients return at stated intervals for observation.

His review of various authors' methods of surgical attack, with especial reference to avoiding implants, is interesting. Any prophylactic measures in this respect should not be omitted. Personally, "it might appear a trifle strenuous to some in advising the filling of the bladder with 70 per cent alcohol for five minutes as well as the suprapubic wound just before opening the bladder. However, if a large suprapubic drainage tube is used following the operation it would appear that sloughs of nearly any size would easily get out of the bladder.

The author should be complimented upon his careful and studious consideration of this most interesting subject. Recent consideration of this subject from a standpoint of tumor classification in regard to their degree of malignancy should help in deciding what method of procedure to follow in treating these tumors.

GRANVILLE MACGOWAN, M. D. (Brack Shops Building, Los Angeles)—The treatment of tumors of the bladder is a fascinating one. Doctor Ferrier has handled the subject in a very masterly manner.

In dealing with tumors of the bladder, two things have to be remembered. One is that whatever the apparent nature of any tumor that springs from the mucosa may be, if it is not removed and removed completely, early, it will eventually become carcinoma-

tous. The other is, that any method of treatment applied to it must be thoroughly destructive to all of its pathological cells, or it will prove futile.

I am satisfied if the tumor is discovered within a reasonable time after its appearance, that we possess, in its dessication by the skillful use of the D'Arsonval current; by the burial of radium needles within the tissues of the bladder at the site and in the immediate neighborhood of the growth—by the modality of the high voltage x-ray—agents which will, used singly, or with judgment in combination, effect a cure.

I do not look with favor upon any bloody dissection of the tumors. I have removed tumors, even when cancerous, by the knife and, in a few instances, have effected a cure; but resection, combined, as it inevitably is, always with rough handling, is not a reasonable method of treating these tumors, and does not give to the patient a proper chance.

I am inclined to believe that we have, in the recently introduced modality of the radio knife, an agent which will prove very valuable for the gross removal of bladder tumors in a bloodless manner. The dissection made, the base should then receive the application of the fulgurating current, or the placing of radium in needles at the selected spots within the zone of the tumors in the bladder wall, from which they have been removed.

I am not in favor of the proposal to remove the bladder in totality, the benefits of which seem to be an obsession of Doctor Ferrier. It is practically impossible to make a complete dissection of all of the tissues which are involved in the cancerous growth that has invaded the sphincter. Total cystectomy is not an easy operation even upon a man who is dead, and one might be allowed to be very skeptical about the thirty-two permanent cures which are said to have been collected by Scheele. If a carcinoma of the bladder is manifestly inoperable or success has not followed a radical application of the measures herein advocated, a double lateral nephrostomy will be, by all means, the measure which will give to the individual the greatest comfort and the longest life.

R. L. RIGDON, M. D. (291 Geary street, San Francisco)—The attitude of the general surgeon toward neoplasms in any part of the body may be characterized as radical. He realizes from a vast experience, that thorough and complete removal is the only justifiable method to pursue and if any course short of this is recommended, it is because of some deterrent circumstance in the individual case.

I believe this same attitude should be taken by urologists, with reference to bladder tumors; in other words, complete removal or destruction should be the aim.

There are so many conflicting circumstances to be considered in tumors of the bladder that very often the best method of procedure is difficult to determine, and it is just here that Doctor Ferrier's paper holds much of interest for us. He has very clearly and definitely suggested the best modes of procedure in different types of cases and his paper should be a reference guide to us in our work.

Another point that must impress all of us, is the necessity of early diagnosis. All practitioners of medicine, specialists or general, should have impressed upon them the necessity of giving due heed to the early symptoms, such as hematuria. Most patients are much alarmed at the appearance of blood in the urine, but unless this be accompanied by pain, they are apt to attach too little importance to it and presently their natural optimism and distaste for examination lead them to put aside investigation to a later date. In this manner, one golden moment may pass and the trouble which might be controlled easily if taken early merges into that large group of late diagnoses, where remedial measures are difficult or impossible.

FRANK HINMAN, M. D. (380 Post Street, San Francisco)—The paper by Doctor Ferrier brings out clearly and in detail the main and important facts of diagnosis and treatment of tumors of the bladder and I see no criticism of any statements he has made.

It was my privilege to work for three years side by side with J. T. Geraghty who has been the most quoted authority on bladder tumors for the past ten years and who always gave to those about him freely and com-

pletely of his knowledge and experience, and I carry with me today some very important impressions as a result of this association.

In the first place, the presumptive evidences of tumor of the bladder are rarely definite. Bleeding is a sign so frequently in other conditions than tumor and frequency of urination or other disturbances of urination accompanies other conditions even more frequently so that symptomatically can tumor of the bladder rarely be diagnosed. The one and only positive finding, other, of course, than that from cystotomy, is the cystoscopic one, and, clinically, Geraghty was always accustomed to differentiate two distinct types of bladder tumor; the one was papillary and most frequently multiple, the other was a sessile and infiltrating flat type tumor and occurred usually singly. The papillary tumors were distinctly of three types: First, the benign papilloma, second, the malignant papilloma and, third, the papillary carcinoma, the distinction being very simply that there was no cancer in the first, that in the second the malignant degeneration was confined to the body of the polyp and in the third that the malignancy was infiltrating the base and bladder wall, but clinically the three types were conveniently associated because the initial treatment of all three was the same, namely fulguration. The second single infiltrating sessile type tumor comprised the vesical carcinomas in which fulguration is usually useless. The cystoscopic differentiation of these two types is usually simple and it must always be borne in mind that a papillary tumor is potentially malignant even though it is not a papillary carcinoma. Attempts to remove fragments with a cystoscopic rongeur are, as a rule, not of much assistance in the diagnosis between a benign and malignant tumor except when such fragments are definitely malignant; negative findings are valueless for the fact that the fragment may have well come from a benign area.

In a plan of treatment of bladder tumors the above clinical differentiation of Geraghty's is a great help. The initial treatment of all papillary tumors, irrespective of its being any one of the three types mentioned, is fulguration and, according to the immediate responses, the use also of radium and x-ray. One very important factor in the treatment of this type of tumor is follow-up treatment and periodic observation and inspection for long periods after the initial treatment. The next line of treatment in these cases is that of resection surgically after the cautery method of Edwin Beer of New York in all papillary type tumors which do not readily disappear under fulguration, radium and x-ray. In the sessile or infiltrating type tumor the first consideration is whether the tumor is operable or inoperable and this surgical consideration is concerned not only with the amount of mutilation so far as the bladder itself is concerned, on account of its site, but is also concerned with the clinical condition of the patient as to age and surgical risk. If operable under these considerations, radical resection, after the cautery method of Edwin Beer, should be given preference, it always being understood that at the time of operation radium implantation is used and that proper x-ray treatment is given afterwards.

Under this head of operable tumors, I believe, there is a distinct field of usefulness for even the radical one of extraperitoneal cystectomy with suprapubic ureteral drainage as advocated by Judd or, according to the operative conditions at the time, uretero-rectal implantation. In the second inoperable group of infiltrating tumors fulguration, radium and x-ray should be given second choice and cystotomy and nephrostomy third choice as purely palliative measures.

Under the above plan of diagnosis and treatment of bladder tumor, it is seen that the most important factor that will give the optimum result is early diagnosis, and cystoscopy can now be recognized as the one method of making an early diagnosis, so that every case in any way suspicious should be immediately cystoscoped.

Men who cannot be beaten, though they fail a score of times, men who cannot be discouraged by an army of difficulties, sometimes go tumbling down as a result of a little success. More men are failures on account of success than on account of failure.—Dearborn Independent.

CHRONIC BACK PAIN FROM A MECHANICAL POINT OF VIEW

By JOHN DUNLOP, M. D., Los Angeles

Faulty mechanics of the lumbosacral joints are more responsible for backache than are the sacro-iliac joints.

There are very few sacro-iliac injuries which are not accompanied by lumbosacral injury.

A very careful history will usually show that most backaches are initiated by an acute onset.

DISCUSSION by Alfred Roncovieri, San Francisco; Maynard C. Harding, San Diego; William Lisle Bell, Oakland; Harold H. Hitchcock, Oakland.

IT IS always a matter of surprise to me that the importance of faulty mechanism of the spine as a cause of chronic back pain is not more frequently recognized. I say this reservedly, for I appreciate that the specialist is often criticized for diagnosing a condition as falling into the category of his own special line. However, when a certain type of case comes very frequently under the observation of the specialist it is natural that he should be impressed by the importance of a correct understanding of it.

Chronic back pain, from a mechanical point of view, has held the attention of the orthopedic surgeon since Doctor Goldthwait's first paper in 1905, concerning the relation of the relaxation of the sacro-iliac joints to instability of the back. I have been fortunate enough to be in a position to observe the entire development of the subject of back pain from the orthopedic standpoint, and since the early days my ideas have undergone considerable change. I was one of those who (twenty years ago) attributed almost all the backaches to the relaxation of the sacro-iliac joints. For the last twelve years, however, I have felt that faulty mechanics of the lumbosacral joints were more responsible for the trouble than were the sacro-iliac joints, and the more I have been able to study my cases, especially with very carefully made stereoscopic x-ray examination, the more positive I feel that the lumbosacral joints are at fault in the great percentage of cases. In fact, I feel that there are very few sacro-iliac injuries which are not accompanied by lumbosacral injury.

When we take into consideration the spine and pelvis and their mechanical construction, we wonder that these very delicately constructed joints are not more frequently the subject of injury.

We might stop here to explain what we mean by injury. Most of the injuries are of a subtle nature; I should say strains from a disturbance of relations at the joint surface. I mean a relaxation or stretching of the ligaments holding such joints in their normal relationships: by sprains, I mean a definite tearing of tissues, which would allow abnormal freedom of movement. There is no question in my mind but that many of these acute cases, or those with acute onset, are due to sprains. Further, when the relaxation is sufficient, there can be no question about the increased amount of mobility possible in the joints, even to the point of dislocation, and we must feel that a number of these badly contused cases are fractures, fresh or healed.

In addition to injuries, we must take into consideration the diseases which are of a chronic nature and can inflict injury on joints and cause somewhat similar symptoms. Hypertrophic or infectious ar-

thrititis are probably the more responsible causes, but we must remember that we are dealing with true joints in every respect and that they are subject to every disease that any other joint is subject to, and therefore the whole category of possibilities must be considered.

A very careful history will usually show that most backaches were initiated by an acute onset. The patient can almost always say just when the trouble started. In Dr. Goldthwait's early cases, which were those following delivery, the trauma was unquestionably due to the act of child-bearing, and from that time on the patient was conscious of a difference. It is my opinion that in all of those cases connected with obstetrical conditions there are sacro-iliac relaxations or injuries and, no doubt, most of those first cases reported by Dr. Goldthwait were of that nature. There is, undoubtedly, a large class of cases where the relaxation of the supporting ligaments to the sacro-iliac joints is so extreme that true motion exists in one or both sacro-iliac joints. This is especially so in the cases where there is so much difficulty following childbirth.

There is another class of cases belonging in this category to which I wish to draw attention, because they have been little understood. I refer to the cases of women who have backache accompanying the normal or abnormal relaxation during menstruation. This relaxation is, in my opinion, definitely due to the softening of the ligaments supporting the sacro-iliac or pelvic joints prior to, or accompanying menstruation, due to a more copious supply of blood to all of the pelvic structures at such a time; another reason why those so afflicted should remain quiet, in order to avoid strain during this period.

As one's experience grows, it appears more evident that post-parturient or delivery injury forms but a small percentage of the cases under discussion. Persons who are subjected to any activity which places a more than ordinary load on the spinal articulation are liable to this injury. I personally believe that among people who have lived to middle age there are few who have not suffered sufficient injury of some spinal or pelvic joint to have had symptoms therefrom.

The more common symptoms of such a condition are sciatica and lumbago. Victims of these so-called maladies often suffer acutely and continuously, and it is astonishingly difficult to convince most of them that their sufferings can be quickly and completely relieved by a skilful treatment of the mechanism of the joints. We should emphasize our assurance to such patients that prompt and complete relief can be obtained, usually by simple means, and that invalidism is unnecessary. This advice should be disseminated, not only among those who have followed mistaken methods of treatment, but also among that class of industrial cases who, rather than work in good healthy surroundings for a living, seek the existence allowed for disability by our State Compensation laws.

It is quite easy to appreciate the signs and symptoms of low back injury of the lumbosacral area when we consider the lumbosacral joints. They are shallow, about half an inch in diameter, irregular in shape and faceted. It is by means of these little facets that practically all the motion between the

trunk and the lower part of the body takes place. In the ordinary way in which we use our bodies it is easy to understand how strains can take place in this location, because there is so little protection against them.

Papers written in recent years by anatomists establish the variations in anatomy of the low part of the spine and the pelvic articulations. Under such conditions it is difficult what is normal or what constitutes normal function. Many of us feel that the greater the departure from what we have considered normal, the more pronounced and uncertain are the consequences of injury. We do know that most of the understood signs point more often to the lumbosacral or sacro-iliac than to the intervertebral articulation higher up. This conclusion also is supported by our anatomical observations. The joints higher up than the fourth lumbar run pretty close to standard construction and lend themselves very little to joint injury.

It may be well to enumerate some of the possible traumatic injuries: bad posture; that is, any position which will put the lumbosacral or sacro-iliac joints on a strain. Flat back; pendulous abdomen with lordosis; short leg; scoliosis, paralysis, are examples. The former faulty dress of women was often responsible for faulty attitudes; such as improperly constructed corsets and improperly balanced shoes. The harm produced by faulty dress has, with present styles, been almost eliminated, and there has been considerable improvement in shoes, although they still form a definite etiological factor.

Knowledge of the usual antero-posterior spinal curves is necessary in order to be able to judge of lordosis or flat-back, which is so predominant and prevalent in backaches due to postural defects. Occupational injury may be very slight and yet be a factor in producing backaches. The use of the joint in a slightly unprotected position over a long period of time, causing a constant stretching or irritation of the joint may be all that is required. Riding in an automobile in a faulty position is a common example. Sitting in a chair of uncomfortable height; standing slightly stooping in any type of work, or flattening of the back on the operating-table when the patient is completely anesthetized, may produce trauma. These are types of injuries which are unnoticed by the patient at the time of injury.

SLIGHT TRAUMA DUE TO SUDDEN OVER-STRETCHING OF THE JOINTS

This, I believe, is the largest group of causative agents of backache. One suddenly moves in a certain way, or meets an unexpected resistance to motion, there is a stitch in the back and one has difficulty in straightening up, the pain being always located at the lumbosacral area. Examples of this may be very slight or very severe. In former papers I have noted some of the most severe types.

The point I want to emphasize is that we are dealing with abnormal joints, the result, in a great majority of cases, of injury, and that these injured joints are not functioning normally, and that through this abnormality of function certain symptoms develop.

I will enumerate: Backache, with pain, located usually at the lumbosacral level, at times distinctly

down the line of the sacro-iliac joint. On abdominal examination, we frequently find tenderness on pressure over the sacro-iliac joints.

There may be referred pains from disturbance of posture or from nerve irritation. Those from disturbance of posture are usually referred up the spine, especially to the back of the neck, but may be quite bad in the mid-dorsal area. Those troubles from referred pains are usually sciatica, pain in the hip-joint, in the sacro-sciatic notch, coccyx, in the low abdomen and groin, and down the outer side of the leg; pain associated with constipation and filling of the large bowel, causing pressure on the sacro-iliac joints in front; and pain directly associated with menstruation at the time when the pelvic ligaments are naturally softened.

The *physical signs* of mechanical disturbance are: Obliteration of the lumbosacral curve; obliteration of lumbosacral fossae; prominence of sacrum; asymmetry of the lumbar and sacral region; prominence and spasm of the lumbar muscles, usually unilateral; restriction of motion in the low spine; restriction of straight-leg lifting; restriction of hyperextension of the hip-joint; usually *little* restriction of the flexed hip in either direction, or complete flexion of hip; tenderness on pressure over the irritated joints, both from behind and through the abdomen, and also from a rectal or pelvic examination; restriction of all movements producing movement of the low spine, such as arising from bed with legs straight, causing pull of the hamstring muscles; rising from the sitting position, stooping; lying in bed, with too much sag, thereby obliterating the normal lumbar curve, as in long protracted illness and fractures.

In accepting faulty posture as one of the frequent causes of backstrain, we must not lose sight of the fact that disturbed foot balance, by throwing the body out of correct alignment, may be a large factor in the production of backache. The normal relations of weight-bearing surfaces of the joints are disturbed, and mechanical irritation is thereby produced.

Much has been ascribed to the sacro-iliac joints which, I think, could well have been ascribed to the lumbosacral joints. There is a condition due to acute trauma which, to my knowledge, has never been so described. I have demonstrated this both from an x-ray standpoint and by clinical observation. It is a rotation of one innominate bone. For such an injury to take place there must be an accompanying injury of the symphysis and one sacro-iliac joint. In those cases where I believe this to have taken place the amount of rotation is, I believe, very slight, but definite enough to make a distinct difference at the pubis and the ilium and the ilium and sacrum on one side. With very carefully taken stereoscopic rays in more than one plane where the findings are identical, I believe such a lesion can be demonstrated. And manipulation done under anesthesia, with the idea of rotating the innominate bone, produces immediate results, which convince me of the correctness of the observation. With such a manipulation there is the feeling and audible demonstration of a click, and on the awakening of the patient the pain is gone. I have plates which, when carefully examined in a stereoscope, will prove my

contention. Unfortunately, these stereoscopic plates cannot be demonstrated on a screen. This lesion is necessarily a true sacro-iliac injury.

Treatment must be attacked as the treatment of injury in any other joint would be attacked; that is, rest through the acutely irritated stage; restoration of relationship by manipulation or, if necessary, operation of the affected joint; gradual return of function without producing pain, the latter usually with the use of some form of fixation in order to prevent further irritation; local improvement of muscle and ligamentous tone and improvement of local circulation; correction of posture by use of apparatus or physical development.

CONCLUSIONS

I. That chronic back pain is very often the result of disturbed mechanics of the bones and joints of the spine and pelvis.

II. That normally constructed joints of the spine and pelvis, when subjected to extraordinary stress, are liable to injury just as are other joints of the body.

III. That in subjects where the normal tone of the ligamentous structure has been lost unusual movement in the joints is possible and the ordinary stability is lacking, with accompanying strain (of the entire mechanics dependent upon it); or there may even be such relaxation that dislocation may be possible.

IV. That the disturbance of the normal mechanics is frequently due to abnormalities or asymmetrical developments of the spinal and pelvic zones, and more especially due to the formation of the joint surfaces between the spine and pelvis known as the lumbosacral articulations, which lend themselves more readily to injury when subjected to any unusual uses to which they may be put. That unless the mechanical defect is corrected pain remains, due to a true mechanical irritation within the joint. In the cases caused by relaxation the tone of the supporting tissue must be supported and built up to enable them to do their usual work. In the cases where there has been a true change in the relation of the joints, the normal relation must be restored before the supporting and building up process is instituted. In the cases where anatomical construction is at fault, in addition to support during the irritated stage, the patient must be instructed in the use of the body in such a way as to prevent strain and irritation.

V. That most carefully trained physical directors who fully appreciate the work in hand should be employed, and should work wholly under the supervision of the physician.

523 West Sixth Street.

DISCUSSION

ALFRED RONCOVIERI, M. D. (Flood Building, San Francisco)—Doctor Dunlop has presented an interesting paper on an important subject. After ten years of active industrial surgery, I know of no other type of disability which presents such a problematic outcome from the standpoint of response to treatment and recovery. It seems to me, as Dunlop has suggested, that there has been a general lack of understanding as to the mechanics of back strains, as well as the pathology and treatment.

I am particularly struck with Dunlop's summary of back injuries, with particular reference to the finer shades

of interpretation between strains and sprains, which, I think, admirably covers the situation.

I concur with his opinion regarding the likelihood of most low back injuries being lumbosacral rather than sacro-iliac in origin and pathology. Aside from the fact that clinically we can demonstrate this to be true in the majority of cases, it also seems reasonable from a consideration of the anatomy and structure of the region. The lumbosacral articulation is a true joint, movable and exposed to injury much more pronounced than the sacro-iliacs which, anatomically, are not true joints, but synchondroses. I have always felt that it is mechanically almost impossible to get ordinary strains of the sacro-iliacs without some degree of sub-luxation. Luxations of the joint, even in slight degree, can now be positively demonstrated by radiograms which should show a distinct altered relationship of the symphysis.

I am sorry Doctor Dunlop did not go into the matter more fully of operative treatment for true sacro-iliac pathology, both traumatic and non-traumatic. From my observation of patients coming under my care during the past two or three years, and with a review of the literature, I am becoming convinced that a well-performed sacro-iliac arthrodesis by the Smith-Peterson procedure gives the best and most practical means of eventual recovery in these troublesome cases, particularly referring to the definite luxated or diseased types. Though frequently tried, and at times with relief and improvement, manipulation and immobilization rarely seem to have produced the desired results in my hands.

Unquestionably postural deformities predispose to low back strains, and prolong recovery, as Dunlop has pointed out.

The question of a complicating osteo-arthritis is also another disturbing factor, which, in my experience, has always aggravated more severe back strains, and has prolonged the milder types.

MAYNARD C. HARDING, M. D. (Electric Building, San Diego)—Doctor Dunlop's excellent paper opens so many lines for discussion that one must leave out much that he would like to say. Two points are uppermost in my mind.

The first is in regard to x-ray. After ten years of checking up hundreds of cases of back pain with the x-rays of normal cases, I am forced to the opinion that it is rare, indeed, to get positive x-ray findings in sacro-iliac pain. The low lumbar pains give a slightly higher percentage of positives.

The second point is in regard to the technique of examination. I wish that Dunlop had given us, from the fullness of his experience, his exact methods of examination. I believe that most of the poor diagnoses of back pain are due to slovenly methods, and I, for one, am unable to arrive at a diagnosis with any certainty until I have gone through my entire procedure.

A few months ago I visited a large number of orthopedic hospitals in the East, and in not one did I see a back examined with sufficient thoroughness to warrant the diagnosis arrived at. I feel it is for orthopedic surgeons to lead the way in instructing the profession at large in the methods of diagnosis and treatment of these distressing patients who come to us all.

WILLIAM LISLE BELL, M. D. (1327 Broadway, Oakland)—It has been a pleasure to go over the paper of Doctor Dunlop. He certainly knows his subject and I, too, am only sorry that he could not have had more space to devote to treatment. A paper of this sort necessarily covers so much territory that one must conserve somewhere.

As early as 1908 I had convinced myself that lumbosacral comprised the volume of lower back injuries and have even gone so far as to say publicly once or twice that I thought sacro-iliacs constituted not over 5 per cent. So I cannot very well disagree with Dunlop on this score. I am convinced also that, were we able to have patients with back injuries within twenty-four or at the most not over forty-eight hours from time of trauma, with proper distraction, relaxation, and fixation, very few of them would go on to a prolonged chronic condition. Many of them are untreated for years and worse than that, many of them go to the ignorant manipulators who pretend to adjust.

One point mentioned to me by a famous old Vienna physician twenty years ago is intra-abdominal gas pressure, mechanical pressure, with its consequent intestinal toxæmia. As to softening of the sacro-iliac ligaments during menstruation and consequent relaxation, well, I shall have to be a trifle disagreeable and say to Doctor Dunlop that my own view of this angle inclines more to a general edema in this region at this time, with its extension, no doubt, to the somewhat predisposed nerve structures. And then, to my mind, one of the most prolific causes of low grade back discomfort, that type which is more or less continuously present and often quite discomforting during sudden extensive excursions of the spine, is not a muscle spasm, is not an inflamed nerve, is not a disarranged column, but the chronic fibrosis, or better still the chronic inelasticity of certain groups of muscles that have degenerated in their continuous effort at splinting.

These muscles are not often palpable, and do not seem rigid except when distracted by the opposing group, but they do have very limited extensibility and do effect a decided pinching when their elastic limit has been reached through contraction of the counter group. It is in these cases that deep thorough intelligent massage helps, but massage alone cannot relieve this condition without active and oft-repeated stretching on the part of the patient himself.

HAROLD H. HITCHCOCK, M. D. (1904 Franklin Street, Oakland)—The mechanics of the back are certainly a great factor not only in causing back pain, but in keeping on going after it has once started.

In the figures obtained by Roger Lee and Lloyd Brown at Harvard, and the University of California Infirmary, examining freshmen students, it was found that 75 per cent of all male freshmen have very poor body mechanics. If this is true of these young men, the pick of the country, it must also be true of those outside of our colleges.

I believe that long-continued tilting the pelvis forward, slumping the upper trunk backward and hanging the head forward, an attitude of fatigue, gives rise to contractures in the psoas and rectus femoris muscles, as well as other smaller muscles that makes it almost impossible for many people to tilt their pelvis backward and decrease their lumbar curve, just as foot drop gives contracture of the calf group.

The muscle balance in the low back is thereby upset just as a short heel cord will upset the muscle balance in a foot, and much extra work is put on the small lumbosacral joints which should be taken care of by normally balanced muscles. Many of these injuries will not clear up until this balance is restored. I regret that Dunlop could not give more space to his corrective procedures.

Young men who are using their bodies mechanically incorrectly constitute one of the biggest problems at the University of California Infirmary. Their x-ray findings are usually negative, they do not improve until their whole mode of living is corrected, which includes their bed, automobile, their chairs and their way of standing, walking and using their bodies.

I have not been able to visualize ligaments relaxing and stretching as a result of increased congestion of the pelvis vessels.

Curve of Inorganic Blood Phosphates During the Sugar Tolerance Test; Significance in Diagnosis and Prognosis—F. W. Hartman and Adolph Bolliger, Detroit (Journal A. M. A.), assert that the effects of insulin on phosphate utilization are comparable to those on carbohydrate utilization. Abnormal carbohydrate metabolism may be divided into seven groups by means of the blood phosphate curve. Slight abnormalities and the functionless pancreas are readily identified through the phosphate curve. Abnormal carbohydrate metabolism associated with the pituitary, and possibly with the suprarenals, may be recognized.

What do you think about the suggestion that has been made, to make drug addiction a reportable disease?

THE PATHOLOGY OF COLITIS

By CURTIS E. SMITH, M. D., San Francisco

Apart from the inflammatory or destructive lesions produced in the colon by tuberculosis, syphilis, amebic or bacillary dysentery, carcinoma and diverticulitis, there is a heterogeneous clinical group, designated as mucous, idiopathic, infectious, hemorrhagic and ulcerative colitis.

Colitis may be secondary to certain diseases which lower the resistance of the patient with probably some toxic effect on the mucous membrane which allows bacterial invasion.

The disease variously described as idiopathic, infectious or ulcerative colitis is an inflammation of the mucous membrane of the colon, probably due to bacterial invasion.

Discussion by George Dock, Pasadena; J. Marion Read, San Francisco; Rawson J. Pickard, San Diego.

UNFORTUNATELY the pathologist cannot see pathological, chemical, and biological processes in their various phases as they are taking place in the human body. One is often forced to study merely the end-result of such a process at necropsy, which is of scant benefit to the patient. This seems especially true of the inflammatory processes of the large intestine, which may terminate in the condition known as chronic ulcerative colitis.

Apart from the inflammatory or destructive lesions produced in the colon by tuberculosis, syphilis, amebic or bacillary dysentery, carcinoma and diverticulitis, there is a heterogeneous clinical group designated as mucous, idiopathic, infectious, hemorrhagic, and ulcerative colitis. This group is idiopathic, in the sense that no definite organisms or other etiological agents have been found to account for the inflammatory process. Any attempt to separate the various types of colitis in this group into definite clinical entities would seem as illogical as the terms "mucous," "hemorrhagic," or "ulcerative rhinitis." The difference, pathologically, in these various forms of colitis is in the degree of the inflammatory process.

Anatomically and physiologically, the colon is rendered more amenable to inflammatory processes than any other part of the gastro-intestinal tract. The rate of progress of the intestinal contents is directly proportional to their toxicity, but the intestinal bacterial flora are inversely proportional, both in number and in virulence, to the digestive activity. The acid reaction in the stomach and terminal ileum is probably protective in character, and the ileum is rarely involved in the non-specific inflammatory processes which affect the colon. Inflammations are more frequent in the colon where the opportunities for trauma are greatest, owing to the character of the material, to the presence of great quantities of bacteria, and to the fact that the protective elements are directly proportional to the digestive powers. Constipation is probably a great factor in causing trauma to the colon, and the lesions are often most marked in the cecum and sigmoid. Colitis may be secondary to certain diseases which lower the resistance of the patient, with probably some toxic effect on the mucous membrane, which allows bacterial invasion. When the colitis is not a secondary complication of some other disease, it is probably initiated by a change in the chemical reaction of the intestinal contents or a change in the activity and pathogenicity of the intestinal bacteria. In some

patients the opsonic index and agglutination tests show a lowered resistance to the bacillus coli. An additional factor is the fact that the colon may act as an excretory organ, as is shown in the lesions following mercury or lead poisoning, and is suggestive by the frequency of ulceration in uraemia. Flexner found that the toxin of the Shiga bacillus, injected intravenously, caused ulceration of the colon.

The disease variously described as idiopathic, infectious or ulcerative colitis is an inflammation of the mucous membrane of the colon, probably due to bacterial invasion. The actual nature of its genesis is not definitely understood. Sometimes it appears to be grafted on a previous specific dysentery, either bacillary or amebic, where these organisms disappear, leaving an inflammatory process carried on by a mixed infection of the ordinary bacteria in the intestine. Sometimes it appears as a sequel to some infectious diseases, such as measles, diphtheria, influenza, and pneumonia. It may occur in patients with general debility, ill health, overwork, or poor nutrition. On the other hand, a severe fulminating acute type is described as occurring in individuals in perfect health. The disease is remarkable for its remissions, and the intermittency does not suggest a repeated invasion by a specific micro-organism. It may start as a mild catarrhal inflammation, giving the symptoms of the so-called mucous colitis and with remissions become a more severe inflammation with mucus, blood, and pus in the stools. Finally, after repeated attacks with recurrent infection and an attempt at healing progressing simultaneously, this results in the condition known as the chronic ulcerative colitis of Hale White, which is somewhat comparable to a chronic diffuse nephritis, which develops after repeated injury to the kidney, complicated by attempts at repair. When this process is fully developed in the colon it probably can never heal spontaneously.

Occasionally one sees patients who suddenly develop an acute fulminating inflammation of the colon, with marked destruction of mucous membrane and profuse hemorrhage. In this case the patient may succumb in a comparatively short time, due probably to the toxicity resulting from a rapid rate of absorption rather than from the severity of the local infection.

In the differential diagnosis of chronic ulcerative colitis, the following conditions must be considered: (1) Diarrheas, due to faulty assimilation of food; those of nervous origin, and those due to general debility in diseases, such as pernicious anemia, tuberculosis, heart disease, nephritis etc. (2) Carcinoma of the rectum or colon. (3) Chronic bacillary or amebic dysentery. (4) Tuberculous enterocolitis. (5) Diverticulitis. The pathology of the above conditions is well known and need not be considered here.

In the acute stages of colitis the mucous membrane is edematous, dark red, granular or bosselated in appearance. A profuse exudate, forming a pseudomembrane, may be found. The mucous membrane appears to be lifted away from its subjacent structures. There may be no circumscribed ulcers, but the entire mucous membrane of the colon may show a confluent process of erosion. As the acuteness diminishes, the mucous membrane is less edematous

and covered by irregular patches of exudate. Between the patches are irregular oblong ulcers, varying in size and depth, with overhanging edges and worm-eaten bases. If the inflammation subsides the mucous membrane becomes pale, and certain areas separated by an arterio-venous network, gives to the bowel a checkerboard appearance. It retains for some time its granular character and bleeds easily if touched. In chronic ulcerative colitis the lesions are usually most marked in the rectum and sigmoid. Here the mucous membrane may be almost completely denuded, leaving a granular, bleeding surface and marked thickening and fibrosis of the wall. In other parts of the colon various stages of ulceration may be found. The mucous membrane becomes adherent to the muscular coat and loses the elasticity of motion characteristic of a normal bowel. If the inflammatory process is severe, deep ulcers going on to perforation may develop, but in this condition only a localized and not a generalized peritonitis usually results. One of the chief characteristics is the extreme thickening of the wall of the colon with smoothing out of the folds, leaving a glazed surface. This marked thickening is first due to hyperplasia, edema and infiltration in the mucosa, and later to fibrosis in the wall. Later, contraction of the fibrous tissue may result in a marked narrowing of the lumen, which, if localized, may result in partial obstruction. It is an interesting fact to the surgeon, if a stoma is made proximal to the infection the strictures will disappear and function will result, even when patients have multiple fistulous openings to the outside.

A multiple polyposis is apt to develop in chronic cases, due to localized hyperplasia of the mucous membrane. This condition may cause some annoyance to the surgeon when he attempts to close a colostomy. The appendix has received more than its share of suspicion in these conditions; it often shows an inflammatory process similar to and probably always secondary to the colitis. The ileum is practically never involved. The histopathology is perhaps more variable than the gross pathology, yet it presents merely the simple picture of acute, sub-acute or chronic inflammation, depending upon the stage of the process. The mucous membrane and subjacent structures are usually involved. Congestion and edema may be limited to the mucosa, sub-mucosa, or may involve the entire intestinal wall. The mucosa may be covered with an exudate composed of pus cells, bacteria, and inflammatory elements. It may be devoid of glands in case necrosis has progressed. Lymphocytic and plasma cell infiltration of varying degrees may involve the mucosa or the entire colon and its peritoneal covering. There is usually marked fibrosis with thickening of the wall, but areas may be found where the wall is almost reduced to the thinness of tissue-paper.

The other organs of the body show nothing of any significance in relation to the colitis. The fact that patients with chronic ulcerative colitis retain their weight and are healthy, except for the colitis, shows a negligible amount of toxic absorption, as compared with certain acute cases. Perforation, with localized peritonitis and paralytic ileus, is probably the most common cause of death.

DISCUSSION

GEORGE DOCK, M. D. (Chamber of Commerce Building, Pasadena)—Doctor Smith describes one kind of pathologist, but there is another kind—the physician who deals with sick people and who should have the foundation furnished by pathology. In his mind's eye he tries to see the processes taking place in the human body. From his training at the autopsy, on the living body or post mortem, he keeps active his criticism and knows how he may be wrong, but he and his patient with some form of colitis, both profit from this habit of thinking in terms of pathology. This kind of physician does not abuse his mind by calling diseases idiopathic. He uses classifications merely as a convenience and he may gain by using the one Smith gives, but he keeps his etiological sense active by constantly working on the causes or conditions of disease. By doing that, Kartulis, Flexner, and others added to our knowledge, as others may do in the future. This sort of doctor does not think that the whole "difference of the various forms of colitis is in the degree of inflammatory process," as shown by such diverse conditions as a well-marked mucous colitis on the one hand and a chronic non-anemic process on the other. This sort of a doctor will profit by the efforts of others to clarify knowledge or stimulate thought, including the essay of Doctor Smith.

J. MARION READ, M. D. (Flood Building, San Francisco)—Doctor Smith has performed a very useful function by his endeavor to elucidate the pathological conditions found in colitis. From a clinical viewpoint we would have preferred he had separated his material into two classes, representing the acute and chronic types, for the clinical picture differs considerably in the two conditions. In the acute form it is probable that bacterial infection plays the chief role; in fact, is the causative agent, and the accompanying clinical and pathological picture is one of an acute infection. It is the chronic form which the average internist sees most often, in fact, quite frequently. This rarely follows the acute type, but is insidious in its onset, and most obstinate in its response to therapy. It seems probable that infection plays a secondary role to mechanical factors in these cases. A good, working classification of colitis is much needed, and a pathological study may afford us one, but the subject is a difficult one upon which to obtain material for study, as colitis is so infrequently a cause of death.

RAWSON J. PICKARD, M. D. (Watts Building, San Diego)—It is, unfortunately, true of cases of chronic colitis that, after exhaustive searches for specific or for unusually virulent organisms, there is a large residue of cases with unknown etiology for which the term "idiopathic" covers our ignorance. Smith's paper is valuable in pointing out the area yet to be explored. His suggestion as to the chemical nature of these cases, even the possibility of injury from the excretory function of the colon, may lead to discovery.

Perhaps analogy will assist us in a conception of the causation and treatment of these cases. Chronic flagellate infections are often encountered resistant to all the many antiparasitides which are cleared up by a change in the chemistry of the intestine through diet, with or without the feeding of bacterial cultures. Empiric treatment indicates that the basis of persistent flagellate infection may reside in an obscure biochemical state. Whether, in colitis cases, a pathogenic flora, acquired virulence of normal flora, or the chemical habitat from the diet precede, is of less moment than the result. Of course, with the destruction present in old cases of colitis there can be no return to normal.

DOCTOR SMITH (closing)—I am sorry that the pathologists have not had the opportunity to demonstrate to Doctor Dock lesions in the colon that are as characteristic as the clinical symptoms in the different types of colitis. In a case that we have just studied, the patient clinically had "mucous colitis" at intervals over a period of twenty-six years and finally died, presenting the characteristic clinical and pathological picture of chronic ulcerative colitis. I wish to emphasize the fact that the gross and microscopic appearance does not begin to explain the etiology of these types of colitis, but merely shows a difference in the degree or stage of the inflammatory reaction. Bacteriological studies have also failed, so we must look further. Realizing this, I do not sponsor the idiopathogenesis of any disease.

RECOGNITION OF SURGICAL DISEASES OF THE GALL-BLADDER

By CHARLES S. JAMES, M. D., *Los Angeles*

I believe firmly that the typhoid and colon bacilli are the chief instigators of gall-bladder disease.

I further hold that all cases of gall-bladder disease are primarily medical cases.

The belief was formerly prevalent that "latent gall-stones" cause no appreciable disturbance; but it is now recognized that they rarely fail to produce symptoms commonly referred to the stomach.

We should not accept the diagnosis "nervous dyspepsia," "acute indigestion," "neuralgia of the stomach," "gastritis" or "gastric neurosis" so frequently as we do in patients presenting the history of dyspepsia of a chronic resistant type.

DISCUSSION by James A. Mattison, *Soldiers' Home, Los Angeles County*; Sterling Bunnell, *San Francisco*.

THE various surgical diseases of the gall-bladder and ducts will be better understood if we consider and accept the underlying etiological factor to be infection; that the infection is of hematogenous transmission through the portal vein or hepatic artery; and that the reaction of the infection primarily is in the walls of the gall-bladder.

I firmly believe that the typhoid and colon bacilli are the chief instigators of gall-bladder disease.

I further hold that all cases of gall-bladder disease are primarily medical cases with the possibility of complications developing or arising of a surgical character, and after surgical intervention and the correction of the surgical phase, the patient again becomes medical in the sense that the individual should be under competent management and observation until a complete maintained re-establishment of health is had and not discharged as cured immediately upon making "an operative recovery," as is too often the case.

If we accept the primary etiological factor to be bacterial, it is easier for us to account for the diseases of the gall-bladder presenting such a wide range in their degree of severity and persistence; and the occurrence of varied surgical complications with the element of too frequent apparent failure following surgical intervention, due to the uncorrected underlying and continuing infection; i. e., cholecystitis or cholangitis.

It is then almost entirely the complications and sequela of this underlying disease that constitute the surgical diseases of the gall-bladder and ducts, the most frequent of which are chronic resisting cholecystitis—cholelithiasis—suppurative cholangitis and empyema of the gall-bladder. Carcinoma of the gall-bladder and ducts is increasing in its recognized frequency.

The belief was formerly prevalent that "latent gall-stones" cause no appreciable disturbance; but it is now recognized that they rarely fail to produce symptoms commonly referred to the stomach—sudden attacks of indigestion with flatulence at irregular intervals, oftentimes nocturnal, with indefinite right-sided tenderness, or slight distress referred to the right shoulder and variable degrees of acholia. This group of hazy subjective symptoms may characterize a type of "stomach trouble" occurring years before.

The diagnosis in many instances rests more on the

thorough careful painstaking history than upon any other one factor. In a case of "chronic dyspepsia" characterized by pressure distress, accumulation of gas in the upper abdomen, eructation and sour regurgitation occurring promptly after eating a heavy meal or some special food, epigastric distress radiating to the back or the tip of the right shoulder-blade (Boas' area), history of attacks of acute indigestion with or without a colicky phase, and with or without varying acholia, one is strongly inclined to the opinion of gall-bladder disease origin and recall the trite saying of our clinical forefathers, "Fat, fair, and forty."

Boas' point tenderness and pain referred to the right back are common and valuable symptoms, but we must recognize their occurrence from other lesions than gall-bladder disease, and also that this pain is sometimes referred to similar locations on the left side. I mention this fact because the profession is educated to exclude gall-bladder pathology when pain is referred to the left.

Gall-stones may be present for years and recognized for the first time on the operating table or at autopsy. "Latent gall-stones" constantly pass recognition, and it is only when associated with the varied degrees of activated cholecystitis or cholangitis that they are considered.

We should not accept the diagnosis "nervous dyspepsia," "acute indigestion," "neuralgia of the stomach," "gastritis," or "gastric neurosis" so frequently as we do in patients presenting the history of dyspepsia of a chronic resistant type, and we should remember that all these cases occurring during the third and fourth decade, or later, with a preceding period of immunity, in general, suggest gall-bladder disease, or possibly cardiorenalvascular disease, or carcinoma, and is worthy of our most exhaustive investigation.

In order to definitely diagnose disease of the gall-bladder, one requires more than a history of reflex gastric symptoms; he must, by examination, determine localizing symptoms, such as the colic of cholelithiasis or the pain and tenderness of cholecystitis or cholangitis, and it is here that we must rely largely on the older diagnostic measures.

Distention and tenderness in varying degrees constitute probably the most constant clinical localized expression of cholecystitis. The distention is determined by the varied forms of palpation. A palpable gall-bladder is usually a pathological one, usually moves with respiration and is movable only in a small segment of the circle, the center of which is at the point of the gall-bladder attachment at the external tip of the ninth costal cartilage. Tenderness is best elicited by deep thumb or finger-tip pressure maintained during complete respiration and expiration or "respiratory arrest test." A test for tenderness that I have found quite reliable is similar to the stroke test of Murphy for kidney tenderness, but is applied in a similar manner anterior and just over the tip of the ninth rib, with the patient either in the supine or sitting position; which, if positive, causes a sharp decisive pain with its origin in the gall-bladder.

Jaundice is a variable symptom in gall-bladder disease; obstruction at the first or second portion of the cystic duct will result in no jaundice; if

in the terminal portion, there may be a variable amount of jaundice, depending on the amount of pressure upon the hepatic or common duct, or the degree of associated cholangitis present. With obstruction in the common duct, jaundice may vary, for obvious reasons, from slight and transient to persistent and severe.

Again, we may have the so-called ball-valve acting stone in the common duct with associated paroxysmal chills, fever, and sweating (*Charcot's fever*) simulating empyema of the gall-bladder. But with persistent variable jaundice, bile is seldom absent from the duodenal contents in common duct-block unless the cause is carcinoma.

In suspected cases of gall-bladder diseases the urine should be frequently tested for trace of bile; for slight degrees of obstruction, not causing observable jaundice, sometimes show a trace for a short period. The examination of the stool is of value in evidencing gross acholia, more minutely determined chemically by the Schmidt bichloride test, and by laboratory methods may prove of value in aiding in the differential diagnosis of amoebic abscess of liver, membranous colitis, occult blood of ulcer or carcinoma, etc.

The radiologic examination is of value largely by exclusion of ulcer and carcinoma of the stomach and nephrolithiasis. It is true that occasionally brilliant positive results are presented in showing calculi or the presence of confirmatory indirect signs as duodenal cap indentation, adhesive distortion, or visible gall-bladder, but in general it may be said that an affirmative report is highly valuable but a negative report valueless. There is no such thing as exclusion of gall-stones by radiology.

Graham and Cole describe the phenoltetrabromophthalein test for radiologic visualization of the gall-bladder which, if clinically proven of definite value, gives promise of opening up a field of great diagnostic possibilities. The salt injected into a vein is excreted almost entirely into the bile, helping the gall-bladder to cast a shadow upon the roentgen-ray plate, recording its shape, size, and contained stones if present.

Indicative of the relative occurrence of gall-bladder disease, Blackford and Dwyer of Seattle, reporting a study of 1650 patients complaining of chronic dyspepsia, state: "The approximate relative frequency of abdominal organic disease causing dyspepsia in this series is: Gastric ulcer, 1; gastric carcinoma, 2; reflex appendix, 4; duodenal ulcer, 6; gall-bladder disease, 12"—or nearly one-half due to gall-bladder disease.

This report closely parallels my own observation and conforms to the experience of many other clinicians and should serve to stimulate our interest in the law of probability when surveying our cases of "dyspepsia" of occult origin.

In considering the differential diagnoses, the gastric diseases—ulcer, carcinoma, and syphilis—are but few in number, compared to the many extra gastric lesions producing symptoms masquerading as diseases of the stomach, for the "stomach is the alarm-clock of the human system."

A carefully taken history and thorough physical and radiologic examination usually serves to make clear the diagnosis of the intrinsic gastric lesions

hereinabove mentioned; but it is with the extra gastric lesions that we find confusion and concern.

Digestive complaint may constitute the chief complaint associated with remote systemic disease, such as pulmonary tuberculosis, grave anemia, chronic pancreatitis, cardiorenalvascular disease, pelvic pathology, appendicitis, stone in the kidney or ureter, and many consultants have seen cases of tabes not relieved of their crisis by a preceding operation upon the gall-bladder.

The physical examination should serve to exclude pulmonary tuberculosis, grave anemia, cardiorenalvascular disease and other systemic diseases associated with digestive symptoms.

Among the colic-causing diseases we may cite that in chronic pancreatitis symptoms may not differ from those of gall-stones, and the two often co-exist. The pain, however, is more apt to be in the mid-line or referred to the left of the upper abdomen—more weight loss and the laboratory may show diminution of pancreatic enzymes.

Acute hemorrhagic pancreatitis is attended with greater collapse and rectus rigidity.

Floating kidney, with Dietl's crisis, may present urinary signs and a more movable tumor, both poles palpable and the maximum mass to the back, as compared to gall-bladder maximum to the front.

Nephrolithiasis, by the pain radiating to the pelvis and thigh, vesical irritation, urinary findings, no jaundice.

Carcinoma of the head of the pancreas presents tumor fixed and deep, loss of flesh, profound continuing jaundice, with enlargement of gall-bladder. Carcinoma of the pancreas, gall-bladder, or pylorus can be excluded, however, at times with great difficulty; nevertheless, tumor cachexia and ascites when present speak strongly for carcinoma.

The diagnosis of acute appendicitis may present considerable differential difficulties, especially if the appendix lies high or Riedel's lobe be elongated. However, the pain reference is different and rectal examination may serve to make clear the situation.

As regards the gastric symptoms reflex from the appendix, it is noted that the reflex gastric symptoms of gall-bladder disease occur promptly in ten to thirty minutes after food intake, while if of appendical origin the time elapsed is more like that pertaining to gastric or duodenal ulcer—two to four hours.

In closing I may mention a group oftentimes presenting special differential diagnostic difficulties as suppuration complicating common duct stones, empyema of the gall-bladder, necrosis and rupture with hepatic abscess, or perforation with peritonitis, all of which present gross evidence of gravity and may be classed under the medical slang phrase, "acute surgical belly," which calls for prompt surgical intervention.

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DISCUSSION

JAMES A. MATTISON, M. D. (Soldiers' Home, Los Angeles County)—My discussion on Doctor James' very excellent paper will be very brief.

Since all of our gall-bladders removed at operation are sent to the pathological laboratory for complete examination and report, there is no longer doubt in regard to the fact that the chief etiological factor is bacterial in origin, the infection entering the biliary tract either by direct

extension or through hematogenous or lymphatic channels. Notwithstanding that great progress has been made in diagnostic methods, it still remains a fact that the most important part of our diagnostic information is derived from a careful study of a thorough history of the case.

In making a differential diagnosis of gall bladder disease, gastric and duodenal ulcers are among the conditions which call for the most careful consideration. Here, again, we find a carefully taken history of first importance, and in differentiating the intra-gastric diseases the most important aid which we have at our command is the x-ray. This gives us definite information in from 90 to 95 per cent of cases of gastric ulcer, provided it is in the hands of an expert roentgenologist. It is generally conceded, however, that the x-ray in gall-bladder disease furnishes confirmatory evidence rather than definite evidence. From our experience, I have found a careful study of the gastro-intestinal tract with a large series of x-ray plates is likewise of value in the diagnosis of gall-bladder disease, aside from the information furnished of intra-gastric conditions.

In our study of gall-bladder conditions, it is necessary to constantly keep in mind the fact, too, that the association of peptic ulcer and cholecystitis and chronic appendicitis is comparatively common and, in a certain number of cases, may be the cause of considerable confusion, especially where two or even three of these conditions are associated in the same patient.

STERLING BUNNELL, M. D. (Physicians Building, San Francisco)—The ideas expressed in this most commendable paper appeal to me as the true conception of cholecystitis. Instead of thinking in terms of gall-stone disease and recognizing only veteran cases, we are learning to recognize infections of the gall-bladder in their incipency.

We now know that the infection is not limited to the gall-bladder, but is generalized in the biliary tract, through the gall-bladder ducts, pancreas, accompanying lymph glands and liver, and that it usually results from germ bombardment coming from infections in the portal system.

Removing the principal focus, the walls of the gall-bladder, by cholecystectomy, together with the original source of infection, if still present, usually cures, but for the following reasons it is not surprising that it does not always do so:

Several months to a year or more are necessary for the natural protective forces of the body to rid the rest of the biliary tract of infection, and especially so if deep-seated infection exists in the head of the pancreas or liver. Again, time is necessary for normal function to return in a stomach which has acquired the indigestion habit. Frequently enough after cholecystectomy the resulting adhesions pull on the pylorus or trigger-point of the stomach and cause a persistence of symptoms. Avoiding trauma in operation and routinely anchoring the end of the omentum in the duodenal-hepatic angle helps to prevent this.

Often tiny stones and sand in the common duct are overlooked, as it is impossible to palpate them through the duct walls. These cause a backfire of infection into the liver and continue the symptoms.

Disease of the gall-bladder makes its presence known to the clinician largely by a perversion of stomach functions, by general symptoms of infection, by disturbances of bile flow, by pain from duct obstruction, by pain, distress and tenderness from local infection in the gall-bladder.

The normal-acting stomach should handle the usual articles of diet and, if it does not, an organic lesion is often the cause. It is unsafe, though, to yield to our desire to simplify and assume that all dyspepsias are caused by the arch triumvirate, appendicitis, cholecystitis and peptic ulcer. When we consider what a multitude of diseases affect our outer covering, the skin, a tissue that we can see, we cannot but admit that our inner lining, the digestive tract, may also be subject to many different ailments.

However, when a patient tells of years of indigestion and of submission to prescribed diet lists and digestive aids, the real cause can usually be found in one or more of the above triumvirate. If the indigestion is

qualitative, intermittent, gradually increasing in severity and length of attacks and accompanied by symptoms of infection, both general and local, in the region of the gall-bladder, this organ comes decidedly under suspicion.

It is, however, only after a survey of all other symptoms, x-ray findings, physical signs and past history, and a due consideration of other possibilities, that we can arrive at a judgment of the case of sufficient value to advise surgical relief.

THE REFLEX NERVOUS DISORDERS AS DESCRIBED BY BABINSKI

By A. R. TIMME, M. D., Los Angeles

Sets up a group of nervous disorders which may not be classified as either functional or organic by usual methods. One case report.

These patients exhibit symptoms far more profound than could be accounted for on a functional basis, and yet not typical of any of the so-called peripheral or central lesions.

DISCUSSION by Harold W. Wright, San Francisco; Samuel D. Ingham, Los Angeles; Edward W. Twitchell, San Francisco; Thomas J. Orbison, Los Angeles.

WE HAVE long been accustomed to labeling as functional any case of paralysis that did not show classical symptoms of definite organic lesion of the nervous system. Thus, localization and grouping of signs indicated to us whether a lesion was in a peripheral nerve, in a plexus, spinal root, spinal cord, or anywhere up to and including the cortex, or in an artery, or in the meninges. Any case of paralysis or deformity that would not fit into any of the above molds was very likely to be classified as functional or hysterical.

There is, however, a group of cases, definitely organic, that do not fall into either of the above categories, i. e., these patients exhibit symptoms far more profound than could be accounted for on a functional basis, and yet not typical of any of the so-called peripheral or central lesions.

Although not explaining the pathology of the lesion, John Hunter, as early as 1835, called attention to muscular atrophy following joint affections, e. g., arthritis. Charcot and Vulpian in the eighties first predicated a reflex origin of such atrophies. Babinski, in the beginning of the Great War, finally gave us an adequate description of this type of lesion, in the form of papers, discussions, and an elaborate monograph. He terms the condition "nervous troubles of a reflex order" or "reflex nervous disorders" and postulates a reflex pathogenesis in certain cases of paralysis, contracture and deformity, atrophy, sensory and vasomotor change following wound or injury of an extremity that do not conform to any of the classical conceptions of central or peripheral lesion of the nervous system or to hysteria. Thus, an almost negligible wound of an extremity can give rise to profound changes in muscular tone and activity, can produce a disproportionate amount of atrophy with vasomotor and sensory disturbance, or it can produce a marked deformity or contracture. These changes cannot be explained by any of the known nerve, cord or brain lesions; they remain in a stationary or progressive state for years after the initial wound or injury has healed.

Prerequisite to the development of the above symptoms is the initial trauma or irritation, whether

an arthritis, a fracture of a long bone, or a gunshot wound. If a gunshot wound, it involves bone or soft tissues without injuring a nerve. Symptoms develop immediately after the injury or months later. They are out of all proportion to the severity of the injury, and in this respect resemble hysteria. They seem to disregard anatomical limits, but may be said roughly to appear in the same or adjacent spinal segments as the initial trauma. The following groups of symptoms are encountered:

(1) Muscular atrophy with paralysis. The atrophy is usually less marked than that of neuritis or anterior poliomyelitis and the paralysis only partial. It may involve single muscles, groups of muscles, or the entire extremity. The paralysis is of the flaccid type.

(2) Contractures and deformities. A few typical contracture deformities are described by Babinski, e. g., contracture of the pelvi-trochanteric muscles following traumatism in the region of the hip, producing a typical "salutation gait"; flexion contracture of the leg, in which the heel remains raised both in standing and walking; various types of club-foot and claw-toes; numerous forms of contractures of the hand and fingers, including the typical "accoucheur's hand"; hypertonus of the flexors of the hand associated with hypotonus of the extensors, producing a strong wrist-drop deformity; and many others.

(3) Vasomotor and temperature changes. The affected limb is blue and cold and responds to air or water temperature variations more slowly than the sound limb. It may also be mottled and reddish and pit on pressure. Arterial pulsations may be weaker in the affected member and the oscillations of decreased amplitude. Obstinate coldness of the hand or foot is the rule in cold weather.

(4) Hyperexcitability of the muscle to percussion, together with slowness of the muscular contraction resulting, are described by Babinski. On striking the belly of the affected muscle with a small percussion hammer, a contraction of great amplitude is produced, which is sustained longer than normal. Babinski has demonstrated this graphically.

(5) Loss of muscular tone may be pronounced in the affected muscle groups. Thus the thigh may be hyperflexed on the body, with the leg extended, or with the leg itself hyperflexed on the thigh, producing an exaggerated letter "Z."

(6) Electrical changes. There may be increased response, i. e., contractions of increased amplitude to both galvanic and faradic currents, or there may be a corresponding hypoexcitability. Babinski also describes premature fusion of contractions to the faradic current. True R. D. is never present.

(7) Changes in reflexes. Tendon reflexes are normal or exaggerated on the affected side. Sometimes the exaggeration can be demonstrated only while the patient is anesthetized.

(8) Sensory changes are inconstant and may assume the form of a hyper or hypoesthesia, frequently of a segmentary distribution. Spontaneous pain in the affected area is also frequently encountered.

In differential diagnosis the chief source of trouble is hysteria, since these cases do not conform to the symptomatology of any of the known anatomical

lesions. A valuable aid in establishing a diagnosis of reflex disorder is examination during chloroform anesthesia. In this state the tendon reflexes become definitely exaggerated on the affected side, attempt to correct the deformity causes muscular spasm, and the contracture persists to an advanced stage of the narcosis. These signs are not true of hysteria. The deformity of reflex disorders also persists during sleep. Other differences are as follows: The paralysis in reflex disorders is more limited in extent and more persistent; the deformities do not correspond to any natural attitude as they do in hysteria; atrophy, vasomotor, and trophic changes are more



marked in reflex disorders; changes in muscular tone are more pronounced than in hysteria; electrical reactions and reflexes are normal in hysteria, but affected in reflex disorders.

Differentiation from organic monoplegia and from peripheral neuritis is easier, since it calls into play our knowledge of anatomy and nerve distribution. The well-known Babinski reflex is never present in these cases, nor are any of the typical signs of upper-motor-neurone lesion. The location of pain, wasting of muscles, R. D. and correlation of motor and sensory symptoms serve to distinguish a peripheral neuritis.

Volkman's ischemic paralysis and Dupuytren's contracture sometimes produce deformities similar to those of reflex disorders, but the muscular induration and lack of electrical reaction in the Volkman lesion, the nodular change in the palmar skin and fascia in the Dupuytren lesion serve as valuable diagnostic points.

As to pathogenesis, Charcot first postulated a reflex origin of the atrophy incident to an arthritis—a peripheral irritation of centripetal nerves in the joint by the inflammatory process, causing an irritation of the anterior horn motor cells, with a resultant atrophy. This reflex arc is called into play in the cases under discussion, Babinski maintains, and so not only furnishes a rational explanation of causation, but also includes these disorders in the organic category. As yet, however, actual histologi-

cal change in the anterior horn cells has not been demonstrated.

PROGNOSIS AND TREATMENT

Since reflex disorders are an undoubted organic condition, psychotherapy has no place in their treatment, except insofar as hysterical symptoms are superimposed. Babinski reports improvement following gentle massage and movement and continuous extension. He cautions against violent and energetic means which are likely to increase the deformity by causing further irritation of the reflex arc. He reports favorable results with mild applications of heat and diathermy. Certain heroic measures have been tried, such as alcohol injections into nerves, excision of the scar tissue of the initial trauma, a destruction of the periarterial plexuses of sympathetic filaments, all with more or less indifferent results.

CASE REPORT

W. R. W. Age 40. Received a through and through wound of the left wrist by a machine gun bullet in December, 1915. The bullet entered the dorsum of the wrist near the head of the radius and emerged from the palmar aspect near the base of the last metacarpal. No infection occurred and the scars are at present barely visible. A plaster cast was applied the following day and remained on about three months without causing any undue discomfort. The cast extended from the base of the metatarsals half-way to the elbow. Flexion contracture of the fingers began almost immediately following the injury, and when the cast was removed the fingers were half closed. This contracture has been progressive to date, in spite of the application during 1917 and 1918 of a large palmar splint designed to maintain the fingers in extension. The flexor pull of the fingers against this splint caused marked pain.

Today the last three fingers of the left hand are so tightly drawn against the palm that the distal ends of the middle phalanges bid fair to crowd through the skin of the fingers. There is beginning slight erosion of the skin of the palm. The third and fifth fingers override the fourth. Forcible extension of the fingers away from the palm is impossible to an extent greater than one inch. Motion at the wrist, of the thumb and index finger is practically unimpaired. There is slight atrophy of the hypothenar eminence. There is one-quarter inch atrophy at the wrist and one-half inch at the forearm. Other movements of the upper extremity are unimpaired. The tendon reflexes are equal to those in the right arm. There is no R. D., in fact, response to the faradic and to K. C. C. is even more prompt than in the right forearm. Direct muscular excitability is about equal in the two forearms and in the two thenar eminences. There is no sensory change. There is obstinate cyanosis and hypothermia in cold weather and after immersion in cold water. There is, at such times, decreased amplitude of the radial pulsations.

General physical and neurological examination is otherwise negative.

Other conditions to be considered in this case are: (1) ulnar neuritis, since the ulnar side is chiefly involved, (2) Volkmann's ischemic paralysis, (3) Dupuytren's contracture, (4) hysteria. Ulnar neuritis is ruled out by absence of typical atrophy and sensory change. Volkmann's is ruled out by absence of muscular induration and presence of electrical reaction. There is no evidence of hypertrophy of the palmar fascia or ridging of the skin of the palm, such as is seen in Dupuytren's disease. As to hysteria, it is inconceivable that a deformity of this severity or duration could be entirely functional. Furthermore, the positive vasomotor changes, the gradual progression of the deformity during eight years, the unnaturalness of the deformity, i. e., the

impossibility to assume the position voluntarily, all point to an organic affection.

Brockman Building.

DISCUSSION

HAROLD W. WRIGHT, M. D. (Flood Building, San Francisco)—This paper is an important contribution as a clear summary of these forms of peculiar syndromes, following peripheral injury and because it calls attention forcibly to the features which distinguish such disorders from hysteria. The word "reflex," as applied to such symptoms and pathological conditions, is, to my mind, not very satisfactory. Nervous reflexes of manifold and peculiar nature, producing symptoms of disordered function at a distance from the place of origin of the reflex activity, we are familiar with, but such reflex disorders are disorders of function and not of structure, i. e., not lesions. In the conditions described in this paper we have definite pathological changes of tissue resulting from something besides a mere irritation of function. May it not be that in some of these disorders there has been an unrecognized infection of the end plates of motor nerve filaments, a localized neuritis at first, then irritative reflexes resulting, and possibly an ascent of the infective or toxic process to anterior horn cells with resulting irritation of other reflex paths at that level?

SAMUEL D. INGHAM, M. D. (1920 Wilshire Boulevard, Los Angeles)—The diagnosis of the conditions here presented offers much difficulty, since it is well established that certain of the functional cases, with local paralysis and contractures develop tissue changes, including joint fixations and rarefaction of bone, as secondary results. On the other hand, indefinable organic and toxic conditions may affect the physical integrity of the nervous structures without producing clean-cut signs or symptoms. We frequently see atrophy of muscles that have been subjected to prolonged reflex rigidity, and that is apparently the conception of Babinski in regard to these cases.

It is impossible to say, in view of our present knowledge, whether there may not be, as Doctor Wright suggests, an absorption of toxin or even actual infection of the peripheral nerves with sufficient resulting disturbance of the innervation to explain the symptoms.

EDWARD W. TWITCHELL, M. D. (909 Hyde Street, San Francisco)—The word "reflex" is very unsatisfactory to describe the condition, and it is curious that Babinski, with his genius for naming symptoms, did not devise a name free from the old associations inseparable from "reflex." He was alive to the possibility of the role that the autonomic system might play in these cases and spoke of it in his monograph. That seems to me to be the most nearly adequate explanation for the present. If a causal-gia be the expression of the sensory manifestations of sympathetic diseases, why may not this irritation extend to the trophic and motor fibers of the same system? Why is a contracture in the case described not due to stimulation of a reflex arc contained entirely within the system of sympathetic fibers efferent and afferent?

The paper is important in that it jars us out of our dimensional attitude toward nervous diseases and brings to our notice another dimension to which others will, no doubt, in time be added.

THOMAS J. ORBISON, M. D. (2007 Wilshire Boulevard, Los Angeles)—I do not disagree with the diagnosis made by Timme in this very interesting and well-presented case. On the contrary, I am inclined to concur in it. But there are two or three points that need to be cleared up. One is that this man has never been subjected to chloroform anaesthesia—at least no mention has been made of this. It would seem to me that this would give the real clue that would enable a correct diagnosis.

The other point is that I noticed that quite a marked extension could be obtained when, in my examination of the patient, moderate, but sustained traction in extension was made on the fingers. This seemed to tire, and I noted a more or less rhythmical attempt at maintaining the original posture, which attempts came with less force at the end of the short time I made traction. A third point should be borne in mind, namely, that his hand remained in a splint for three months. In my opinion

this man should have been anesthetized quite early in order to make diagnosis certain.

DOCTOR TIMME (closing)—The strongest criticism encountered by Babinski, when he formulated this concept, was from those who clung to the hysterical explanation for such cases as these. But in this case hysteria would be a diagnosis by elimination, rather than a positive one. We have all been too prone to call a thing functional if it does not fit into the known organic pictures. After all, the tendency of medical research is to increase the number of "organic pictures."

Among many wounds of extremities in American troops, I have encountered only two of these cases, whereas the French found them with much greater frequency.

I have been unable to find any pathological reports whatever, but I have no doubt that some alteration in structure will be seen somewhere between anterior horn cells and motor end-plates.

The sympathetic fibers are, no doubt, always involved, as shown by the vasomotor and trophic changes. But there is no evidence as yet that striped muscle has any sympathetic innervation, or at least that sympathetic stimuli can produce striped muscle spasm.

This man had moderate and sustained traction by means of splints for nearly two years, but the deformity persisted and advanced. This speaks for a powerful irritative factor at work. A splint deformity does not act this way.

Let us keep this concept of reflex disorder in mind. Perhaps many doubtful and borderline cases can, in the future, be so explained.

A Clinical Classification of Bright's Disease—Thomas Addis, San Francisco (Journal A. M. A.), made a study of the effect of various physical factors on the formed elements of the urine. He found that hyaline casts and all casts whose matrix was hyaline disappeared from neutral sodium chlorid solutions when the salt concentration was reduced to less than 0.5 per cent. When the hydrogen ion concentration of the solution was varied, it was observed that the less the hydrogen ion concentration the greater was the concentration of sodium chlorid necessary to keep the casts from dissolving. He had already noticed that those specimens of urine in which few or no casts were present were either dilute or alkaline or had both of these properties in lesser degree. It seemed likely, therefore, that variability was no inherent characteristic of cast formation, but might be the result of changes in the degree of dilution and reaction of the urine. This proved to be the case, since the variability was replaced by a satisfactory degree of constancy whenever the conditions were such as to induce the secretion of concentrated and acid urine. The results of the examination of the urinary sediments of the patients who were investigated fall, naturally, on qualitative as well as on quantitative grounds, into three main divisions; and since these divisions seem to be corroborated by many significant facts elicited by other methods of examination, Addis has become persuaded that they represent three diseases that are pathologically and etiologically distinct and separate. In order to avoid the confusion that would result from the use of terms that are familiar but have been used with a somewhat different meaning, he has reverted to a purely descriptive terminology and has called the first division hemorrhagic Bright's disease (seventy-one cases), the second degenerative Bright's disease (forty-three cases), and the third arteriosclerotic Bright's disease (twenty-six cases). The initial stage is a sequel of streptococcal infections. The second disease has been called degenerative Bright's disease because the constant and most prominent feature of the sediment is the large number of apithelial cells in various stages of granular or fatty degeneration. The third disease, arteriosclerotic Bright's disease, is of great importance because it occurs more frequently than any other form of Bright's disease. But so far as the kidney is concerned, its importance is of a negative character; for when the diagnosis has been made it is no longer necessary to consider the renal lesion as a factor in the management of the patient. These are the patients with hypertension who are often told that they are suffering from "chronic interstitial nephritis" and who consequently live in fear of death in uremia that never comes. These conditions are described in detail.

Clinical Notes and Case Reports

UNUSUALLY EXTENSIVE INJURY

REPORT OF A CASE

By S. M. SPROAT, M. D., Portola, California

A. O., age 22. Mill laborer, single, was brought to the Sierra Valley Hospital at Loyalton July 28, 1925, suffering from avulsion of the entire scrotum, skin, and subcutaneous tissues of the entire penis, abdomen, and left side, with testicles entirely denuded, and lying on the abdomen. The patient had been caught in the live rollers of the mill at 7:45 a. m., and was bleeding profusely and suffering profoundly from shock when seen at 10 a. m. in consultation with Dr. W. A. Lavery of Loyalton. Pulse 135, weak, thready; blood pressure, systolic, 90.

The patient was at once removed to the operating-room, anesthetized, and the entire area scrubbed with a scrubbing-brush and tincture green soap and water, after which sterile water was poured over the entire area. The testicles were placed in an artificial scrotum formed



by flaps from the inner sides of the thighs. The flaps were united in the midline with sutures of silkworm gut, leaving the perineum resembling that of a female. The penis was repaired and covered with skin drawn back from the foreskin which covered the distal end of the penis and which had escaped injury. The proximal end of the penis was covered with skin which had been avulsed from the abdomen and placed around it in a spiral manner. This graft did not live. The abdomen was covered, to a large extent, by bringing in large skin flaps from the surrounding healthy skin, and also by one large flap, which had been torn off. The skin which had been avulsed did not live, nor was it expected that it would live at the time of operation, but it was thought advisable to cover as much raw area at this time as possible on account of the likelihood of this lessening, to some extent, the marked shock which was present, and it evidently served this purpose.

For about ten days the patient had a stormy conva-



lescence, but after two weeks was out of danger and making a nice recovery. The photographs were taken August 20, and upon August 29 an extensive skin graft was done by Dr. Lavery and myself by the Thiersh method. This has taken well for the most part, and the patient is well on the road to a complete recovery.

This case is of interest because of the extensive injury, of which the pictures give only a small idea, and from the fact that recovery was made after such an injury involving such a tremendous area and severely injuring the testicles, scrotum and penis, and producing severe shock.

CONGENITAL CYSTIC KIDNEY

A CASE REPORT

By WALTER PRITCHARD, M. D., Colton, California

J. M. B. Teacher, single, age 40. In October, 1923, complained of cramps in the right loin for five days, with fever, headache, and vomiting.

One sister had a "cystic kidney" excised during her forties; the diagnosis was made after operation. Another sister, now in her fifties, is pale and puffy in the face, but repeated urine examinations fail to confirm the suspicion of nephritis.

For twenty years the patient had had attacks of colic in the right loin, with belching, bloating, headache, and fever, lasting a few days and occurring a few months apart. Between the attacks he had diffuse headaches. Fifteen years ago he bruised the left loin in a fall. He had "meningitis" twelve years ago. For several years, ending five years ago, he had "pyelitis and nephritis," a systolic blood pressure of 200, and took urotropin daily.

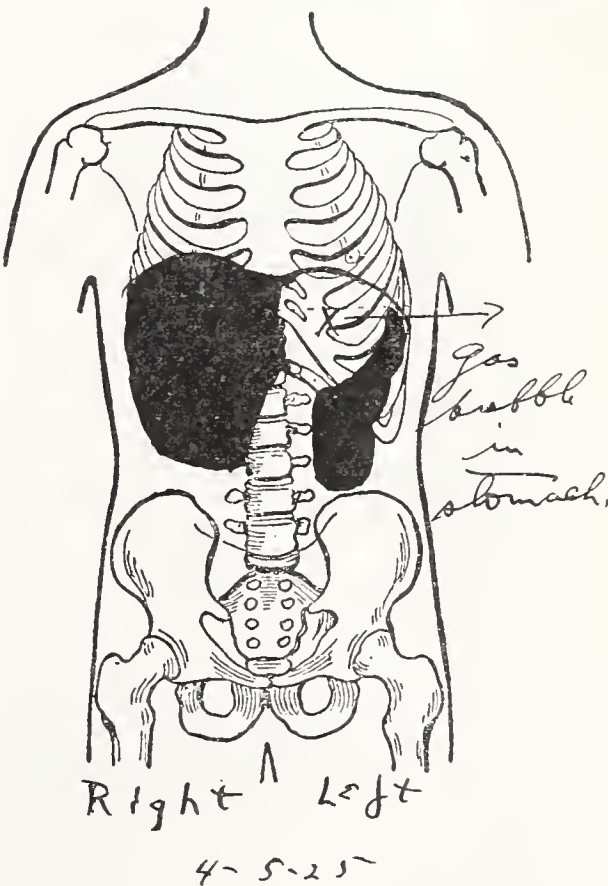
P. E.—The patient was of average weight and development; temperature, 98.4; pulse, regular 80; blood pressure, 140/90. There was marked tenderness in the right loin and less on Murphy maneuver; no psoas spasm; peristalsis was active. There were 16,000 white cells, with 83 per cent polynuclears. The urine was slightly acid, clear amber, 1.018; showed a heavy trace of albumen, trace of indican, a few hyaline-granular casts, and a moderate number of red, white, and renal cells. A tentative diagnosis was made of right pyelitis and nephritis, probably an exacerbation. With rest, local hyperemia, forced fluid intake, and urotropin gr. 15 q. 4 hr., the patient became comfortable within a few days. He refused cystoscopy.

During the next year and a half the patient was seen in several attacks, and the investigations made are here summarized. He finally consented to cystoscopy, which yielded a conclusive diagnosis. Because of the fragmentary development of these investigations, chronological treatment seems better replaced with topical consideration.

Symptomatology—Pain in the loin had harassed the patient for twenty years. It had been in the right side until the past year, and then worse in the left loin. In character it suggested "a lighted candle burning in my side all the time," with cramps during the height of the attack. The pain did not radiate, and was not influenced by voiding or defecating. Nausea and vomiting, malaise

and diffuse frontal headache were frequent. There was frequently a chill and febrile rise to 102, and rapid drop within a few hours. The attacks occurred at any time, beginning rapidly and lasting for hours or days, and were of varying severity. The intervals decreased from months to weeks, and even days. Gross hematuria was never seen. Nicturia once was habitual, but large amounts of urine were never passed.

Subsequent physical examinations revealed constant tenderness in both flanks, becoming exquisite during attacks. A mass was first noticed in March 27, 1925, continuous with the liver to percussion and palpation; it was firm, smooth, slightly tender, reaching downward in the right half of the abdomen to the level of the umbilicus. The sharp lower edge moved with respiration, and was continued in a rounded, firm superficial mass at the right rectus border, suggesting a distended gall-bladder, and measuring two inches across. This mass can be seen in the x-ray of April 5, 1925. A month later the topography had changed: a firm, smooth, tender mass three inches in diameter lay in the midright lower quadrant and moved with respiration, but could not be displaced. The liver edge could be felt just under the ribs. Immediately after cystoscopy, and with the bladder drained, the pa-



No. 1

The x-ray of April 5, 1925, shows the left kidney shadow with a faintly scalloped external border, and upper pole covered by gas in the stomach. The right upper abdomen is occupied by a shadow of uniform density extending from the diaphragm to the level of the umbilicus, and from the midline to the lateral abdominal wall.

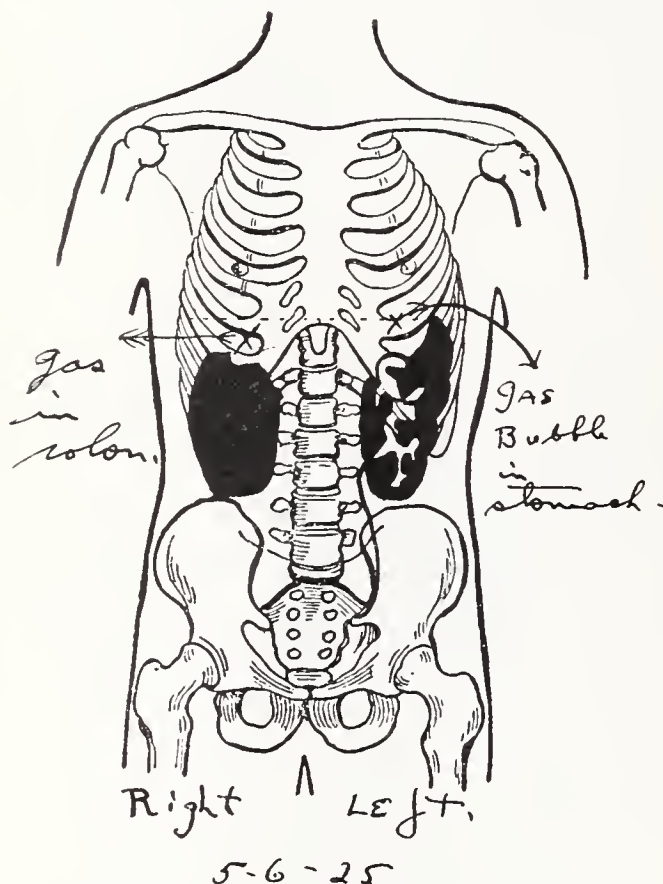
tient voided two quarts of urine, and this mass moved four inches cephalad.

Cystoscopies—One on April 5, 1925, indicated a normal bladder, except for slightly enlarged median prostatic lobe. Normal ureteral ostia emitted turbid urine at an average rate. A No. 6 catheter easily passed to the left pelvis, but would not drain, although readily admitting water. The left pelvis admitted 12 cc. of 20 per cent sodium iodide solution, with pain characteristic of the attacks. The right ureter readily admitted a No. 5 catheter, and drained urine at an average rate. It was not thought wise to inject both kidneys at the first sitting.

On May 6, 1925, both ureters were emitting turbid urine; catheter to left pelvis, but stopped at pelvic brim in the right side. Both dropped urine rapidly. The left

side admitted 35 cc. of injection fluid readily, with pyelogram as shown. The right catheter, unfortunately, slipped out in removing the cystoscope. But the shadow of the right kidney was so plain that further examinations did not seem necessary. After intramuscular injection, phthalein appeared in twelve minutes from the right side, and in nineteen minutes from the left side.

X-rays—The pyelogram of April 5, 1925, shows the left pelvis only partly distended, with those calices shown, blunted. The pelvis is six inches long, and the kidney shadow about nine inches long by four and a half inches wide, and extends from the dome of the diaphragm to within an inch of the iliac crest. The "liver" shadow is shown, extending downward with uniform density to a sharp lower border at the level of the umbilicus. The gall-bladder region was normal in espe-



No. 2

The x-ray of May 6, 1925, shows the left kidney as before and with the large, imperfectly filled pelvis and calices. The right kidney occupies the corresponding position. Both are deformed above by gas in the stomach and colon.

cially taken x-rays. The x-rays of May 6, 1925, show the left pelvis better distended, and the same blunted calices. The outline of the right kidney is clearly shown in the corresponding position and size, only an inch lower, reaching the iliac crest. This shadow is felt to be the right kidney because it corresponds in size and shape and position with the known left kidney; because the mass markedly shrank and moved cephalad after copious voiding; because of the varying position of the mass in the right side of the abdomen; and because a sister had a cystic kidney removed.

Laboratory Data—A twenty-four-hour urine specimen was 2500 cc.; neutral; 1.010; and contained 2 per cent of albumen. On other occasions there were a few pus cells, hyaline and granular casts, and a few red and renal cells. Non-protein nitrogen 34 milligrams for 100 cc. blood. Wassermann test of the blood was negative. A complete blood examination showed nothing abnormal.

Diagnosis—Bilateral congenital systic degeneration of the kidneys.

Treatment—The patient was placed on a cardio-renal regime, and given a ptosis corset with kidney pads. It was hoped thereby to prevent kinking or rotation of the pedicles. His fluid intake was to be over 3000 cc. daily, and the urine to be kept acid six days a week; and

urotropin gr. 5 taken bid. During three months, he has been free of pain, fever, or headache, and has gained fifteen pounds. Operation was discouraged because both sides were equally involved, and neither side badly infected. The bizarre masses, without typical signs of hydronephrosis (except once), were confusing. The familial character of the disease is illustrated.

TREATMENT OF OTITIS-MEDIA

By B. C. DAVIES, M. D., Los Angeles

In the treatment of this particular condition, both the anatomy and the nature of tissue involved demand special consideration.

Anatomically, we have a semi-closed cavity which communicates with at least two other cavities, while the part involved is relatively minute in area and difficult to reach.

The mucous membrane lining is sensitive and affords a fertile field for infection; moreover, it quickly reacts to irritants, or stimulants, and is capable of producing granulation tissue very rapidly. These findings render treatment difficult and uncertain of results under regulation procedure.

Boric-alcohol instillation goes very little farther than the opening through the tympanum, while the resultant deposit of boric acid impedes both drainage and continued treatment. Phenol-glycerine is no more satisfactory, except in early open cases.

Irrigations, of whatever nature, which contain water do not entirely pass the tympanum, but instead stimulate granulations, which eventually close the tympanic perforation and a chronic otitis-media is established, succeeded frequently by a mastoiditis.

Gentian violet, mercurochrome, acriflavine, and the rest of the newer antiseptics act well on bacteria that are reached, but their progress into the middle ear is easily impeded.

Following its successful use in other purulent conditions, I have for the last year been using pure ether in the treatment of acute and chronic otitis-media, with unvarying success, in over 125 cases. A few case histories follow:

1. Jenny C., age 8. Admitted March 13, 1924. Diagnosis, diphtheria. Acute mastoiditis, left. No operation. Both ears discharging. Boric irrigations. Phenol-glycerine. Treatment lasted five weeks, no improvement. Ether treatment started April 16, 1924. Ears dry, April 30, 1924.

2. John C., age 17. Diagnosis, measles. Ears discharging two weeks before admittance. Had been irrigated since discharge began. Ether treatment started February 13, 1924. Ears dry, February 18, 1924.

3. Mrs. W. J. E., age 47. Post-scarlet otitis-media, left. Ear had been discharging for week. Dry swab, followed by mercurochrome; no results. Ether treatment started March 25, 1924. Ear became dry April 3, 1924. Several cases practically similar cleaned up in one week.

4. James McC., age 7. Scarlet fever, otitis-media, left. Discharge began April 12, 1924. Ether treatment started same day. Dry ear April 20, 1924. Approximately fifteen cases of similar histories showed equally quick results.

5. V. W. M., age 5. Diagnosis, scarlet fever. Ears discharging three days before entry, April 7, 1924. Simple mastoidectomy, right, April 8, 1924. Wound and middle ear washed with ether at time of operation. Canal dry and wound clean, April 15, 1924. Wound healed in less than three weeks. Several cases of the same kind had been irrigated for weeks. Others had been treated with various dye solutions without success.

The technique followed was a careful swabbing, using small cotton swabs, made up fluffed on the

end. A twisting motion removed all pus in the canal and on the tympanum. Then the canal was filled with ether and that ear held uppermost while the ether evaporated. This treatment was given twice daily. In cases of very heavy discharge, the ether treatment was increased to three times daily. Upon the introduction of the ether, there is a transitory stinging which lasts but a few seconds.

The patients vary in age, from 9 months to 45 years. Five cases of wet ears, in post-operative, radical mastoidectomies that had discharged for six months following operation dried up inside of ten days, following the ether treatment.

The points of advantage in using ether are: First, its capacity to penetrate into corners and through very small apertures, as found in granulation tissue areas. Second, does not stimulate granulation tissue. Third, and most important, its rapid solvent action on lipoids, as found in pus and bacteria. No untoward results were noticed in any of the patients treated. Four post-scarlet, early mastoiditis cases were carried through without operation. However, the treatment is not suggested in lieu of operation.

In contagion wards of county hospitals, health office rules require a dry post-scarlet ear before release of the patient, and it can easily be seen that, all other considerations aside, the financial saving to the county by the early release of a large number of patients is considerable.

"Where There Is Darkness There is Disease"—"Printers' ink floods the darkest places with the light of intelligence," writes Dr. Frank Crane. "It is printers' ink that has scared the food fakers. Only at a good round of printers' ink will the vile, carrion flock of unclean birds that fatten on human credulity and ignorance take flight, they that sell plaster of paris for bread, carpenters' glue for candy, and God knows what vileness for fish, flesh, and fowl. Printers' ink has spread right ideas of sanitation, upset old, mildewed superstitions, opened windows, lured people outdoors, flooded fearsome brains with truth, and despairing hearts with hope. It has built hospitals and supports them. It has prevented epidemics, driven hush-mouth authorities to activity in remedial measures of cleansing. It is well enough to give an individual epsom salts or calomel, but what the public needs for what ails it is plenty of printers' ink. The best part of the science of medicine is that part which can be told in plain language so that the common man can understand. Every newspaper ought to have its health department edited by an intelligent physician. What people need to know is the truth about health, about food, and about simple living. The more truth they know the less useless and harmful food they will eat, and the less they will run after religious cure-alls and crazy fads."

Pyelonephritis Complicating Pregnancy After Nephrectomy—John E. Hall, Nashville, Tenn. (Journal A. M. A.), reports the management of a case of pyelonephritis occurring in a woman who became pregnant about one year after he had performed a nephrectomy on her for pyonephrosis of the left kidney. The right kidney was at all times free from infection during her illness from the left-sided pyonephrosis. Attention is called to this fact, so that it may not be supposed that the pyelonephritis developing during pregnancy was due to impairment of the right kidney from infection at the time of this pyonephrosis. The primary focus of infection responsible for the pyelonephritis could not be ascertained. The patient's tonsils were removed shortly after her nephrectomy, and her teeth and accessory sinuses were in perfect condition.

EDITORIALS

THREE YEARS OF THE CORNELL PAY CLINIC

The Cornell Pay Clinic, says its recent report, "has proved a successful demonstration of the possibility of providing good medical service on a self-supporting basis for persons of moderate means. Since these persons constitute the majority of the population, the Cornell Clinic announces itself as 'a demonstration of considerable public importance.'"

The most amazing feature of the expensive report gotten out by these promoters of department-store practice of medicine is that they are apparently proud of the fact that they can successfully compete with private doctors with the "majority of the population."

Their report announces with apparent gusto that, whereas other pay clinics, some of which are enumerated, do serve some poor people free, the Cornell Clinic absolutely refuses charity because it was feared the Clinic would be "swamped by non-paying patients" unless service was "limited to those who could pay its fees." *In other words, this clinic is in the practice of medicine for fees precisely as are private physicians.* They are so cold-blooded about it that they refuse any help to the poor "except in emergencies" and for purposes of "medical education and research." This, of course, gives them a tremendous advantage over the private physician who considers it his duty—and privilege—to render a large amount of free service. It even gives this corporation form of medicine advantages over the Mayo Clinic, the clinic in connection with the Ford Hospital and others they mention, in that all of these do some free work. Cornell claims a large volume of business, with an average of 18,000 new patients a year. The report shows 118,711 visits during 1922, 110,235 during 1923, and 114,705 for 1924. These, according to the report, represent about 90 per cent of those who apply for service; *the other 10 per cent are refused because of inability to pay the fees.* There is another 10 per cent who, although of doubtful financial standing, are accepted.

A Promising Business Venture—Although only in its fourth year of business, this clinic has grown financially from a deficit of \$46,000 in 1921 to a self-sustaining basis in 1924, and the indications are for a substantial profit for 1925, unless some of the usual business methods of preventing such showings of profits are utilized. This is an encouraging showing, from a commercial standpoint. It is said to have taken Mr. Gary longer than this to make United States Steel a paying proposition.

Fees—The report gives the average fees paid by patients as \$2.24 a visit. As an *average*, such fees ought to make the practice of medicine very profitable, particularly when it is remembered that they render no free service. Less than 20 per cent of the doctors of California—and we suspect of New York as well—*average* as much as \$2.24 a visit in the practice of their profession. But, of course, they all

do free work, and most of them a large amount of it, which naturally pulls *their* average down.

Substituting salaries for fees to physicians gives corporation practice of medicine another advantage in their competition with the private fee basis of pay usually employed by the physician who practices as an individual. The Cornell Clinic report shows that they paid \$90,770 as medical salaries last year. When this is considered in connection with the 114,705 patient visits, we see that they paid their doctors the bargain-counter figure of seventy-eight and a fraction cents a patient visit. Mind you, these were no "let me see your tongue" visits. Some 10 per cent of them were first visits, with a "thorough physical examination" which required "nearly three-quarters of an hour of the doctor's time," while the others were revisits requiring "ten or fifteen minutes" of the doctor's time. The report shows that the Clinic paid "non-medical salaries" equivalent to well over a dollar per patient visit. Compare that with the 78-cent doctor's fee, and draw your own conclusions. The report's apology for the "flat fee," like all similar apologies, whether emanating from a Detroit hospital, a labor union, or a government bureau, makes illuminating reading.

The various clinic "chiefs" are paid a "flat salary" of \$1500 a year, which, according to the report, is for from 268 to 360 hours of their time—at most, \$5 per hour. Other doctor employees are divided into two groups—one class is paid \$2 an hour, and the other \$2.50 an hour. They work in clinic "sessions" of two and one-half hours each, and if the doctor finishes his work in two hours he is permitted to take the other thirty minutes off, presumably on full pay. The Clinic attempts to provide these doctors working for wages all the clerical and technical help they can use, but, says the report, "where the physician is supposed to be giving his time in hospital or clinic without remuneration . . . he can be clerk as well as doctor," because this combination "saves the institution money."

In answering the question of who are their patients, the report says the average wage of the patients is \$1800 a year, and that the wage-earners average "somewhat" more than one per family. The report quotes the figures of the Housing Commission of New York, to the effect that two-thirds of the families of the city have incomes under \$2500 per year. Therefore, says the report, "*Potential Cornell Clinic patients represent a majority of the population of the city.*" If this dream should come true before the inevitable awakening occurs, there would be left to the some 15,000 doctors—many of them Cornell graduates—a clientele of a minority of the people of the city, and *all* of the poor would be in this minority because the Cornell Clinic refuses to serve them, so the personal doctor must do so, as he always has done. Interesting, isn't it? That interest will be intensified by the well-bolstered statement of the Clinic that many of their patients "have had previous medical care without satisfactory results before coming to Cornell." We wonder if the Cornell service is so superior that their shoe might not fit the other foot with equal certainty. The report certainly indicates strongly enough what the Cornell Clinic promoters think of

themselves, as compared with their own graduates with whom they are competing, when they say in effect that the great popularity of the Clinic is due to "previous unsatisfactory experiences" of their patients and to the "prominence" of the Clinic doctors, who are "leading members of the medical profession." Considerable space in the report under review is occupied in explaining, by invidious comparisons, how and why the services of the Cornell Clinic "indicate a much higher level of medical efficiency" than do similar figures from other clinics. Some ingenious philosophy and some queer figures are used to support this conclusion, which some readers will extend to a logical conclusion of interesting if not entertaining portent.

To make the claim that because many patients are added to the Clinic's happy clientele because of dissatisfaction with their former doctors is indicative of the Clinic's superior service, is likely to have another side. Surely, there must be some patients—and we suspect there are many—who also became dissatisfied with the Clinic and took their patronage to a clinic competitor. Of course, the ethical doctor works at a disadvantage in this phase of competition because his idea of service does not extend to follow-up letters and personal solicitation to return by paid agents or solicitors of any kind. His contractual relations with his patient are purely personal and wholly voluntary at every stage of the contact.

The authors of this ingenious report appear to get considerable satisfaction out of invidious comparisons of the costs of service to the patient between what they are pleased to term the "commercial rates" of private doctors and their department-store prices. This part of the report reads much like advertisements published for the purpose of increasing trade, and closes with this: "From the financial standpoint, there is no question that the Cornell Clinic is offering a grade of medical service which would be far more expensive to its patients in private offices" . . . and "the family incomes of the Cornell patients are typical of the majority of the families of New York City."

Careful reading of this report of the Cornell Clinic, only a few outstanding features of which have been noted here, leaves the thoughtful reader with a variety of feelings. One is in wonder as to how many of the fifty odd thousand patients who visited the Clinic needed hospital care, including surgical work; what hospitals and what doctors were they sent to? Why? What were the expenses and who paid the bills? The chances for referred work from a large clinic that does no free work and claims the majority of citizens of New York as its legitimate customers ought to be exceedingly great.

The House of Delegates of the American Medical Association has twice disapproved as unnecessary and inadvisable, movements which appear to offer only part of what this clinic offers under similar principles and tending in the same obvious direction.

Are department-store methods and corporation practice of medicine to replace the personal service of the doctor to the patient who chooses him? We wonder. If the policies and practices of the Cornell

Clinic are sound, then many other varieties of big business medicine are sound and in the best interests of the public health. None of these activities can be considered to be local. Attempts to start Cornell Clinics have already been seen in California and presumably elsewhere. If the Cornell Clinic is the best method of caring for thousands of pay patients of New York City annually, then the principle should be extended to all classes of people throughout the country. If it is unsound, unwholesome and unwise, then physicians should say so now, and say so in no unmistakable terms.

HOSPITALS AND THE CULTISTS

Certain groups of inadequately educated "healers," acting under the protective constitutional cloak of religious liberty, have succeeded thus far in having themselves widely admitted to be "above the laws" regulating the practice of the healing art. Certain other groups of ignorant or inadequately educated healers have succeeded in California and certain other places in having the laws so modified as to allow them to license themselves to practice medicine and otherwise assume the responsibilities once the sole prerogative of specially educated professional men and women. These "doctors above the law" and "doctors by law," instead of by education, are now active in further efforts to get control of health services by invading hospitals, laboratories, public health services, clinics, etc., again using politics, legislation and law, instead of education, as the weapons for their offensive. They apparently do not wish their own hospitals for their own purposes, *because there is no objection to this*, and it seems fair to assume they are afraid of the consequences of full responsibility that operating their own hospitals would entail. They want to crowd themselves into hospitals operated for and by educated physicians, and force—by law and politics—these educated physicians to work with them as "fellow practitioners." In a word, they want the safe cloak of intelligence to produce the shadows they require to "get away" with the consequences of their ignorance.

These "sciosophists," as Doctor David Starr Jordan has grouped them in BETTER HEALTH MAGAZINE, find their best opportunities to destroy hospitals as agencies of scientific medicine among those operated by government and in the miscalled "community hospitals," better named "political hospitals."

These are the weakest links in the hospital chain. Of the some forty county and municipal hospitals in California, less than ten are even considered important enough to list. It is exceedingly doubtful if the "sciosophists" could make poorer excuses for hospitals out of most of them than they now are, and the inevitable reaction that must come before the hospitalization of the poor is upon even a decent basis might be hastened by turning the majority of county hospitals over to the "sciosophists" *exclusively*. Such action cannot, of course, be recommended, but if it occurs, as has already happened in part in a few instances, what is now a perpetual disgrace might become a tragedy of such magnitude

as to jar public opinion from its complacency and too obvious indifference.

Of the small minority of acceptably operated county hospitals, "sciosophistic" efforts to burrow in must certainly be resisted. They are making a lot of noise on the cellar doors of—for example—the San Francisco and Los Angeles county hospitals. In the latter they have already secured "rights and privileges" that have placed the standing of that great hospital in jeopardy as an approved agency of scientific medicine and better health. Some of the other county hospitals are even less fortunate.

A most interesting situation is just developing in Santa Barbara county, where steps have been taken to build at Santa Maria a branch of the existing county hospital, and this branch hospital is to be "wide open"; which means that it will be, except in emergencies, an exclusively cult hospital supported by public funds. Of the misnamed "community" hospitals, the stories of efforts at Riverside and Long Beach, now familiar to readers of hospital literature everywhere, ought to prove more effective than has been the case in checking efforts to extend the application of this stupid idea. The shock troops of "sciosophy" are collecting about some of the State government and even National government hospitals, waiting and watching for an unguarded entrance. But by far the most tragic incident that has happened was the *repudiation* by plebiscite of the terms of acceptance of the gift of a memorial hospital by Colonel Simon J. Murphy to the people of Whittier. The story of this debacle has been so often and widely told that it needs no repetition here.

Fortunately, the great majority of hospitals are still in full control of intelligent persons and groups, who are not even tainted with "sciosophy" and are not likely to be. These include the more than half of all hospital beds operated by the Sisterhoods of the Catholic church; most, but not all, of those operated by other church organizations; most of those operated by philanthropic groups of one sort or another; practically all those operated by physicians; and the majority of those conducted by corporations and business organizations. Fortunately, also, the law gives to hospital directors and trustees *absolute authority to decide who may and may not have the privilege of practicing in their institutions*.

This is the most effective bloc that the "sciosophists" have to face in their campaign for hospital control. But they do not consider it hopeless and are working along three lines to overcome it. One sustained effort is to gradually change the controlling personnel to one more friendly. Another is to encourage any and all movements calculated to extend political regulation of hospitals; and another is to promote actively the "community hospital idea." The "sciosophists" know their political power and if they can get government supervision extended, or get hospitals to use in some way—any way—public funds, they believe their chances will be better—and they would be. One of the most interesting of these movements is the sustained effort to have hospitals declared "*public utilities*" and regulated accordingly. We took a long step in this direction when the present, in certain respects commendable, Department of Public Welfare Law was passed by the last Legislature, with jokers in it calculated to

plague every ethical hospital and other health agency in California in the not far distant future.

WHAT CAN BE DONE?

From the political angles, legislation and law enforcement, probably not much. Much recent legislation is immature and faddish; politics has become too much a matter of "bloc juggling" and law enforcement as a whole is at a remarkably low ebb. "Sciosophists" of the near doctor groups, while their more than fifty-seven varieties fight among themselves, seem to have little difficulty in presenting a united front to legislators, voters and other factors of "democracy in action." Opposed to them in this broad field are the intelligenzia, with every fellow holding to his own brand of treatment and opposed to any form of mass action. In that most effective of all power—moral influence—honesty, intelligence, and decency, still have the trump cards. Of these, one of the most effective is the widely accepted ethical ruling that educated doctors, nurses and other recognized health workers may not consult with, work for or with, or have anything whatever to do with any members of the "sciosophy" groups. True, some do violate the principles of their profession by doing these things, but they are well known, both to their colleagues and to much larger groups than they realize. These "twilight zoners" often slip over entirely and become unspeakable. It is from this group of intellectual backsliders that the "testimonials" for fake cures by "celebrated specialists" are recruited. It is from the same groups that "death certificate signers" for "sciosophists" come, and it is from them that leaders of new cures, cults and what not, are recruited.

The moral web was immeasurably strengthened when the American Medical Association, the American College of Surgeons, the American Hospital Association, and practically all other great health serving bodies, extended their restrictive ethics to include hospitals, clinics, and all other agencies of health as well as persons.

A hospital, for example, in order to have any sort of recognition, must limit those permitted to practice in it to persons of certain educational attainments and certain standards of morality. By the same token, a doctor who practices in a hospital with lower standards thereby becomes unethical and is out in the open for what he is. We gather from many letters and inquiries upon this subject that the simple facts are not as well known as they should be, and in order to further clarify and impress the subject, the following abstracts are made from recent letters from the Council on Medical Education and Hospitals of the American Medical Association; the American College of Surgeons, and the American Hospital Association to this editor and to certain hospitals (which shall be nameless) in California:

American Medical Association to W. E. Musgrave:

"The only policy to pursue from now on is to stand fast in the requirement that no hospital will be approved under any circumstances unless it confines membership on its staff to reputable practitioners who have received the degree of Doctor of Medicine from medical schools approved by the American Medical Association and that this ruling must apply

to every person permitted to treat or prescribe for the sick in the hospital. This means that no concessions for any irregulars or incompetent practitioners shall be made whether they hold the M. D. degree or not. I feel certain that you will be in full agreement with such a stand."

American Medical Association to — Hospital:

"The provision for such irregular practitioners in a wing of the hospital cannot, as I believe you will readily see, enable you to entirely separate the various services whether they be professional or non-professional, and the hospital will necessarily have to bear the same name whether it applies to the medical or irregular practitioner division. Indeed, there is no way in which the identity of the two portions of the hospital can be kept separate. *Under no circumstances can the approval of the American Medical Association be given to the practice in hospitals of any individuals, whether they have the degree of Doctor of Medicine or not, unless both educationally and morally they are qualified to intelligently and efficiently care for sick and injured people.* More serious still, however, is the legal status which will result from the arrangement you have made for irregular practitioners—a legal status which you can hardly afford to assume. The board of trustees which controls a hospital, and this refers with particular force to hospitals caring for pay patients, is legally responsible for any errors or malpractice on the part of any practitioner who is permitted to treat the sick in the hospital. *Therefore, that board will be liable for any disasters which may result through the ignorance or incompetence of the irregular practitioner.*

"If the arrangement you have made for irregular practitioners continues, I do not see how recognition can be given to your hospital, either as a place in which efficient care to its patients can be assured, or as a place where an adequate training of interns can be provided.

"The irregulars are fighting against the requirement of reasonably high educational standards throughout the country, but it seems that *they are at present focusing their action on the institutions in the fair state of California.* I believe you will agree with me that the greatest safety to your hospital from every point of view rests in your standing firm for the principles and educational standards which the American Medical Association is trying to uphold in the hospitals of this country."

American College of Surgeons to W. E. Musgrave:

"I want to thank you for your communication of July 6 with enclosures re conditions at the — hospital.

"I have notified them that in view of the action they have taken their standing, so far as the American College of Surgeons is concerned, is endangered. I have, however, asked for an official statement from the hospital authorities regarding their present relations to the irregulars, pending my final decision. I want to get something from them in writing. However, we have sufficient data on hand to cause us to eliminate them from our list of approved hospitals unless there is a very radical change in the near future in the present situation.

"I find that the — and the hospital at — are both playing with the irregulars, and for that reason, particularly, have been notified that we cannot give them our approval.

"— county hospital will soon have their irregular unit ready. *This will disqualify them also, so far as hospital standardization is concerned, inasmuch as this unit is under the corporate name of the hospital which we approve as a whole and not in part.*

"If county hospitals, by virtue of their nature, are obliged to submit to public or popular whims, then I feel that the county hospital system is not a sound one for future hospital development.

"If the medical profession would absolutely refuse to use hospitals which are courting the irregulars

it would settle the matter in a very definite manner, for the hospitals cannot get along without the educated doctors and their clients."

American Hospital Association to — Hospital:

"Your first vital mistake was made when funds were solicited from the public on the presumption that irregular practitioners would be given equal privileges with doctors of medicine. If this is true it would be far better to raise additional funds to repay those who contributed under these representations rather than attempt to run a hospital with the two under one roof.

"So far as this association is concerned we do not recognize a hospital whose staff admits any of the cults. We believe that a hospital is a place for the scientific care of the sick and that the trustees are *morally and legally responsible* for the application in the institution of all of the modern methods and practices generally recognized by the medical profession. We believe that the trustees have an absolute right, and are legally obligated, to choose the members of the staff and that in making such choice they should be bound by the highest standards that have been set in the country.

"I can conceive of no method whereby a decent hospital can permit osteopaths, or other cults, to practice under its corporate name while keeping faith with the public and maintaining high ideals and, because of this belief, we refuse to accept a hospital as a member of this association where such practitioners are admitted.

"It is realized that you have a practical problem to solve and that there exists considerable public sentiment in favor of the cults in your vicinity but we are convinced that only grief and disorganization can result from the sacrifice of fundamental principles and that your only salvation lies in making a determined stand for the right. *If the osteopaths want hospitals let them establish them and go to the public boldly for their funds rather than hide under the cloak of the profession of medicine whose ideals they would destroy.*

"I see no prospect of a compromise when such involves the sacrifice of the things we have so long fought for and I feel safe in saying that this association is not likely to lower its standards through the clamor of a very small minority that is endeavoring to obstruct the wheels of progress."

I might quote more at length and from additional sources, but surely enough has been said to clearly outline the issue between adequate education and morality on the one hand and the hosts of "sciosophy" on the other, at least insofar as hospitals are concerned. A similar problem is forcing itself to the front in the conduct of "clinics," the duties, responsibilities and ethics of nursing and a score or more contacts between agencies of health based upon intelligence and the machinations of the hosts of "sciosophy."

A STUDY OF SURGICAL DIAGNOSTIC ERRORS

The most accurate check yet devised to determine the errors of physicians in their clinical judgment as expressed in diagnoses is, to compare the clinical findings with the autopsy findings in a series of cases. This has been done repeatedly in various centers, but not as often as it should be.

Several months ago (January) we noted in these columns the interesting study made by Sison and Sison from the medical records of patients of the Philippine General Hospital, Manila. More recently, C. M. Reyes (Journal of the Philippine Islands Medical Association) has made a similar comparative study of the clinical and post-mortem

records of the fatal surgical cases of the same hospital during the past twelve years. This study, says the author, is an inquiry "into the extent and gross causes of the discrepancies occurring between the clinical diagnosis on one hand, and the pathological findings on the other, in 1065 surgical and gynecological cases that passed through the free wards of the Philippine General Hospital and went to autopsy during the first twelve years of its existence."

Leaving out of consideration certain conditions, the analysis of the records shows 3708 diagnoses for 1065 patients. Errors of commission (as determined by autopsy) occurred 729 times (19.6%), of which 287 or 7.7% are recorded as excusable errors. Errors of omission were 1719 or 46.3%, of which 761 or 20.5% were classed as excusable after autopsy studies. Clinical diagnoses were correct 1260 times or in 33.9%, of all the 3708 diagnoses.

A hospital like the Philippine General Hospital, where the faculty of a medical school is ex officio the staff of the hospital; where the well known Bureau of Science and the city morgue are all located upon the same campus, and where each and every clinical diagnoses found in every patient is entered upon the clinical record; where the anatomic diagnosis is made equally complete and where autopsy is secured for well over 90% of patients, offers particularly favorable opportunities for studies of this character.

It is worth noting that Reyes' findings are—as they should be—a comparison between *diagnoses* independent of the number of patients. His 1065 patients had 3708 clinical diagnoses and he did not consider many others that were of little consequence or could not be checked up by autopsy.

The showing made by the study compares favorably with somewhat similar reports elsewhere. There is some consolation in the figures and much that should stimulate clinicians to devote more serious and thorough study to their patients; and there is a sharp warning for all of us who may tend to grow careless under conditions where carelessness is paid for with health or even life.

DON'T FORGET

The Lane Medical Lectures, so fully described in the September issue of CALIFORNIA AND WESTERN MEDICINE, page 1179, are to be held in Lane Hall, Monday to Friday, November 9 to 13, 1925.

Graduate instruction in medicine seems to be the order of the day, and it is difficult to conceive how more valuable or lasting benefit may be secured by any physician in any way interested in the problems of orthopedic surgery than by attending these lectures.

Tom Sawyer on Vaccination—"I ain't denying that a thing's a lesson if it's a thing that can happen twice just the same way. There's a lot of such things, and they educate a person, that's what Uncle Abner always said; but there's forty million lots of the other kind—the kind that don't happen the same way twice—and they ain't no real use, they ain't no more instructive than the smallpox. When you've got it, it ain't no good to find out you ought to have been vaccinated, and it ain't no good to get vaccinated afterward, because the smallpox don't come but once."—Tom Sawyer Abroad.

- The MONTH with the EDITOR -

Notes, reflections, extracts from correspondence, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

We have been asked to accept a financially profitable advertisement from a new proposed *he-goat* farm.

We also recently declined the advertisement of a slaughterhouse offering to supply fresh "glands" at attractive rates.

"By-products" and "end-products" from slaughterhouses seem to be growing more numerous and expensive. Curiously enough, the price of meat does not decline.

"EATING too much is bound to shorten your life," observed the doctor.

"That's right," agreed the farmer. "Pigs would live a good deal longer if they didn't make hogs of themselves."

"IT IS not natural for your public to be objects of charity," writes Doctor Edwin Schisler (Journ. Mo. Med. Assn.). "One of the first laws of nature," continues this author, "is self-preservation and independence, which is taught in your schools, churches, and your actions of every-day life and handed down by your forefathers. Then why try to make dependents by forcing your different charities upon them?"

A June bug married an angleworm;
An accident cut her in two;
They charged the bug with bigamy,
Now what could the poor thing do?

I See by the Papers That—

—"The State Board of Osteopathic Examiners has been advised by the Attorney-General's office that city school boards could not, under the state law, employ osteopaths to examine children in the public schools, the law requiring licensed medical men for that work."

When King Nebuchadnezzar was restricted to a diet of grass his "hairs grew like eagles feathers and his nails like birds' claws"—at least, so says the Bible in the Book of Daniel.

Here's a hint to beauty specialists! Food fad-dists might also examine this "recent literature" with profit.

From Our Correspondents—

—Lemuel P. Adams, M. D. (Oakland)—The surgical "Conversaciones" are fine, and would like to see more of them in future numbers of our magazine.

—Alfred E. Banks, M. D. (San Diego)—Anent the surgical "Conversaciones," a sample of which is contained in the last issue of the Journal, permit me to state that the innovation is of the utmost interest and promise.

By all means continue this method of attack on the many vital questions which may be thus appropriately briefed.

—Roy Oliver Thompson, M. D. (Calexico, California)—The "Conversaciones" published in your latest Journal I think were a complete success. Give us some more of them, please.

—Julius R. Hamilton, M. D. (Hollywood, California)—I wish to thank you for the courtesy extended in the publication of the case report submitted by me, and your kindly comment in "Editor's Note" certainly lends encouragement to one to send in reports on any future cases that might be of sufficient interest for publication.

Please know your courtesy was appreciated.

—Doctor C. O. Sappington (Oakland)—I was very much interested in the article by Doctor Glaser on "The Doctor in Industrial Medicine," which appeared in the July issue. It was very well done, and I wrote a commendatory note to Dr. Glaser about it.

I wish to take this opportunity to congratulate you on the fine piece of work that you have done in bringing the Journal to where it is at the present time as the finest type of state or section medical journal in the United States.

"Happiness defies the laws of mathematics;
To multiply it you have to divide it."

Doctor James M. Patton (Journal A. M. A., August 22, p. 564) gives an illuminating discussion of "Oculists or Optometrists—Which?" that every doctor, particularly in California, ought to read *carefully*.

It seems that California is to become the perennial proving ground for curious things pertaining to health.

Most doctors are not much concerned with a controversy as to whether or not the present incidence of infantile paralysis in California constitutes an epidemic.

But we are all disturbed by official reports of some eight or ten cases a day.

More than five times as much poliomyelitis as for corresponding periods last year should at least be interpreted as a danger signal.

Mose—Does yuh really love me or does yuh jes' think yuh do?

Rose—Yas, indeedy, Honey. Ah really loves yuh; Ah ain't done no thinkin' yet!

Other County Medical Societies, and even the California Medical Association, would serve themselves and their people well by emulating the very praiseworthy work of the Los Angeles County Medical Association's Narcotic Committee.

Their recent report (Bulletin of the Los Angeles County Society) shows wise conduct in a difficult situation. The report is too long to republish here, but of its nine short paragraphs of advice to members we read:

"Think five times before prescribing for addicts."

"Think one hundred times before joining reform movements."

A GOOD WAY to gauge the truth of any man's argument is to ascertain the motive behind it. Many a cause which seems on a high moral plane is resting on a nicely concealed substructure of self-interest.—Ohio Health News.

"What do you make a week?" asked a judge of an Italian organ-grinder.

"Twenty dollars, sare."

"What, \$20 for grinding an organ?"

"No, sare; not for da grind, but for da shut up and go away."

THE DISTURBING INTERVIEW published in the San Francisco Bulletin by Mr. Frederick L. Hoffman, statistician for the Prudential Life Insurance Company of New York, about the alleged excessive prevalence of cancer in San Francisco, and the Challenge written by this editor and published in the same paper the next day, is still bringing reactions in letters and messages from doc-

tors, and even more so, from the public of the whole community.

Of all the letters and messages, only one—and it was written by a doctor—"protested" about the rough handling of Mr. Hoffman, who, this doctor claims, ought to have the "active support of the medical profession in his work."

The recent serious illness of Doctor H. J. Hanzlik explains the absence of his excellent editorials from CALIFORNIA AND WESTERN MEDICINE during the last few months.

Doctor Hanzlik is professor of pharmacology of Stanford University and a member of the Council on Pharmacy and Chemistry of the A. M. A. It is a pleasure to the editor that his splendid monthly editorials on some phase of pharmacology and therapeutics have been missed by our readers. Doctor Hanzlik has now recovered, and we will again hear from him monthly.

From the Medical Press—

—Does roentgen ray modify the course of whooping cough? Faber and Struble of San Francisco (Journal A. M. A., September 12) say not. They supply some rather convincing evidence upon which their conclusions are based.

—Novasurol, ammonium chlorid, and controlled diet provide promising results in the treatment of patients suffering from nephritis and edema, according to Keith, Barrier, and Whelan (Journal A. M. A., September 12).

The gratifying results from the combination indicated was not secured by either of the three agents alone.

—Calmette and his co-workers keep hammering away on "B. C. G." their anti-tuberculosis vaccine (Am. Inst., Pasteur). Calmette is a veteran, daring and resourceful investigator, and let us hope that something practical comes out of his novel and extensive experimentation with the human-like apes in Africa.

The faster you travel the quicker you will reach the end of the road.
Old age and death are your last stations. Why hurry so?

MR. — OF LOS ANGELES was injured in a motor accident. He was examined by a "licensed doctor," whose report of his findings reads:

"Had an X-ray taken at once for which reads Fourth Cervical to Sixth Cervical left roatary Scoliosis (causing the neck to be pulled to the left side), causing dispoena, preception dull and nervousness. Second: Seventh Dorsal to Ninth Dorsal right Scoliosis (causing torpid condition of liver and kidneys, and auto-intoxication absorbing toxine). A contraction of the Lumbosacrael muscles, drawing right hip posterior, creating severe impingement of sciatic nerve. Also left knee injured by jar and causing severe pain of same. Patients sufers intestinal stasis, absorpion of toxines, and in general a fit subject of rest for at least two months after he is put shape at this office."

The physician to whom the patient eventually applied for service thought the above gem would be interesting news. It is. It is more than that. It's a whole arbeit that tells a lot.

"Exhausted Nutritives"—Under this heading the Medical Journal and Record writes editorially: "We, or at least our children, are urged these days to eat various things which we do not want, and might, therefore, on general principles, seem not to need. Bowing to authority, many of us have followed humbly the leadings of the 'nutrition workers' and have taken spinach and carrots and their ilk as a matter of conscience. We make no complaint against this diet (even if we do not like it), provided we really take in the ingredients which are supposed to be contained in the prescribed foods. Now cometh the agricultural scientist and deposeth that spinach is, in many a garden patch, suffering from chlorosis. If the spinach suffers from chlorosis, will not the human who depends on spinach for his daily supply of iron also suffer from chlorosis?"

Medical Economics and Public Health

THIS IS ENCOURAGING
Commonwealth of Massachusetts
Department of Public Health

Preventive Medicine From Your Family Physician

"There are at least three common diseases that can be prevented. Any case of these diseases in your family means that available methods have not been used.

"(1) Smallpox may be prevented through vaccination. Recently smallpox has been widely spread over the country, and in some places it has been of the malignant type.

"(2) Typhoid fever may be prevented through the periodic injection of typhoid vaccine. 'Vacation' typhoid is mounting with the increased crowding of the country.

"(3) All your family can be protected against diphtheria. Your private physician will explain how.

"Diseases of middle life, due to 'wear and tear,' such as Bright's disease, arteriosclerosis, cancer, and diabetes are increasing. These diseases can be combated by corrected habits and early recognition. Periodic health examinations at all ages may save you from these diseases.

"Talk these matters over with your physician."

The Massachusetts Public Health Department "believing that the *private physician* is the ultimate unit in *preventive medicine* as in curative medicine," has prepared the above postcard for wide distribution. Physicians, hospitals, and all other health workers are invited to help distribute the cards.

This is one example of the many that are now being published, which seems to indicate that the practice of personal health by *public* health departments is on the decline. It is true that some boards of health still continue the operation of "health centers" and other contrivances for the private practice of medicine under the guise of public health, but they apparently are less numerous than they were a few years ago.

Some of the best public health departments have never entered the field of personal practice. Others from time to time announce their withdrawal from the field, and still others, like the Massachusetts Public Health Department, are now urging people to *go back to personal health doctors for personal health services, both preventive and curative.*

The Wayne County (Michigan) Medical Society is actively engaged in an effort to induce all of its members to have a physical examination. Preliminary reports indicate probable success.

A DOCTOR DOES NOT SECURE "BUSINESS" in Industrial Medicine by destructive criticism of the law and the methods of its enforcement.

Two of the three fundamental essentials to secure and hold "business" of this character are a complete knowledge of the provisions of the law as interpreted by the Industrial Accident Commission and a constant, prompt carrying out, in every instance of these requirements. The third essential is not included in this discussion.

Mr. W. H. Pillsbury, attorney for the Commission, authoritatively discusses the law in all that it signifies and in its many and far-reaching applications in "California Safety News" of December, 1924, and March and June, 1925. If Mr. Pillsbury would complete the discussion by a chapter thoroughly outlining doctors' and other medical agencies' responsibilities in the carrying out of this law as interpreted by rulings and actions of the Commission, the result would be wholesome.

Health Officers Recently Appointed (State Board of Health Weekly Bulletins)—Mr. J. J. Saunders has been appointed health officer of Covina. It should be noted that East Covina is under the supervision of the Los Angeles County Health Department, but that the city of Covina is not included under county supervision.

Mr. C. E. Wood has been appointed health officer of Oakdale, succeeding Mr. R. L. Acker, deceased.

Neither of the above appointees are licensed to practice medicine and surgery in the state of California.

Dr. Beverly Young has been appointed health officer of the city of Maricopa. He succeeds Dr. D. W. Sooy. Both are licensed to practice medicine and surgery in the state of California, and Doctor Sooy is a member of the California Medical Association.

The city of Brea in Orange County has turned over the administration of its public health affairs to Dr. V. G. Presson, health officer of Orange County. Doctor Presson is licensed (June, 1925) to practice medicine and surgery in California, but is not a member of the California Medical Association. Dr. W. E. Jackson was formerly city health officer of Brea.

Department Stores Add "Health Sections."—Several clippings of advertisements of certain department stores, calling particular attention to their new "Health Section," have been sent to us both by doctors and patients, inviting comment. A San Francisco department store urges its patrons to visit this "Health Section," where a . . . operator will "diagnose the condition of your health." This "operator" uses, according to the advertisement, a "new and highly scientific device" which, "through a series of vibrations, stimulates the activity of the cells and controls vicima, by which health is maintained." Treatments given by this expert are said to have produced "astounding results," etc., etc.

The only comments we care to make upon such bosh is to call attention to the fact that it constitutes a violation of the Medical Practice Act, both in its offers and claims.

"During June of this year there was no smallpox in Cuba. Covering the same period, 356 cases were reported in Ohio, according to Ohio Health News. Cuba is well vaccinated and enforces vaccination; Ohio does not enforce it."

What about California?

"Fifteen insurance companies are now issuing forms of policies on non-medical plan; twenty-two companies are considering and rather favorably inclined; twenty-five are not expected to adopt the practice, and most of these are unfavorable; seventeen are not issuing policies upon the non-medical plan, but are more or less non-committal as to its advisability."

For a more extended discussion of this interesting development, see editorial, Journal Iowa Medical Society, August.

"Concerning Insurance Examinations"—"Dire consequences are foreseen for insurance companies who abandon the fundamental requirement of a medical examination as a requisite for life insurance.

"The trend is toward this policy. Several companies have already made special classes of policies available to applicants without medical examinations. The theory upon which such procedure is based is that the American actuarial tables are of sufficient experience-length as to warrant such a move. . . .

"The problem involved in the scheme to abandon medical examinations as a requisite to insurance, is not alone the prospects of a decline in the number of good risks and increase in the number of bad risks, but also the prospects for increase of 'state medicine.'

"Once the bars are down and insurance companies are inundated with a host of poor risks, with subsequent losses through claim-payments, then the next step would be to correct an already bad condition by endeavoring to administer to the health of bad risks taken, through elaborate nursing, and medical centers.

"Even now, it is understood, some insurance companies are seriously considering nursing and medical services to the policy-holders as a means of reducing mortality rates among their clientele."—Ohio State Medical Journal.

"THE NATION IS OBSESSED," the Cincinnati Enquirer says, "with laws and bureaus which are designed to emasculate the priceless thing that heretofore has been known as individual liberty. There has been and continues to be a trend toward governmental over-

lordship, a trend fomented and encouraged by the ribald red mockery of government which functions from Moscow, and whose propaganda is prattled and preached from every puffing Punchinello of sinister socialism and communist conflagration in this country. This reaction is seen in the multiplication of federal bureaus and proposed amendments to the Federal Constitution, which, with their resultant clouds of agents, sappers, spies, hangers-on, and official meddlers in the citizen's private life and business."

"Several months ago one of the largest and best known life insurance companies of the country made the surprising announcement that thereafter on business examined within two years additional insurance up to \$10,000 would be issued without medical examination. Another company had already set aside one month a year, during which this privilege was available, and others conceded the writing of twenty-year endowment policies up to \$2000 without medical examination, all showing a tendency toward unexamined business."

Medical and Related Book Service—For several issues past CALIFORNIA AND WESTERN MEDICINE has been carrying the card of F. Gertrude Tallman, who has a medical and related books service in the new Medico-Dental building, 480 Post street, San Francisco.

The surface has hardly been scratched in promoting the sale of worthwhile medical and scientific books in California. We are glad to accept advertisements and promote the interests of concerns like that of Miss Tallman that are being conducted upon a high ethical plane and are serving well a need.

It Affords Us Great Pleasure to admit to our advertising pages, beginning with this issue, the *Scripps Metabolic Clinic and Scripps Memorial Hospital*, La Jolla, California. This splendid memorial is one of the fine, new, modern health-service institutions, donated in the right spirit and being operated in the right spirit, to the credit of scientific medicine and the welfare of the public.

Like so many other of the newer institutions, and with the consent of the benefactor, the articles of incorporation were so drafted as to insure in perpetuity that only adequately educated physicians may practice in that institution. In fact, the intelligence and farsightedness employed up to the present in the planning, construction and operation of this hospital deserves imitation.

An Opportunity for Rest and Recuperation is offered by Miss Alice E. Firth, R. N., at her home, Glen Lodge, Whipple Road, in the foothills above Redwood City. Miss Firth is well and favorably known to many of our members in San Francisco and other Bay cities through her work in the past as supervising nurse in one of our large hospitals and through private duty nursing. Her announcement will be found on the back cover of this and other issues of CALIFORNIA AND WESTERN MEDICINE.

Tuberculin—The chemical composition of the active principle and the nature of the tuberculin reaction are discussed by Esmond R. Long and Florence B. Seibert, Chicago (Journal A. M. A.). The active principle of tuberculin is non-dialyzable; is not absorbed by animal charcoal; is destroyed by trypsin; is maximally but incompletely precipitated by acetic acid at pH 4.0, and is completely precipitated by saturation with ammonium sulphate. The product precipitated by ammonium sulphate is of protein nature, and can be separated into three protein fractions: (1) A water-soluble heat coagulable protein; (2) a non-coagulable, alkali soluble protein, and (3) a non-coagulable, water-soluble protein. Of these, the first and third appear to be the most potent. The nature of the highly specific toxic action of this substance on the tissues of a tuberculous animal is not known. Preliminary experiments indicate that the tissues of the sensitized (tuberculous) animal do not act on tuberculin in such manner as to render it toxic for normal animals, nor do they bind the active principle in appreciable quantity, so as to render a tuberculin preparation less toxic for another tuberculous animal.

California Medical Association

EDWARD N. EWER, M. D., Oakland.....President
 W. T. McARTHUR, M. D.....President-Elect
 EMMA W. POPE, M. D., San Francisco.....
Secretary and Associate Editor for California

ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer, secretary)—At the first monthly meeting after vacation, held August 17, the following program, as arranged by T. C. McCleave, was presented:

The Epidemiology and Public Health Aspects of Poliomyelitis—Karl Meyer, University of California (by invitation).

The Diagnosis and Treatment of Poliomyelitis—H. H. Hitchcock, Oakland. Discussion of these papers was opened by Harry Foster and Philip Potter, Oakland; W. P. Shepherd, Berkeley.

The Certified Milk Commission and Its Work (illustrated by lantern slides)—T. C. McCleave, Oakland.

The papers on poliomyelitis were presented by special request of the health officers of Oakland and Berkeley, in view of the prevalence of the disease at that time.

Dr. K. F. Meyer, in discussing the public health aspect of acute anterior poliomyelitis, recalled that the infectious nature of poliomyelitis became evident from the clinical and epidemiological observations of Wickman (1905-06) in Sweden, and the transmission experiments of Landsteiner and Popper in Austria, and Flexner and Lewis in this country. On account of the parallelisms of the human and experimental disease both in their clinical and pathological aspects, it was pointed out that inferences drawn from experiments with monkeys may be accepted with a certain degree of safety as valuable to the solution of problems in connection with human cases.

Inoculations of material obtained at autopsy from a human case demonstrated the virus in the brain and cord, basal ganglia, cervical and lumbar enlargements, the sympathetic ganglia, nasal and pharyngeal mucosa, tonsils, and lymph nodes. The virus is not found in the cerebrospinal fluid, blood or viscera. Nasal washings of clinical cases contain the virus during the acute stage of poliomyelitis. It is very much diminished after the first week.

The natural mode of infection is probably by the nasal route. It appears that the virus is propagated in the central nervous tissue of the host, is transferred by chance either directly or indirectly from nasal mucosa of the susceptible to the new host. It is probable that the virus goes directly through the nasal mucosa to the olfactory lobes by means of the perineural lymph spaces, and not first into the circulation and then into the meninges.

A favorite explanation of the epidemiology of the disease is to regard it as a very communicable disease like measles, and much more widespread in the community than indicated by the paralytic cases. Most cases are mild, escape notice and leave protection. In accordance with this theory, only the occasional severe case with paralysis comes to clinical diagnosis. In accordance with this view, one is dealing with a very common infection, always present in the community, but which in recent years has gained an increased virulence.

The virus having been transferred to the nasal mucosa of the second human being, may lodge there, remain active, or may be destroyed. That the latter may happen is shown by the experiments of Flexner and Amoss on the neutralization of the virus by nasal washings. The definite seasonal distribution of poliomyelitis suggests that the recovered case or carrier act as the inter-epidemic reservoir of the virus. All things considered, it seems that the virus has greater chance of surviving in the nasal secretions of the carrier than the recovered case.

Field observations indicate that only slight contact between the carrier of the virus (case, healthy carrier, or person in the incubation period) and the susceptible person suffices for the transfer of the virus. In recovered cases the virus probably disappears, except in rare in-

stances, within ten days to two weeks after the acute attack. The stage of communicability then is from one to two weeks after the onset. This presents difficulties from the standpoint of prevention. The use of convalescent human serum as a prophylactic measure is impractical. Vaccination with altered or changed virus has been tried experimentally, without success. The only method of prevention is isolation until the age of relative non-susceptibility arrives. The patient and intimate contacts are quarantined for three weeks. A search must be made for all persons, especially children, who have been associated with the patient for the previous week. Since the children may be in the incubation period, they are voluntarily quarantined for two weeks.

H. H. Hitchcock, discussing the diagnosis and treatment of acute anterior poliomyelitis, pointed out that this disease is a generalized infection, not confined to children, but seen in all ages. The type of child most often taken in the Long Island epidemic in 1916 was the round-faced child with the central incisors spaced, adults of unusual types as acromegals, hypopituitary, etc., were common.

There are four types seen—the “abortive,” the “dromedary,” the “straggling,” and the “sudden onset group.”

The early symptoms of the disease are the same as seen in any acute infectious disease of childhood. The eyes, however, often present a puffiness of the circumorbital tissue and a glazed porcelain quality in the sclera and cornea.

The “spine sign” (pain and discomfort from flexing the neck or spine) is of importance.

The blood shows 15,000 to 25,000 white blood cells. The spinal fluid is increased in volume, the cell count ranges from 10 to 2500 per cmm., but is rarely opalescent or turbid.

The two most important things in the treatment of the acute phase is the avoidance of meddlesome therapeutics and the prevention of deformities due to muscle-stretching or muscle contractions.

Children should not be permitted to walk until their abdominal and other muscles are strong enough to function normally or are properly protected from stretching and fatigue. Some children are best treated by reclining in bed for a full year. No electricity or massage should be given while there is muscle soreness.

T. C. McCleave, speaking on the work of the Certified Milk Commission, discussed the history of certified milk movement, the organization of a commission by a county medical society, the methods and standards for the production of certified milk, and the medical veterinarian, sanitary, bacteriological and chemical control of the operation of a certified dairy. He pointed out the relative value of certified milk and such other grades of market milk, as guaranteed, pasteurized, etc. The paper was illustrated by lantern slides, depicting unsanitary dairy conditions such as formerly prevailed very generally—and still do to some extent—and contrasted these with slides, showing the methods of production of milk in modern sanitary dairies, with particular reference to certified dairies.

The program was a most instructive one, and brought out a big attendance, many remaining and continuing the discussion in the refreshment hall until midnight.

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FRESNO COUNTY

Fresno County Medical Society (reported by John Montgomery, M.D., secretary)—The new out-patient clinic of the Fresno County General Hospital is about completed and will be in use within the month. The Board of Governors of the medical society have expressed themselves in favor of handling all free clinic work in this clinic, and with this in view have sent the following resolution to the Community Chest and to the small clinics operating in Fresno, partly under the support of Community Chest funds:

Whereas, There is no doubt that a certain amount of free clinical work is needed in Fresno; and

Whereas, The Fresno County General Hospital will soon be in a position to handle this work in a completely equipped building, designed for this purpose; and

Whereas, This Clinic will have connected with it, the following:

1. A department of social service, to investigate each applicant, consisting of a social worker and an assistant.

2. A pathologist and complete laboratory organization.
3. Radiographer.
4. Pharmacist.

And in addition there will be available the supervision of the resident surgeon, and the services of an intern, and complete nursing service.

And whereas there will also be the advantage of direct connection with the hospital for patients needing to be referred for hospital care, it is the sense and opinion of the Board of Governors of the Fresno County Medical Society that the clinics conducted by the Fresno County General Hospital will adequately cover the entire field of free clinic work.

It is further the conviction of the Fresno County Medical Society, as represented by the board of governors, that no organization supported by voluntary contributions in Fresno, or by the Community Chest, can afford to put in the necessary expensive equipment, such as x-ray and laboratory equipment and organization, and without these scientific medicine cannot be practiced.

Further, it is our conviction that a clinic which undertakes to operate without these departments is doing an injustice to patients by keeping them away from a place where adequate treatment and facilities are provided. And that the work done in an improperly equipped clinic has a tendency to lower the standards of medicine in this community.

It is further our opinion that the numerous small clinics, which are improperly equipped, make no effort to investigate thoroughly the financial condition of patients, owing to their inability to employ trained social workers for this purpose. And that, therefore, these clinics are imposed upon and people often pauperized.

It is also our opinion that the most efficient work comes through centralization. Therefore, the more this work is divided, the less efficient it will be, and the more difficult to control.

It is also our belief that such smaller clinics are often dominated by "laymen" who cannot grasp the medical point of view. And that the money, which is trust money, being donated by the people to support such clinics, will accomplish more good if spent along other lines, leaving the medical care of the sick and poor to the county, where the law places it.

The secretary of the society is hereby instructed to deliver a copy of this resolution to the directors of the Community Chest. And ask the publicity committee of the society to give this resolution such publicity as seems best.

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MARIN COUNTY

Marin County Medical Society (reported by J. H. Kuser, secretary)—A meeting of the Marin County Medical Society on August 20 was held at W. F. Jones' office in San Rafael. The following members were present: H. O. Hund, W. F. Jones, L. L. Stanley, C. De Lancey, Charles B. Marston, J. H. Kuser, and A. H. Mays. This being a business meeting, no papers were read.

On motion of L. L. Stanley, Dr. O. A. Sharpe of San Francisco was invited to read a paper before the society at its next meeting on September 24, the meeting to be held at the San Rafael Club.

The application of Frank Cannon of Point Reyes station was presented by transfer from Idaho, and, on motion duly made and seconded, Doctor Cannon was elected a member of the society. Several communications were read and filed.

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SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by Bert S. Thomas, secretary)—The September meeting will be too late to report in this issue. In addition to the applications from Moser, Reynolds and Schluter, as previously reported, we have three more applications on our files. These come from Charles Israel Titus, now settled in Sacramento, coming to us after five years' practice at Minot, South Dakota, and fourteen years' practice at Great Falls, Montana. He was president of his local society, the Cascade Medical Society; Norris Jones, present resident at the Sutter Hospital; Angus McKinnon, holding a hospital residency at Mater Misericordiae.

Albert K. Dunlap surprised his many friends by the announcement of his marriage to Ruth Yarbrough.

Bert T. Rulison tells of a very enjoyable trip through the East. He spent most of his time at the Mayo Clinic.

The beautiful statue, Maternity, presented by June Harris to W. A. Beattie, now occupies a prominent place at the entrance of Sutter Hospital. The statue has been re-presented to Sutter Hospital as its permanent property.

William Ellery Briggs has returned from his world tour. He took a full year in his travels, a goodly portion of the time being spent in the Orient.

George N. Drysdale, chief of staff at Mater Misericordiae Hospital, has spent one month in the East in the interest of his hospital. He is studying methods of hospital administration. His daughter, Miss Dorothy, chief surgical nurse of Mater Misericordiae Hospital, accompanied him. She is also studying operating-room routine.

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SAN DIEGO COUNTY

San Diego County Medical Society (reported by Dr. Robert Pollock)—On August 25 the voters of San Diego authorized, through the polls, a substantial bond issue for further development and extension of the service of the San Diego County General Hospital. The intelligent expenditure of this issue will greatly facilitate the medical service for the poor.

The County Medical Society resumed its scientific work, following a dinner at the San Diego Hotel on Tuesday, September 8. The program consisted of three numbers: (1) An excellent case report of unusual interest compiled by A. E. Banks, and in his absence read by Frank Carter, describing a case of osteo-arthritis of Marie coming to autopsy, which showed, as the sole pathology, carcinoma of lung and cerebrum. This paper was discussed at some length by Drs. Redelings and Carter. (2) Ben F. Eager presented a patient on whom he had recently made a division of the posterior root of the right Gasserian ganglion for the relief of painful trifacial neuralgia of ten years' standing. This case, from the standpoint of prompt relief, freedom from disfigurement and quick release from hospital and return to work, left little to be desired in the handling of this stubborn condition. (3) James F. Churchill gave an extremely interesting—because clear and informal—exposition of electro-cardiography. Churchill made very clear the many ways in which the electro-cardiogram is a distinct aid to the clinical study of heart conditions, taking pains to show just what the instrument can do and what are its limitations. He supplemented this talk with a presentation on the screen of graphic records of many of the abnormalities which the instrument can portray. This paper met with an enthusiastic reception, and was discussed at some length by Owens and White of the Naval Hospital. At the close of the discussion on his paper, Churchill took occasion to thank the commandant and officers of the Naval Hospital for many courtesies received at their hands, and to express in high terms of commendation the excellent scientific work, both clinical and research, which is being carried on by the splendid staff of this hospital.

The program committee announced the October meetings to be featured by a trip to El Centro, where the sister societies of San Diego and Imperial Counties will discuss jointly a program based on casualty surgery.

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SAN FRANCISCO COUNTY

St. Lukes Hospital submits an interesting report for the month of August. They had a daily average of 150.9 patients, with 4527 patient days. Of these, 106 days were free and 308 days were utilized by patients who could pay only a part of the cost of their care. Thirty-six thousand seven hundred and thirty-four meals were served at a cost, exclusive of prorated overhead and general expense, of 21 cents a meal. Eighty patients were refused service in the free clinics, and were instructed to consult their private physicians. One thousand four hundred and fifty-one persons requested reduced rates.

This hospital issues a remarkably concise and well-prepared monthly report of its doings.

St. Joseph's Hospital Staff Considers Construction Problems—On September 2 R. G. Brodrick of Oakland

spoke before St. Joseph's Hospital staff of San Francisco on "Latest in Hospital Construction," A. S. Musante presiding. The following is an abstract of the address:

"The problem of constructing a modern hospital presupposes a consideration of a proper site and here, also, the old buildings. Elastic plans to meet the growing use of hospitals and the control of an entire city block are best. The ideal should be aimed at. Economy is often questionable, especially if based on cost per bed or square feet. Cubic cost is better. Two thousand five hundred cubic feet is the legal requirement, but 7500 cubic feet is required; figuring the school of nursing, 10,000 cubic feet is needed per patient. Maintenance costs must be considered. The culinary department can cost one-third or one-half of it, and labor now makes up 50 per cent. Much depends upon types of patients—pay, part-pay, and free. Latter should be limited, so those straining to pay low rates will be able.

Tendency in rooms is to make them attractive and free from somber aspects and odors. Color is needed for the interior. All conveniences must be considered. The size is smaller than before, 11x11 being used. The bed is placed out of the draughts, between the door and window. Patients' call system is by flash, not bell. The double-hung sash is still the best window, the top transom being omitted. Telephone and radio are now used. Facilities for hospital and visiting nurses are needed. Great numbers of baths and suites are not profitable, about one bath to fifteen patients being the average. Wards are smaller than ever, eight beds being the maximum. Utilities are placed in middle.

The surgery is placed where there is no passage to anything else, to eliminate visitors and be able to close it off. Compact rooms, with much of the equipment built in and about 16x18x20, are used. Viewing platforms, reached from hall, are used. The windows are getting smaller and artificial light is used more, as it is steady. Spotlights are not favored for general lighting, but are used to illuminate deep fields. Nitrous oxide is piped into the surgery from large tanks. Compressed air, alternating and direct currents and x-ray connections are provided. Floor drain and other plumbing are not used, but the anteroom can house them. Distilled water is being replaced by sterile water. Scrub-up room should be next to surgery. Sterilizing outfits are placed between operating rooms, and pressure types are best. All the piping can be built in stalks, easily accessible. Light green tiling is better. Surgical laboratories are placed near surgery, but general ones should be nearer internists' floors and out-patient department. The x-ray room should be convenient to operating room, on account of its growing importance to urological and other procedures.

Metabolic, electro-cardiographic, post mortem, and animal experimentation rooms should be convenient to laboratory. Handle dead so as not to be seen by patients. In admitting patients, ambulance patients must be kept separated from those afoot. Provide for observation and isolation of cases.

The culinary department must provide proper place, construction, and equipment for the kitchen. Trays are distributed by elevators. The dish-washing room should be deadened to limit the noise. Door-closers, ball-bearing butts, hardware for doors, laundry, signal systems, and physiotherapy need study, the latter being desired by the public, but should be in charge of a technician and be supported by the staff. An emergency service is needed in large cities for traffic and other wounds.

On October 14 Dr. Harry Spiro will speak on "Modern Diagnosis and Treatment of Heart Disease," and Dr. Earnst Gehrels on "Gastric Surgery."



SISKIYOU COUNTY

Siskiyou County Medical Society (reported by Cordes W. Ankele, secretary)—The members of the Siskiyou County Medical Society met, with their wives, at luncheon on August 30 at Crag View, Castella. Following the luncheon a business meeting was held out under the trees, while the wives were engaged at cards. There was a general discussion as to the effect of the newly adopted fee schedule, followed by a discussion on the treatment of chronic urinary infections.

H. A. Morse of Hilt was elected to membership. The

following members were present: R. H. Heaney, Charles Pius, Szabo Kalman, W. E. Tebbe, C. W. Nutting, and C. W. Ankele.

CHANGES IN MEMBERSHIP

New Members—Lawrence J. Bernard, George Eric Chapman, J. Paul de River, Thomas E. Gibson, Robert M. Laddon, A. A. Maximova-Kulaev, Edmund J. Morrissey, Harry J. Pruett, Sergius S. Rakitin, Guy Schoonmaker, San Francisco; Frank M. Cannon, Point Reyes Station; C. Dana Carter, Clarence D. Dickey Jr., Roscoe A. Ford, Alessandro Jardini, Roscoe M. Nicholson, A. W. Williams, Los Angeles; Luella S. Cleveland, San Jose; Glenn G. English, Hollywood; Bernard H. Gilbert, Montague; Charles C. Hall, Oda T. Leftwich, Rufus I. Newell, Oakland; Burton A. Myers, Hammonton; William G. Tucker, Dunsmuir.

Resigned—John E. Nast, San Francisco.

Transferred—Adolph Kutzmann, from San Francisco County to Los Angeles County; Charles E. Mordoff, from Fresno County to Alameda County; Harper Peddicord, from Mendocino County to San Mateo County.

Deaths—Skeel, Roland Edward. Died at Los Angeles September 4, 1925, age 56. Graduate of the University of Michigan Medical School, Ann Arbor, 1890. Licensed in California in 1919. Doctor Skeel was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

EXTENSION LECTURE SERVICE

In the September issue of CALIFORNIA AND WESTERN MEDICINE was extended an invitation to the members of the California Medical Association to join the Extension Service. The revised list, as here published, will be issued as a reprint on November 1 for the use of county secretaries. Further names of members who desire to join this service, together with the titles they are prepared to present, will be added to this reprint if furnished the state office before October 20.

Harry E. Alderson, M. D., 320 Medico-Dental Building, 490 Post Street, San Francisco.

1. A Skin and Syphilis Clinic will be Held of Locally Selected Cases (five or six).
2. Newer Methods of Therapy in Dermatology.
3. Therapy of Lues.

Walter C. Alvarez, M. D., 803 Liebes Building, 177 Post Street, San Francisco.

1. The Taking of a Gastro-Intestinal History and What It Means When You Get It.
2. Practical Points in the Diagnosis of Gastro-Intestinal Disease. (Lantern slides.)
3. New Light on the Cause and Significance of High Blood Pressure. (Lantern slides.)
4. The Present Status of Various Researches of Interest to the Physician.

Hans Barkan, M. D., 921 Medico-Dental Building, 490 Post Street, San Francisco.

1. Headaches Due to Ocular Causes.
2. Industrial Aspects of Eye Injuries.
3. Modern Methods of Cataract Operations.

Edwin I. Bartlett, M. D., 1020 Medico-Dental Building, 490 Post Street, San Francisco.

1. The Use of the Exploratory Incision in the Diagnosis of Malignant Disease.
2. When and How to Operate on the Breast.
3. Simplified Classification of Breast Conditions, and "Short-Cuts" to Diagnosis.
4. Essential Points in Neck Dissections and Methods of Accomplishment.

W. W. Boardman, M. D., 612 Union Square Building, 350 Post Street, San Francisco.

1. Treatment of Cholecystitis.
2. Cholecystography—Its Value as a Diagnostic Procedure in Infectious Gall-Bladder Disease.
3. Some of the Newer Methods of Studying Liver and Gall-Bladder Disease—Vandenberg's Test—Icterus Index—Phenoltetrachlorophthalein.

Philip King Brown, M. D., 401 Medical Building, 909 Hyde Street, San Francisco.

1. The Medical and Surgical Treatment of Peptic Ulcer.
2. The Medical and Surgical Treatment of Angina. (With Walter B. Coffey, M. D., San Francisco.)
3. Leukemia and Its Treatment, With Special Reference to X-Ray.
4. Pneumothorax, Phrenocotomy and Thoracoplasty in the Treatment of Pulmonary Tuberculosis. (With Leo Eloesser, M. D., San Francisco.)
5. Chronic Gall-Bladders.
6. Management of Acute and Chronic Heart Disease.

Joseph Catton, M. D., 609 Howard Building, 209 Post Street, San Francisco.

1. The Doctor Looks at Crime.
2. Mental Problems in Every-day Practice.
3. Your Patient's Vegetative Nervous System Is Just as Important as His Central Nervous System.
4. What the General Practitioner Should Know of Encephalitis.

E. W. Cleary, M. D., 803 Liebes Building, 177 Post Street, San Francisco.

1. Fractures of the Spine. (Lantern slides.)
2. Fractures of the Long Bones. (Lantern slides.)

Ernest S. Du Bray, M. D., Flood Building, 870 Market Street, San Francisco.

1. The Management of Diabetes Mellitus, With Special Reference to the Method of Planning Quantitative Diets and the Use of Insulin.
2. The Early Diagnosis of Diabetes Mellitus and Its Differentiation From Certain Benign Chronic Glycosurias probably of Non-Pancreatic Origin.
3. The Criteria for Prognosis in Arterial Hypertension.
4. A Consideration of the Degenerative Diseases and Their Prevention Through Preclinical Medicine.

L. A. Emge, M. D., 506 Union Square Building, 350 Post Street, San Francisco.

1. Sterility.
2. The Transsufflation of Uterine Tubes.
3. What Can the Clinician Learn From Cancer Research?
4. The Lacerated Cervix.

Ernest H. Falconer, M. D., 316 Fitzhugh Building, 380 Post Street, San Francisco.

1. The Diagnosis of Pernicious Anemia. (Lantern slides.)
2. The Treatment of Severe Anemias. (Lantern slides.)
3. The Classification and Diagnosis of the Hemorrhagic Diseases. (Lantern slides.)
4. The Spleen and Its Relationship to Diseases of the Blood-Forming Organs. (Lantern slides.)

Arthur C. Gibson, M. D., 416 Physicians Building, 516 Sutter Street, San Francisco.

1. Pan-Sinusitis, With Suggestions for Rational Therapy.
2. Chronic Catarrhal Otitis Media, With Discussion of Causes, Treatment, and Results.
3. Causes of Chronic Otitis Media, With Discussion of Treatment and Results.
4. The Mastoid—Its Complication, Diagnosis, Treatment, With Results.
5. Combined Intranasal and External Tear Sac Operations With Results (Totimosher Method).

Edgar L. Gilcreest, M. D., 315 Fitzhugh Building, 380 Post Street, San Francisco.

1. Personal Reminiscences of Sir William Osler, Physician and Philanthropist. (Lantern slides.)
2. A Consideration of Rupture of Muscles and Tendons. (Lantern slides.)
3. Fractures of the Elbow Joint and the Lower End of the Humerus. (Lantern slides.)
4. Fractures of the Ankle Joint and the Lower End of the Tibia. (Lantern slides.)
5. Fractures of the Wrist Joint and the Lower End of the Radius. (Lantern slides.)

A. Gottlieb, M. D., 605 Consolidated Realty Building, 607 South Hill Street, Los Angeles.

1. Club-Feet.
2. Poliomyelitic Deformities—Prevention and Treatment.
3. The Painful Foot. (Lantern slides.)
4. Osteochondritis: Legg-Perthes, Koehler's Disease, etc. (Lantern slides.)

R. W. Harvey, M. D., 711 Fitzhugh Building, 380 Post Street, San Francisco.

1. The Personality of the Patient.
2. The Vegetative Nervous System.
3. Vocational Education in the Rehabilitation of Nervous Cases.

Samuel H. Hurwitz, M. D., 1214 Medico-Dental Building, 490 Post Street, San Francisco.

1. Diet and Blood Pressure.
2. Infection in Asthma—Results of Treatment.
3. The Treatment of Bright's Disease.

W. H. Kellogg, M. D., State Hygienic Laboratory, Berkeley.

1. The Problem of Diphtheria.
2. Present Status of the Schick Test and Immunization Against Diphtheria.
3. The Practicing Physician and Preventive Medicine.
4. The Old and the New Public Health.
5. Immunologic Reactions of Especial Interest to the Practicing Physician.
6. The Status of Laboratories in the Practice of Medicine.

William J. Kerr, M. D., University of California Hospital, San Francisco.

1. Treatment of Heart Disease.
2. Diagnosis and Medical Treatment of Goiter.
3. The Cardiac Irregularities, Their Recognition, Treatment, and Prognosis. (Lantern slides.)
4. Liver Function Tests. (Lantern slides.)

Alson R. Kilgore, M. D., 724 Medico-Dental Building, 490 Post Street, San Francisco.

1. Treatment of Mouth and Skin Cancer by Surgery or Radium.
2. The Pre-Cancerous Conditions of the Breast.
3. Clinical and X-Ray Diagnosis of Bone Tumors.
4. The Diagnosis of Early Breast Lumps by Gross Pathology at the Operating Table.

Eugene S. Kilgore, M. D., 724 Medico-Dental Building, 490 Post Street, San Francisco.

1. Precordial Pain—Clinical Types and Significance.
2. The Assessment of Circulatory Efficiency.
3. Cardiac Irregularities—Their Non-Instrumental Recognition and Significance.

Fred H. Kruse, M. D., 916 Fitzhugh Building, 380 Post Street, San Francisco.

1. The Irritable Colon.
2. The Redundant Colon.
3. Peptic Ulcer, Etiology and Diagnosis.
4. The Medical Treatment of Peptic Ulcer.
5. Clinical Studies in Thyroid Disease.

Hans Lisser, M. D., 208 Fitzhugh Building, 380 Post Street, San Francisco.

1. Types of Ductless Gland Disease. (Lantern slides.)
2. Present Status of Organotherapy. (Lantern slides.)
3. Roentgenology as an Aid in the Diagnosis of Ductless Gland Disease. (Lantern slides.)
4. The Differential Diagnosis of Dwarfism. (Lantern slides.)
5. The Differential Diagnosis and Treatment of Goiter. (Lantern slides.)
6. Organotherapy and Physiotherapy in the Treatment of Obesity and Asthenia.
7. Endocrine Factors and Organotherapy in Disturbances of Menstruation. (Lantern slides.)

G. Carl H. McPheeters, M. D., 1021 Mattei Building, Fresno.

1. Obstetrics vs. Midwifery.
2. Prenatal Care in Obstetrics. (Lantern slides.)
3. Care of the Abdomen and Breasts in Pregnancy. (Lantern slides.)
4. The Toxemias of Pregnancy and Their Treatments.
5. Obstetrics the Stronghold of Medicine Today.
6. Prenuptial and Prenatal Physical Examinations of Girls and Women.

George Warren Pierce, M. D., 1211 Flood Building, 870 Market Street, San Francisco.

1. Plastic Surgery in Civil Practice. (Lantern slides.)
2. Care of the Injured Hand. (Lantern slides.)
3. The Use of the Tubed Pedicle Flap in Plastic Surgery. (Lantern slides.)
4. Plastic Reconstruction of the Hand. (Lantern slides.)
5. Plastic Surgery of the Nose. (Lantern slides.)
6. Reconstruction of the Eye-Socket. (Lantern slides.)
7. The Treatment of Burns. (Lantern slides.)

Philip H. Pierson, M. D., 811 Medico-Dental Building, 490 Post Street, San Francisco.

1. Pleural Effusion, With or Without Pus—What Does It Mean From a Tuberculosis Viewpoint?
2. Hemoptysis—Its Importance and Treatment.
3. Pneumothorax—Its Indications and Contra-Indications.
4. What Forms of Therapy for Tuberculosis Have Stood the Test, and What are Their Indications.

V. H. Podstata, M. D., The Livermore Sanitarium, Livermore.

1. The Old Neurasthenic.
2. The Incipient Mental Depression. (Doctor Podstata not available on Tuesdays.)

J. Marion Read, M. D., 1183 Flood Building, 870 Market Street, San Francisco.

1. Classification and Treatment of Thyroid Disease. (Lantern slides.)
2. The Relation of Iodin to Thyroid Disease. (Lantern slides.)
3. The Prognosis and Treatment of Graves' Disease. (Lantern slides.)

Alfred C. Reed, M. D., 715 Fitzhugh Building, 380 Post Street, San Francisco.

1. Intestinal Protozoa in Clinical Practice.
2. Similarities of Sprue and Pernicious Anemia.
3. Treatment of Dysentery.
4. Management of Asthma.
5. Avoiding Old Age and the Preservation of Youth.

Robert Lewis Richards, M. D., 409 Fitzhugh Building, 380 Post Street, San Francisco.

1. Bad Parents and Fearful Children From a Medical Point of View.
2. Medical Beginning of Crime and Treatment of Same.
3. Emotional Thyroids.

Emmet Rixford, M. D., 1795 California Street, San Francisco.

1. Mechanics of Production of Fractures. (Lantern slides.)
2. General Principles of Treatment of Fractures.
3. Ulcer of the Stomach and Duodenum.
4. Cancer of the Stomach.
5. Cancer of the Colon and Rectum.

Max Rothschild, M. D., 704 Fitzhugh Building, 380 Post Street, San Francisco.

1. The Early Diagnosis of Pulmonary Tuberculosis.
2. The Diagnosis and Treatment of Tuberculosis of Bronchial Glands in Children. (Lantern slides.)
3. The Problem of Immunity in Tuberculosis.
4. The Treatment of Tuberculosis With Specific Remedies. (Lantern slides.)
5. The Treatment of Tuberculosis With Non-specific remedies, With Special Reference to Pneumothorax Treatment. (Lantern slides.)
6. Tuberculosis and Pregnancy.

7. Tuberculosis and Syphilis. (Lantern slides.)
8. Fever in Tuberculosis—Its Significance in Regard to Diagnosis, Treatment, and Prognosis.
9. Heliotherapy and Tuberculosis. (Lantern slides.)
10. Lung Abscess—Etiology, Diagnosis, and Treatment. (Lantern slides.)

C. O. Sappington, M. D., 602 Hutchinson Building, Oakland.

1. Standards of Education and Practice in Industrial Medicine.
2. Periodic Health Examinations—the Technique, Results, and Need. (Lantern slides.)
3. Industrial Lead Poisoning—Etiology, Diagnosis, and Prevention.
4. Industrial Absenteeism—An Application of Statistics to Medical Practice. (Lantern slides.)
5. Recent Advances in the Science of Industrial Ventilation and Illumination. (Lantern slides.)
6. The Economic Loss Due to Sickness in Industry. (Lantern slides.)

John Hunt Shepard, M. D., Growers Bank Building, San Jose.

1. Squamous Cell Epithelioma of the Lip—Especial Reconsideration of Grading the Degree of Malignancy. (Lantern slides.)
2. Our Present Knowledge of Thyroid Perversion.

Harry Spiro, M. D., Flood Building, 870 Market Street, San Francisco.

1. Angina Pectoris.
2. Some Related Cardiac Irregularities.
3. Quinidine Therapy.
4. Experiences With the Intravenous Use of Mercurochrome.
5. Aortitis. (Lantern slides.)
6. Blood Pressure and Its Treatment.
7. Judging the Quality of the Heart Muscle by Fluoroscopy.

William E. Stevens, M. D., Flood Building, 870 Market Street, San Francisco.

1. Urology in Women.
2. Urology During Infancy and Childhood.

Laurence R. Taussig, M. D., 803 Fitzhugh Building, 380 Post Street, San Francisco.

1. Malignancies of the Skin, Their Diagnosis and Treatment. (Lantern slides.)

E. B. Towne, M. D., Stanford University Hospital, San Francisco.

1. Recent Advances in the Localization and Treatment of Tumors of the Brain. (Lantern slides.)
2. Diseases of the Pituitary Gland—Diagnosis and Treatment. (Lantern slides.)
3. Localization and Treatment of Tumors of the Spinal cord. (Lantern slides.)
4. Prevention of Musculo-Spiral Nerve Injuries. (Lantern slides.)
5. Value of Roentgen-Ray in Treatment of Tumors of Brain and Pituitary Gland. (Lantern slides.)

William Voorsanger, M. D., 1001 Medico-Dental Building, 490 Post Street, San Francisco.

1. Pulmonary Conditions Wrongly Diagnosed as Tuberculosis. (Lantern slides.)
2. Tuberculosis Laryngitis—Is It Curable? Heliotherapy as a Remedy.
3. Gastro-Intestinal Complications in Pulmonary Tuberculosis.
4. Artificial Pneumothorax in the Treatment of Pulmonary Tuberculosis.
5. What Do Tuberculin and Vaccines Really Accomplish in the Treatment of Pulmonary Tuberculosis?
6. Advances in the Diagnosis of Pulmonary Tuberculosis.
7. Suggestions on the Importance of the Sanitarium in the Treatment of Pulmonary Tuberculosis.
8. Pulmonary Abscess; Classification; Prognosis and Treatment. (Lantern slides.)

James T. Watkins, M. D., 212 Medical Building, 909 Hyde Street, San Francisco.

1. Technical Improvements in the Treatment of Fractures.
2. Surgical Approaches of the Knee, Hip, and Shoulder Joints.
3. Congenital Hip and Club-Foot.
4. Treatments of Infantile Paralysis.

Miley M. Wesson, M. D., Flood Building, 870 Market Street, San Francisco.

1. Urethritis and Sequelae. (Lantern slides.)
2. Diseases of the Prostate; Their Treatment—Medical and Surgical. (Lantern slides.)
3. The Prostatic Median Bar; Complications and Treatment. (Lantern slides.)
4. Diseases of the Bladder; Symptoms and Treatment. (Lantern slides.)
5. Diseases of the Kidney and Ureter; Symptoms and Treatment. (Lantern slides.)
6. Cysts of the Prostate and Urethra. (Lantern slides.)

John Homer Woolsey, M. D., 907 Medico-Dental Building, 490 Post Street, San Francisco.

1. Gastric and Duodenal Pathology. (Lantern slides.)
2. Empyema.
3. Carcinoma of the Rectum. (Lantern slides.)

Harold W. Wright, M. D., 413 Flood Building, 870 Market Street, San Francisco.

1. The Prognosis in the Psychoses, With Remarks on the Relation of General Hospitals to Psychiatric Service.
2. The Psychoses of the Puerperal State.
3. The Differential Diagnosis of Sciatic Pain.

Utah State Medical Association

T. C. GIBSON, M. D., Salt Lake City.....President
W. R. CALDERWOOD, M. D.....President-Elect
FRANK B. STEELE, M. D., Salt Lake.....Secretary

The complete transactions of the Annual Session, held September 7 to 12, at Salt Lake, will be published in November, as the very splendid transcript of the proceedings was not received in time for this issue.

A NEW YEAR

So far as the Utah State Association is concerned, we begin now a new year. President Gibson has not as yet appointed an editor for CALIFORNIA AND WESTERN MEDICINE to take the incumbent's place. But we still, as editor, want at this time to bespeak for him, whoever he may be, a hearty co-operation from the several county societies.

The Utah section of CALIFORNIA AND WESTERN MEDICINE is meant to be representative of the state. The only way in which any editor can gather the local news of interest is through the co-operation of the several secretaries, each of them sending him a monthly report. And if they will do this, if they will take this little trouble, if they will give him the chance to give their section representation—then we can build up the Utah section to a point where Doctor Musgrave, editor of CALIFORNIA AND WESTERN MEDICINE, will have to give us more space—to where he will be glad to do it. He has already said he would be glad. So, now, all together for the new year. Let's make him show that he meant it—every word. Send in your news notes after every meeting. You're each and every one entitled to a part of Utah's space. Will you use it or won't you? Come on. Let's go for the next twelve months.

HE WHO RUNS

As this is written, the meeting of the State Association is drawing to a successful close, with a good attendance, over 190 men having been enrolled among the visitors from two neighboring states. An election has been held, and Doctor T. C. Gibson has been installed president for the year to come, Doctor Calderwood has been named as president-elect, and Doctor Frank Steele has taken up the secretarial duties laid down by Doctor William Rich. Under the guidance, and assisted by the service of such men, the association can hardly do more than look upon the future with confidence.

As for the convention itself, consisting as it did of the routine conventional activities combined with and followed by the post-graduate program so ably furnished by the committee in charge, one can say little save that it was a gratifying success both for those who gained much or little from it. For a man may profit from such a course of instruction in two ways: Should he be deficient in knowledge on the subjects covered, then he may learn and strengthen himself. Should he already be possessed of the knowledge advanced for his apprehension, then is he strengthened and supported in his application of it by the knowledge that the men from far places—those who have had a wider experience than him—

self—have, as it were, placed the cachet of approval upon his methods and technic. There is only one trouble with such gettings together as the last convention, and that is: they come not often enough. He who runs may read.

There is something compellingly beautiful in that old-time oath with its pledge of clean, unselfish, sincere, unfaltering service. And there is something beautiful in the work, the face, the very soul of the man who lives up to it. There is something almost divinely beautiful in the life of the man—the doctor, the physician, the healer, the comforter, as he walks his daily path. He is a disciple of Hippocrates, who gathers to himself the intangible yet priceless values of the look in the eyes of a woman who has gone down into the valley of the Great Adventure of giving life and found him there a strong arm to lean upon rather than a broken reed; who earns for himself the clasp of baby arms, the touch of baby lips, in payment for the help he has rendered in a time of pain and danger, or reaps the harvest of the tears of thankfulness in parents' eyes. Disciple of Hippocrates—he serves his race, himself, and his God.

But what of the hypocrites? What of the man who, forgetting the oath he swore to follow, prostitutes his pledge and himself and his craft? You and I meet him and his work from day to day, and sometimes we rave, and sometimes we curse, and sometimes we simply weep. He it is that brings the blush of shame to the true doctor. We mean the man who deliberately advises an operation in order to gain a few dollars on the basis that, "if the patient survives it is all right." We mean the man who deliberately, under the guise of a "D. C."—that phraseology which, like the mantle of charity, covers a vast number of sins—deliberately for a price destroys incipient life, and "gets away with it." We mean the man who, in order to aggrandize his assumed reputation or his pocketbook or both, plants the barb of unkind criticism in the mind of a patient of some other member of his profession in order to gather that patient to himself. Surely, surely, the true disciple of Hippocrates will criticize only when criticism is deserved. Wherefore, we mean, of course, those men in an age when ignorance can no longer be held an excuse, who so conduct their service to their patients that such criticism can honestly be brought against them by sincere and informed members of their craft.

What we mean—if you get what we mean, and we hope to God you do—is simply this: Let's be disciples of Hippocrates; let's be true to that grand, uplifting, exalting oath, and let's NOT be hypocrites.

I'm a doctor. I hope I'm a good one. I try to be, at least. Anyway, I'm proud of my profession and its accomplishments. And I hope and I pray in my innermost soul that the day may come when the true physicians, of which there are such a glorious number, will stand shoulder to shoulder for the good of the race and the profession, and he who will not subscribe to the higher ideals of our calling shall more and more, like Lucifer, the Archangel who rebelled against the Most High—the hypocrite, wearing his cloak as a disguise rather than a glory—be driven out, uncloaked, unveiled, shown in his true colors, for the racial parasite he really is.

HIPPOCRATES OR HYPOCRITES

We don't know. We never met him. But if the code which bears his name is any criterion to go by we feel that Hippocrates must have been a pretty good old guy, with a large measure of optimism and more than the average of altruism in his makeup—both of which qualities could be more assiduously cultivated by the medical profession of today.

Anyway, the Hippocratic oath is a thing to remember as something more than a mere step in the program of being endowed with the degree of M. D. And as we sit up in a tree and watch the show go by we sometimes wonder just how many of the men who have taken that oath before that degree was conferred *do remember* it—at least in the sense they should.

Into the Hippocratic oath was written a code which, if followed, would make of the doctor a man and a minister to his fellows in nowise short of a priest. One who follows it as it was meant to be followed must be, as a result of its mere following, a man set aside from his fellows, for purity of thought and action—a man of men—one to be looked up to, trusted, given every confidence.

And is not this the ideal of the profession aside from the daily battle of the disease just as much as it was in the days of the ancient Greek? The men who have gone down in history, whose names will live as benefactors of the race, are the men who *have served*. Service is the measure of the true man's worth—be that service rendered to a state, a nation, or a little child.

And so, it would be even more advantageous if one could have the opportunity to read a little more—a little oftener—those things which can refresh his recollection, build up his information, give him a renewed confidence.

Convention Notes—The ubiquitous detail man was on the job. A medical convention without a few detail men is like a circus without peanuts and pink lemonade.

We think more men should have attended the lectures on blood chemistry, serology, bacteriology and kindred subjects. Too many doctors seem to think that the difference between a gram negative and a gram positive organism is similar to a parliamentary vote. As a matter of fact, whether the negatives or the positives have it the patient has it in either event.

Doctors who come to a convention for the purpose of renewing personal acquaintances or airing their own viewpoints should be given a private lecture room for the purpose. Some of the men want to hear what the lecturer has to say while he talks.

We wish to disabuse the idea that the chairman of the banquet committee was under the table. In reality he was professionally engaged with a patient who could not retain her food (not at the banquet).

The thanks of the Association should go to the University of Utah for the use of their buildings during the convention and the co-operation of the medical faculty during the convention week.

Cecil Alter, in charge of the Weather Bureau, should also draw a vote of thanks. The brand of weather which he distilled during the convention could have been equaled only in California, where, rain or shine, the sun shines 100 per cent. Well, after all, Utah is best described in the words of the French artist who visited one of her canyons and sought to describe it. Having used up all his superlatives, he ran out of words and finally summed it up as "Pretty darned good." It is.

A noticeable factor in the convention was that the lec-

turers talked horse sense. It's a good thing to mix with every prescription or each bit of professional advice.

Anyway the convention was a success.

Utah Notes (reported by J. U. Giesy, associate editor)—Meeting of Catholic Association—Welcomed by Governor George H. Dern and the Rt. Rev. Joseph S. Glass, C. M., D. D., bishop of the Catholic diocese of Salt Lake, the members of the Mountain States Conference of the Catholic Hospital Association convened for a two-day session Wednesday morning at the Holy Cross Hospital at 8 o'clock, where Holy Mass was said by Bishop Glass followed by his opening remarks, which welcomed the visitors to the city and to the hospital. Governor Dern added his greetings and welcome to the visitors, followed by a greeting from Dr. J. J. Galligan.

An attractive program of scientific discussion by visitors and local hospital workers, interspersed with social features, continued during the two days' session.

Nevada State Medical Association

A. J. HOOD, M. D., Elko.....President
HORACE J. BROWN, M. D., Reno.....
.....Secretary and Associate Editor for Nevada

PROCEEDINGS OF THE TWENTY-SECOND ANNUAL SESSION, ELKO, NEVADA, SEPTEMBER 4, 5, 6, 1925.

The twenty-second annual meeting of the Nevada State Medical Association was called to order by President W. M. Edwards at 10 a. m. in the courthouse at Elko, September 4, 1925.

The program was rendered as follows, with excellent presentation of timely subjects and splendid attention:

Professor Peter Frandsen, Reno, representing the American Association for Medical Progress—"Anti-Scientific Propaganda." He gave history and aims of the American Association for Medical Progress, and answered questions often asked. This association is safeguarding the public against anti-scientific methods. He recommended public health meetings for the public, and explaining to patients the principles of therapy and the prevention of disease. Discussion by Henry Albert, T. W. Huntington, E. L. Gilcreest, Peter Frandsen.

Henry Albert, M. D., Reno—"The Prevention and Control of Infantile Paralysis." As outbreaks have occurred this year, Nevada may expect an epidemic this fall or winter. Expression of anxiety and resistance, dull sclera with resistance to flexion of neck and a slight Kernig's sign are of definite diagnostic aid. Tapping of spinal canal relieves pressure, and is of therapeutic value. Isolate nurse and family with patient. After three weeks, with proper antiseptic precautions, family may leave premises. Circular used at Fallon. Discussion by H. W. Sawyer, W. L. Samuels, H. J. Reese, W. H. Hood.

Arthur Collis Gibson, M. D., San Francisco—"Chronic Paranasitis," with slides. Discussion by Henry Albert, William Edwards, Anna De Chene.

Edgar L. Gilcreest, M. D., San Francisco—"The Treatment of Fractures of the Elbow Joint and the Lower End of the Humerus," with slides. Discussion by A. J. Hood, R. A. Bowdle, A. R. Kilgore, J. F. Kerby, T. W. Huntington.

J. F. Kerby, M. D., Salt Lake City, Utah—"Anomalies, Diseases and Injuries of the Spine," with slides. Discussion by H. J. Brown, R. A. Bowdle, E. L. Gilcreest, H. Zimmerman, C. E. Piersall, H. Albert, Albert Soiland.

Eric A. Larson, M. D., Woodland, California—"The Treatment of Peptic Ulcer." Discussion by A. R. Kilgore, E. L. Gilcreest, Albert Soiland, William Edwards.

The Reno Radium-X-ray Association presented a four-reel movie on "Pulmonary Tuberculosis" at the theater.

September 5, 1925, 9 a. m.—The business meeting was called to order by President Edwards.

It was moved by D. A. Turner that the reading of the minutes be omitted. Seconded by W. A. Shaw. Carried.

The secretary's report was read, and it was moved by Turner that the report be approved and that the secretary be allowed to buy a filing cabinet, which is now necessary. Carried.

The report of the delegate to the American Medical Association was read.

The report of the Judicial Committee was read by H. J. Brown. A telegram from Dr. Eby was read by the secretary, and a motion by H. J. Brown was made that we give Dr. Eby our sympathy in his illness, and regrets that he could not attend this meeting.

Dr. Turner asked that the doctors of Nevada enter the United States Medical Officers Reserve Corps.

Election of Officers—W. A. Shaw nominated W. L. Samuels for president. R. Bowdle nominated A. J. Hood of Elko for president. H. I. Brown moved that the nomination be closed and the votes be made by written ballot. Turner seconded the motion. Carried. A. J. Hood received seven votes and W. L. Samuels received two votes. It was moved by Olmsted and seconded by Roantree that the secretary cast a unanimous ballot for Dr. Samuels as vice-president. Carried. It was moved by Roantree that C. W. West be nominated for second vice-president, and that the secretary cast a unanimous ballot for him. Carried.

C. E. Piersall nominated V. A. Muller for secretary and treasurer. W. A. Shaw nominated H. J. Brown. Dr. Brown received nine votes, and Dr. Muller received four votes.

H. J. Brown nominated W. A. Shaw for re-election for a three-year trustee. Secor moved that the motion be closed, and the secretary cast a unanimous ballot for Dr. Shaw. Seconded by Dr. Bowdle. Carried.

H. J. Brown moved that all physicians who are our guests be honorary members. Seconded by Shaw. Carried.

H. J. Brown also moved that the Nevada State Medical Association pay all that it is able to pay of the expenses incurred by the Elko County Medical Society for the 1925 meeting, and that we express a vote of thanks to Elko County for their splendid entertainment. Seconded by Dr. Bowdle. Carried.

A motion was made by Dr. John E. Worden to have the 1926 meeting at Reno. A motion was made by R. A. Bowdle that the next meeting be held at Ely. The vote was a tie. A motion was made by W. L. Samuels, and seconded by Turner, that the 1926 meeting be held at Bowers Mansion. Carried.

The president appointed the following three committees to work with the University of Nevada Agricultural Extension Division: Henry Albert, H. J. Brown, and C. E. Secor.

Saturday, September 5, 1925—Miss Mary Stillwell of the Nevada Agricultural Extension Division of the University of Nevada gave a talk on "Health Contests Among 4-H Clubs," with demonstration by two club girls. Discussion and approval by T. H. Huntington, H. J. Brown.

It was moved by H. J. Reese that the president appoint a committee of three to confer with the University of Nevada to co-operate with yearly assemblages in health problems. Carried.

Albert Soiland, M. D., Los Angeles—"The Granulomata, Hodgkin's Disease, Lympho, Sarcoma, and Leukemia." Discussion by A. R. Kilgore, J. F. Kerby, H. Zimmerman, Eric E. Larson.

Miley B. Wesson, M. D., San Francisco—"Conservation vs. Radical Surgery for Traumatic Rupture of the Kidneys," with slides. Discussion by E. L. Gilcreest, Eric E. Larson, T. H. Huntington, R. P. Roantree, R. A. Bowdle.

Alfred B. Spalding, M. D., San Francisco—"The Surgical Utility of the Pelvic Fascia in Cases of Cystocele, Rectocele and Uterine Prolapse," with slides. Discussion by E. A. Larsen, Miley B. Wesson.

P. K. Brown, M. D., San Francisco—"The Medical and Surgical Treatment of Angina," with illustrations. Discussion by W. W. Washburn, E. L. Gilcreest.

H. J. Brown, M. D., Reno—"The Workings of the American Medical Association." Discussion by John E. Worden, Miley B. Wesson.

W. W. Washburn, M. D., San Francisco—"The Modern Surgical Treatment of Goiter," with slides. Discussion by

E. A. Larsen, E. L. Gilcreest, P. K. Brown, S. M. Sproat, W. L. Samuels, R. P. Roantree.

Banquet at Lamoille.

The following members were in attendance at various times during the meeting:

William M. Edwards, Henry Albert, Anna B. De Chene, R. A. Bowdle, D. A. Smith, W. L. Samuels, John E. Worden, W. A. Shaw, A. R. Kilgore, W. H. Hood, C. E. Secor, A. J. Hood (Elko), A. C. Olmsted, C. W. Eastman, C. E. Piersall, H. J. Brown, J. T. Reese, H. W. Sawyer, R. P. Roantree, D. A. Turner, H. A. Paradis.

The following visitors were also present at various times during the meeting:

T. W. Huntington, M. B. Wesson, J. P. Kerby, J. P. Warren, E. L. Creveling, Peter Frandsen, Edmund White, A. C. Gibson, Eugene Benjamin, E. Eric Larson, H. A. Collings, A. Soiland, Mary E. Stilwell, W. W. Washburn, E. L. Gilcreest, G. J. Hull, A. B. Spalding, R. H. Travers, H. Zimmerman, S. M. Sproat, P. K. Brown.

CORRESPONDENCE

C. O. Sappington, M. D., Oakland, Calif., commenting on the article by Doctor Shuman, "Questionable Diagnostic Methods," published in the August issue of CALIFORNIA AND WESTERN MEDICINE, page 1027, says:

All progressive clinicians will, no doubt, agree with Dr. Shuman that it is not to the best interest of any sick patient to be examined by too many physicians. Refined diagnoses, so called, are frequently made at the expense of comfort and safety.

The standardization of diagnostic procedures is a necessity, which might be handled through standardization committees as have other procedures.

One is inclined to agree with Dr. Fulton's idea that perhaps the greater of two evils in regard to laboratory methods is neglect, rather than abuse. Medicine is certainly more scientific today than ever before. As President Ewer has so well remarked, "Cold science, effective but not always convincing, has come into nursing and medicine as sentiment has been squeezed out." As a clinical guide-post for future use, perhaps Sir James MacKenzie's observation is noteworthy: "The next advances in clinical medicine must be the recognition of the diseased state before it has produced gross structural changes and the recognition of the conditions that predisposed or induced the disease." This surely calls for diagnostic thought.

Dr. Bine commented most interestingly on the "old fogey" physician—as he was called by some of his more modern younger associates—and the experiences during an epidemic in which the older man was more valuable than the younger ones. As a representative of the younger group of medical men, let me say that I heartily wish that there was more genuine respect between the younger and older men. Respect, of course, is a mutual feeling. Many younger men feel that, through newer methods, they know more; many older men feel that, through more experience, they are superior. Both err, for both new ideas, methods, and long experience are essential. In perhaps no other walk of life than the practice of medicine do years of experience play so vital a part. Yet young fellows often set themselves up as specialists when barely out of school, and one hears tales of incomes which overreach five figures within the first year of specialty practice, while most of our good practitioners today know that years of labor and thought are necessary to build up such an income.

Perhaps a bit more of regard for the experience of the older man, on the part of the young fellows, and a little more commendation and encouragement of the young practitioner by those in seniority would improve relations. And, again, perhaps all of us, old and young, should more keenly realize that "life is short, the art long, judgment difficult, delay dangerous, experience fallacious."

Manila, P. I., August 5, 1925.

My dear Dr. Musgrave—Your kind appreciation of the actual status and development of the Department of Legal Medicine in the Philippines, as outlined in your editorial in the August issue of California and Western Medicine, gives me the strongest encouragement to maintain my devotion to the subject, and to work harder for a greater extension of its application to the legal and social needs of this country.

In this connection permit me to inform you that, thanks to the inclusion of the subject of Legal Medicine among the required subjects in the courses of law and medicine, and the relatively more intensive and practical teaching of the same during the last decade, *we are actually noting here a remarkable change of orientation taking place in the procedure of the courts of justice in relation to medico-legal questions and problems.* The prosecuting attorneys, at least in the city of Manila, deal with these questions by making previous careful preparation with the aid of medical experts, thus compelling the side of the defense to adopt equal or better means and thereby affording the judges to have a better basis to understand and decide on scientific matters.—Sixto De Los Angeles, Professor and Head Department of Legal Medicine.

Medicine Before the Bench

Findings and Comments of the Courts on Acts and Omissions of Doctors

(EDITOR'S NOTE—*The law reports contain many interesting decisions, involving the reputations and fortunes of doctors. In this column in each issue a brief summary of one or more decisions and comments of the several courts of last resort upon the cases will appear. The matter will be selected by our general counsel, Hartley F. Peart, who, with Hubert T. Morrow, attorney for Southern California, will contribute from time to time.*)

A case was recently tried before a jury in the Superior Court of this state, involving the following situation:

A practicing dentist had made certain false teeth for a patient and had delivered them to her upon the claimed understanding that she would pay for them within a certain time. Before the teeth were paid for, the patient called on the dentist for additional examination and work, and, as claimed by plaintiff, while she was permitting her mouth to be examined, the dentist forcibly removed the teeth and stated to the patient that when she had paid for the teeth she could have them back, but that he would not return them unless and until he had been paid.

The patient sued for damages, claiming that title to the teeth had passed to her upon the credit of her contract to pay, and that the defendant dentist committed an assault upon her person in forcibly taking the teeth, and that his remedy was purely contractual for the price of the teeth. A jury was demanded by plaintiff and there was evidence that plaintiff suffered from shock as the result of the withdrawal of her teeth, a physician testifying that he gave plaintiff an opiate to quiet her nerves. After argument, the jury awarded plaintiff \$500 damages, an amount very much in excess of the value of the teeth.

On motion for a new trial, the trial judge permitted the verdict in favor of plaintiff to stand, but reduced the amount to \$250, on the ground that the damages awarded were excessive.

"Anybody hurt in the wreck?"

"One gentleman, I believe."

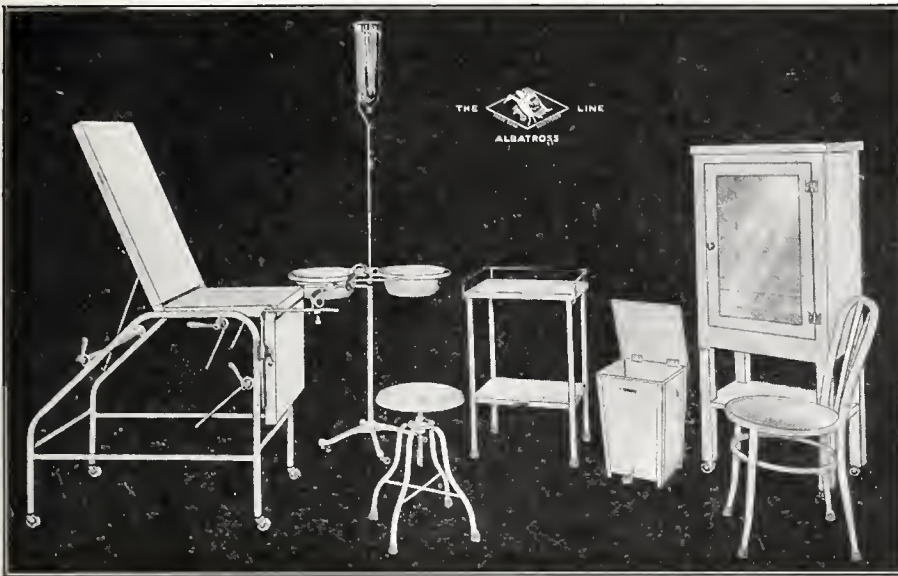
"Bones broken?"

"I think it was his heart. He sat down by a leaking suitcase and shed tears."

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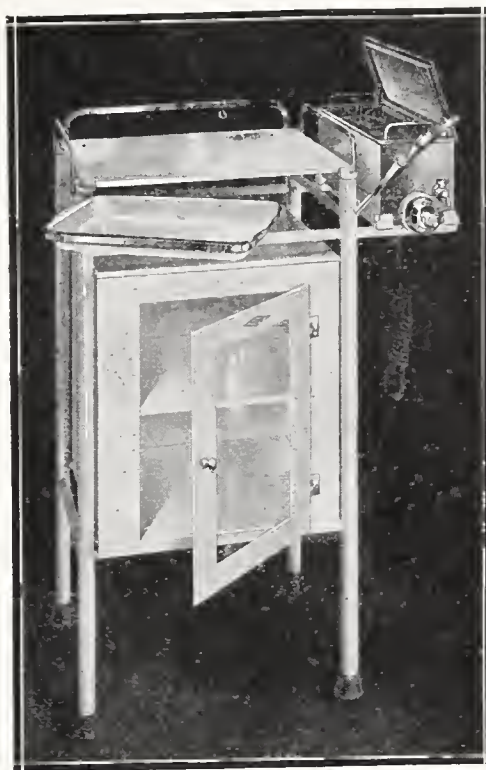
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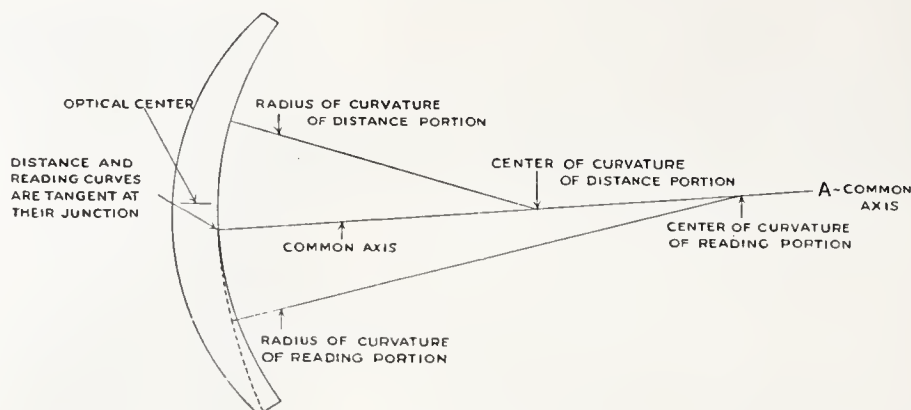
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The Psychiatric Clinic in the General Hospital—The development of psychiatric clinics, behavior problems in childhood and adolescence, treatment of neurotic children, and adolescent and older patients are some of the topics discussed by I. J. Sands, New York (Jour. A. M. A.). He asserts that the psychiatric clinic in the general hospital supplies the long-felt want of a readily accessible source of information on general psychiatric subjects for the medical profession at large. The mental clinic in a general hospital is in a position to furnish information on psychiatric subjects that are not encountered in state hospitals. There is a great need for an exhaustive study of endocrine diseases, especially in their histopathologic phases. Likewise, there is a great need for further research in brain pathology. The country at large is at present aroused over the great wave of criminality that is sweeping over it. Everything is being offered as a possible cause of this problem, from the greatest achievement of science to the very elements of nature itself. Impossible laws, bigoted reformers, the automobile, the motion picture, the radio, lack of religious training, and even the very rays of the sun have been enumerated among the possible causes. When one considers that approximately two-thirds of the population of our penal and correctional institutions have been shown by surveys to be suffering from a mental disease or defect that has a definite bearing on their anti-social conduct, it is but logical to expect psychiatrists to produce explanations for and offer solutions of this problem. Recent tragic events have shown the importance of the recognition of the various problems in childhood long before their manifestation in overt acts of anti-social conduct. These have elicited considerable unfavorable editorial comment from the lay press. Recently, psychiatric opinion has been subjected to severe criticism because of the diametrically opposed views which alienists have offered in some of the notorious medico-legal cases, and also because the poor person is frequently deprived of expert psychiatric opinion that is purchased by the rich. The first criticism can be combated by merely calling attention to the fact

(Continued on Page) 1346)



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Disturbances of Vision Due to Digitalis—Disturbances of vision resulting from the internal use of digitalis have been known at least from the time of Withering. Such disturbances have only rarely been described in the English literature, but have been carefully reported in German and French. Their occurrence at present in this country is very infrequently recognized. Because of the importance of noting visual disturbances in all grades of digitalis intoxication, H. B. Sprague, P. D. White, and J. F. Kellogg, Boston (Journal A. M. A.), report a series of seven cases. These cases present symptoms of a toxic amblyopia with dimness of vision, flickering and flashing scotomas and marked disturbance of color vision. All these seven patients received an excessive amount of digitalis. In all but one case, this was due to incorrect dosage by the physician in charge, or misunderstanding on the part of the patient. Five patients complained of a defect of color sensation; four had yellow vision, one red-yellow, and two green. All complained of decrease of visual acuity, and three said that they seemed to be looking through mist. Two had difficulty in focusing the eyes or reading, two had definite scotomas, and three had flickering before the eyes. In one instance the patient said that surrounding objects in sunlight appeared covered with snow. In two cases the visual disorders preceded the gastro-intestinal and cardiac effects; in two others, disturbances of the eye were associated with nausea and vomiting as the first toxic symptoms. Two patients with marked visual effects had no change in cardiac rate or rhythm, and one of these had striking xanthopsia without either nausea or cardiac effects. In three cases, extreme muscular weakness, described in digitalis intoxication, was a prominent feature. This, with the gastro-intestinal complaints, was considered by the patients of more serious importance than the eye symptoms; and it was, therefore, necessary to question them carefully to secure an adequate description of their visual disorders.



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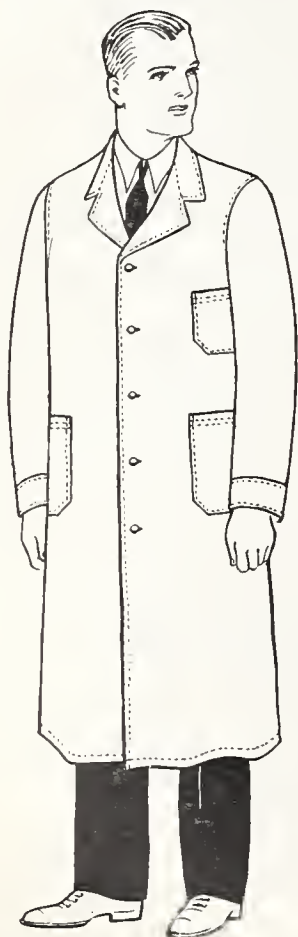
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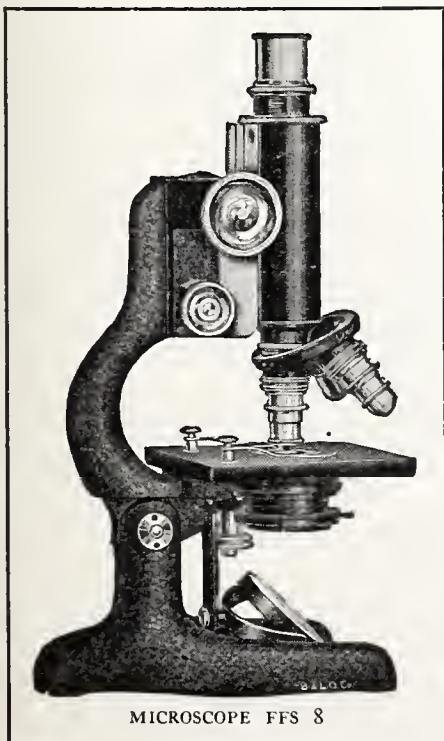
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PSYCHIATRIC CLINIC IN GENERAL HOSPITAL

(Continued from Page 1341)

that difference of psychiatric opinion as compared with difference in legal opinion is like an harmonic symphony compared with a rhapsody of incoherence. The second criticism may ably be combated by the psychiatric clinic in a general hospital, which would be in a position to offer expert advice to the poor. The presence of the psychiatric clinic in the general hospital is assured. The success and failure of any one given clinic will depend on its personnel. The director of the clinic must be a psychiatrist of wide experience and special aptitude for his work. The study of mental disorders requires a long apprenticeship, and there are no short-cuts for acquiring psychiatric knowledge and experience. A six months' course of training in a foreign country in one of the many modern schools of psychology or psychopathology is surely inadequate to enable a man to assure leadership of such a clinic. A properly trained psychiatric social service worker is likewise indispensable for the success of the clinic. A properly trained psychologist is a very desirable addition to the personnel. Properly kept records and proper clerical assistance will enhance the value of the clinic.

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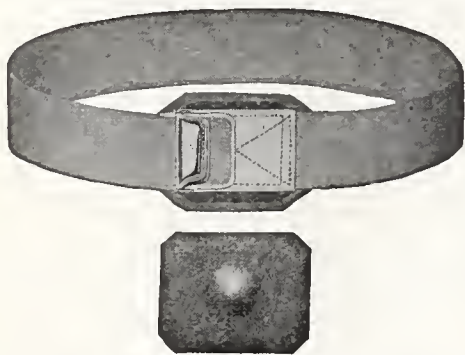
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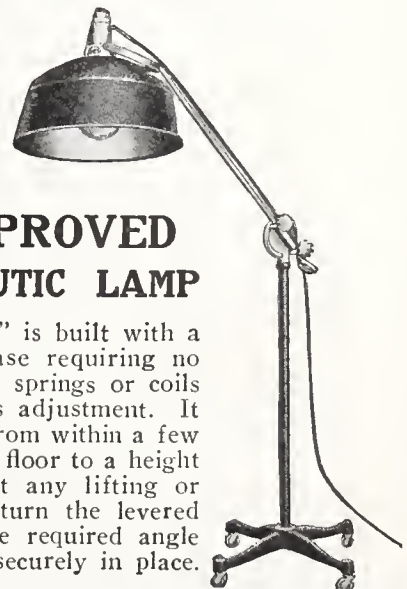
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BOOK REVIEWS

This column is conducted solely in the interests of California and Western Medicine readers. Critical comment, favorable and unfavorable, purely from the standpoint of the interests of the medical reader, will be made about books selected from the larger number acknowledged in the Books Received column. The advertising columns are open to book publishers who wish to make additional statements about their publications.

Diseases of the Rectum and Pelvic Colon. By Martin L. Bodkin. 2nd ed. 487 pp. Illustrated. Review copy supplied by the publishers, E. B. Treat & Company. After Pennington's great work on diseases of the rectum and colon, Bodkin's book comes in the nature of an anti-climax. It is not up to date, it is not sufficiently revised. For instance, instead of the emetin treatment hypodermically, the now long antiquated ipecac pill treatment is given for amebic dysentery. In mixed piles, the clamp and cautery is advised for the skin portion of the pile. No mention is made of quinine and urea as the drug of choice for the injection treatment of piles, a method now widely practiced. Alcohol, as a remedy for pruritus ani, is not mentioned by the author.

In the chapters on surgical treatment of malignant growths, entire pages are quoted from Tuttle and Munimery. And what are the dates of publication of these pages? Why 1907 and 1912. No! Bodkin's book is not up to date, but it may be enlarged.

Diseases of the Heart. By Henri Vaquez. Translated by George F. Laidlaw. 743 pages. Illustrated. Review copy by courtesy of the publishers, W. B. Saunders Company. For sale by advertisers in California and Western Medicine.

This book has been the subject of almost unanimous favorable review since its appearance.

Vaquez is widely recognized as one of the valuable contributors to the literature about diseases of the heart. In the choice of subjects and in the manner of their presentation, this volume is delightful. Much of the cumbersome speculation so commonly used as padding finds no reference in this book.

The translating and editing by Doctor Laidlaw are worthy of fullest praise, and the book has the enthusiastic endorsement of our review editors.

"The Harrison Narcotic Law penalizes all addicts as criminals and degenerates," believes Oscar Dowling (Journal A. M. A.); "it does not even attempt to sep-

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arate the wheat from the chaff. In theory, the law makes it impossible for addicts to get their supply of drugs. It does not distinguish between the criminal and the non-criminal. It is oblivious to human suffering; it sees the mass, but not the individual—the forest, but not the trees. On the other hand, the physician receives the human wreckage from the legal battle to repair and make whole again, if he can. His motives are humane, and society exacts this trait. He cannot understand, as a lawyer apparently can, that a law devoid of the elements of humanity can be framed. The physician, on the other hand, is interested in the individual more than in the mass. He sees the trees, but not the forest."

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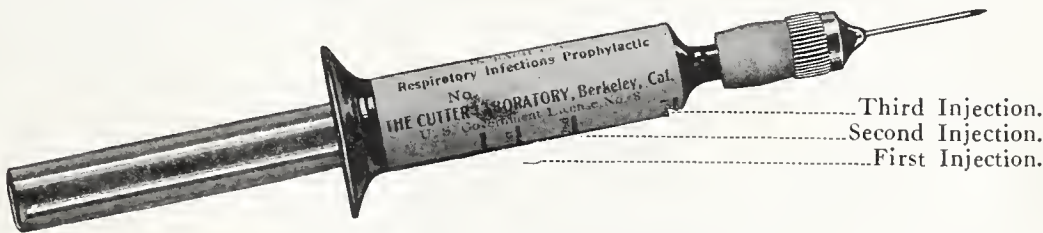
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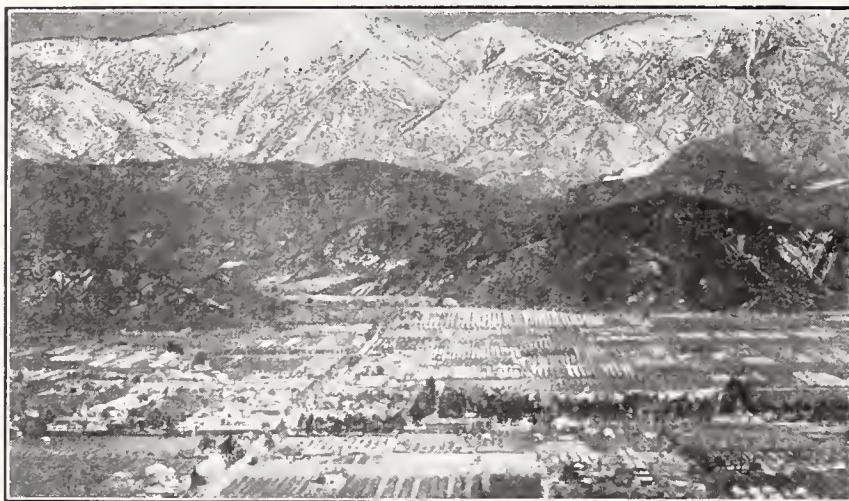
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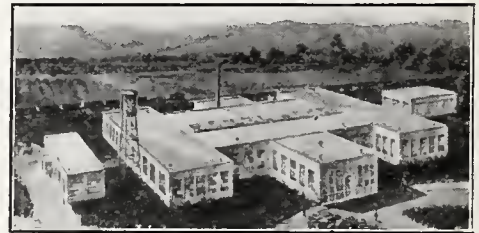
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Parenchymal Rales in Pulmonary Tuberculosis—According to E. H. Bruns, Denver (Journal A. M. A.), showers of fine and medium rales of equal size, occurring at the end of a full inspiration, or the so-called coughing rales which occur when the patient forcibly breathes out, gives an expiratory cough, and immediately breathes in, are not due to the bubbling of secretions in the alveoli or bronchial tubes, nor are they necessarily associated with abnormal secretions in these structures. Such rales are not always associated with active inflammatory processes in the pulmonary parenchyma or bronchi, and must be distinguished from tracheal, bronchial, cavity and pleural rales. Parenchymal rales cause the most confusion. They may be due to pneumonia, fibrosis, atelectasis, pleurisy, etc., and cannot be said to be associated with any particular disease or pathologic condition. Showers of rales usually elicited only by cough and heard over the upper parts of the lungs are unquestionably the most reliable physical sign for the detection of tuberculous lesions. The significance of these rales as a criterion of manifest tuberculosis and the character of the lesions will depend on other clinical findings—history, symptoms, sputum, roentgen-ray examination. A period of observation may be necessary in order to arrive at a definite diagnosis. In studying the progress of a case and in deciding whether a tuberculous process is progressing or undergoing retrograde changes, the persistent occurrence of this type of rale is not a conclusive sign unless correlated with other physical signs and clinical findings.

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Directory of Medical Organizations of California

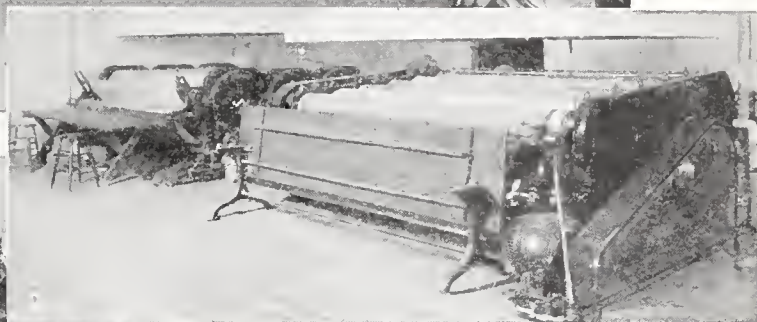
<p>CALIFORNIA MEDICAL ASSOCIATION</p> <p>President, Edward N. Ewer 251 Moss Avenue, Oakland Secretary, Emma W. Pope Balboa Bldg., San Francisco</p> <p>President-elect, William T. McArthur 523 W. Sixth Street, Los Angeles Vice-President, Joseph Catton 209 Post Street, San Francisco General Counsel, Hartley F. Peart 514 Humboldt Bank Bldg. San Francisco Assistant General Counsel, Hubert T. Morrow Bartlett Bldg., Los Angeles</p> <p>COUNCILORS</p> <p>FIRST DISTRICT—San Diego, Riverside, Orange, San Bernardino, and Imperial Counties. Lyell C. Kinney, 415 Elm Street, San Diego.</p> <p>SECOND DISTRICT—Los Angeles, Santa Barbara, Ventura, and Kern Counties. W. H. Kiger, 523 W. Sixth Street, Los Angeles.</p> <p>THIRD DISTRICT—San Luis Obispo, and Monterey Counties. T. C. Edwards, Salinas.</p> <p>FOURTH DISTRICT—Fresno, Kings, Tuolumne, Merced, Mariposa, Madera, and Stanislaus Counties. Fred R. De Lappe, Modesto.</p> <p>FIFTH DISTRICT—Santa Clara, San Mateo, San Benito, and Santa Cruz Counties. 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Directory of Medical Organizations of California—(Continued)

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Santa Barbara County Medical Society President, Franklin R. Nuzum Santa Barbara Secretary, Alex. C. Soper, Jr. Santa Barbara	Stanislaus County Medical Society President, J. L. Hennemuth Modesto Secretary, E. R. McPheeters Modesto	League for the Conservation of Public Health President, Dudley Smith Oakland Secretary, W. T. McArthur Los Angeles Executive Secretary, C. J. Sullivan Balboa Bldg. San Francisco
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Santa Cruz County Medical Society President, W. Grant Hatch Santa Cruz Secretary, H. G. Watters Watsonville	Tulare County Medical Society President, Harry J. Willey Porterville Secretary, John C. Palne Exeter	State Board of Medical Examiners President, P. T. Phillips Santa Cruz Secretary, C. B. Pinkham State Bldg., San Francisco
Shasta County Medical Society President, Sherman T. White Redding Secretary, C. A. Mueller Redding	Tuolumne County Medical Society President, Geo. C. Wrigley Sonora Secretary, W. L. Hood Sonora	Southern California Medical Association President, Rexwald Brown Santa Barbara Secretary, Charles T. Sturgeon Merritt Bldg., Los Angeles
Siskiyou County Medical Society President, R. H. Heaney Yreka Secretary, C. W. Ankele Dunsmuir	Ventura County Medical Society President, F. E. Blaisdell Santa Paula Secretary, C. E. Schultz Santa Paula	California Northern District Medical Society President, C. J. Durand Colfax Secretary, J. O. Chiapella Chico

Directory of Hospitals, Sanitariums, etc., of California

ALBERT H. ROWE SANITARIUM Diabetes and Metabolic Diseases 2545 Regent Street, Berkeley, Calif.	FRENCH HOSPITAL General Hospital Geary Street, bet. 5th and 6th Avenues San Francisco	O'CONNOR SANITARIUM General Hospital in Charge of Sisters of Charity Race and San Carlos Streets, San Jose, Calif.
ALEXANDER SANITARIUM Nervous and Mild Mental Diseases Belmont, Calif.	GLEN LODGE For Rest and Recuperation Foothills above Redwood City, Calif.	PARK SANITARIUM Alcoholic and Drug Addictions 1500 Page Street, San Francisco
ALHAMBRA SANATORIUM For Nervous Patients Rosemead California	GOTTBRATH'S SANITARIUM (Dr. N. J.) Nervous Diseases and Semi-Invalidism Belmont, California	PHYSICIANS & SURGEONS INSTITUTE OF PHYSIO-THERAPY Limited to Patients referred by the Medical Profession. No other cases accepted 226 Haight St., San Francisco, Calif.
ALUM ROCK SANATORIUM For the Treatment of Tuberculosis San Jose, Calif.	HOSPITAL FOR CHILDREN AND TRAINING SCHOOL FOR NURSES General Hospital for Women and Children 3700 California Street, San Francisco	POTTENGER SANATORIUM For the Treatment of Tuberculosis Monrovia, Calif.
ANDERSON SANATORIUM Mental and Nervous Diseases 2535 Twenty-Fourth Avenue Oakland, Calif.	JOHNSTON-WICKETT CLINIC Anaheim, Calif.	RADIUM AND ONCOLOGIC INSTITUTE Diagnosis and Treatment of Neoplastic Diseases 1052 W. 6th St., Los Angeles, Calif.
BANKSIA PLACE SANITARIUM Nervous and Mental Diseases 5227 Santa Monica Blvd. Los Angeles, Calif.	LAS ENCINAS SANITARIUM For Treatment of Nervous and General Diseases Las Encinas, Pasadena, Calif.	SCRIPPS METABOLIC CLINIC SCRIPPS MEMORIAL HOSPITAL La Jolla, San Diego, California
BANNING SANATORIUM Treatment of Tuberculosis and Throat Diseases Banning, Calif.	LIVERMORE SANITARIUM For Treatment of Nervous and Mental Diseases Livermore, Calif.	ST. FRANCIS HOSPITAL Limited General Hospital Bush and Hyde Sts., San Francisco
CALIFORNIA SANITARIUM For the Treatment of Tuberculosis Belmont, San Mateo County, Calif.	MARY'S HELP HOSPITAL General Hospital 145 Guerrero Street, San Francisco	ST. GOTHARD'S General Hospital St. Helena, California
CANYON SANATORIUM For the Treatment of Tuberculosis Redwood City, California	MENDELSSOHN REST HOME 870 Fell Street San Francisco	ST. JOSEPH'S HOSPITAL Limited General Hospital Buena Vista and Park Hill Avenues San Francisco
COLFAX SCHOOL FOR THE TUBERCULOUS For the Treatment of Tuberculosis Colfax, Calif.	MONROVIA CLINIC Diagnosis and Treatment of Tuberculosis 137 N. Myrtle St., Monrovia, Calif.	ST. LUKE'S HOSPITAL Limited General Hospital 27th and Valencia Sts., San Francisco
DANTE SANATORIUM Limited General Hospital Van Ness and Broadway, San Francisco	MOUNT ZION HOSPITAL General Hospital 2200 Post Street, San Francisco	ST. MARY'S HOSPITAL General Hospital 2200 Hayes Street San Francisco
FRANKLIN HOSPITAL Limited General Hospital Fourteenth and Noe Sts., San Francisco	OAKS SANITARIUM For the Treatment of Tuberculosis Los Gatos, Calif.	WOODLAND CLINIC AND SANITARIUM Woodland, California



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2. "American" Flat Work Ironers at the Jefferson Hospital laundry.
3. The battery of "American" Prim Presses.

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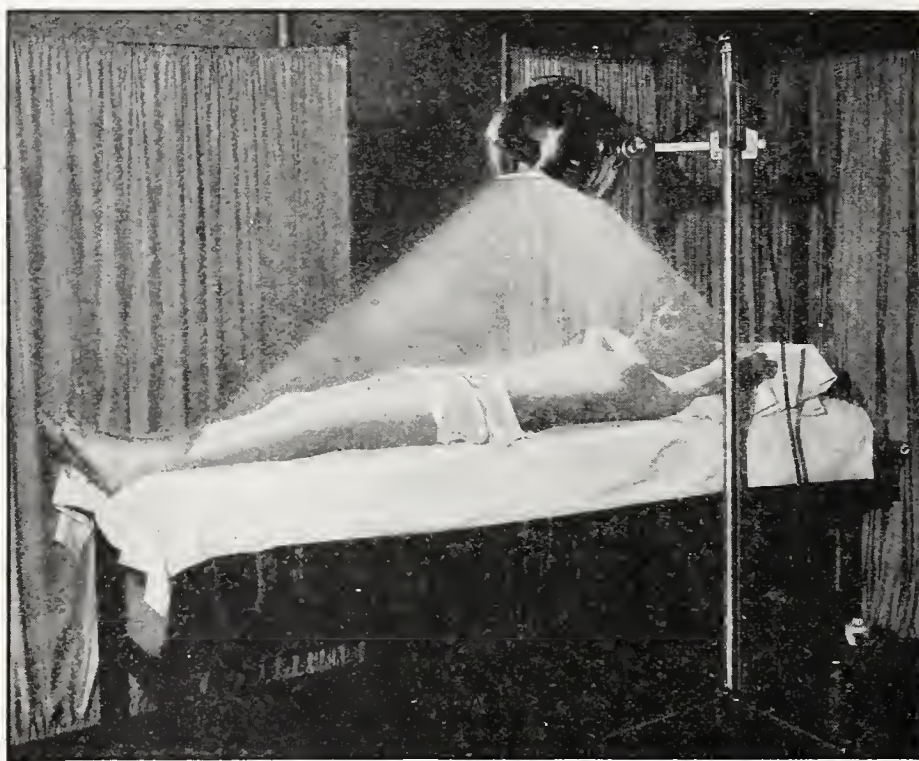
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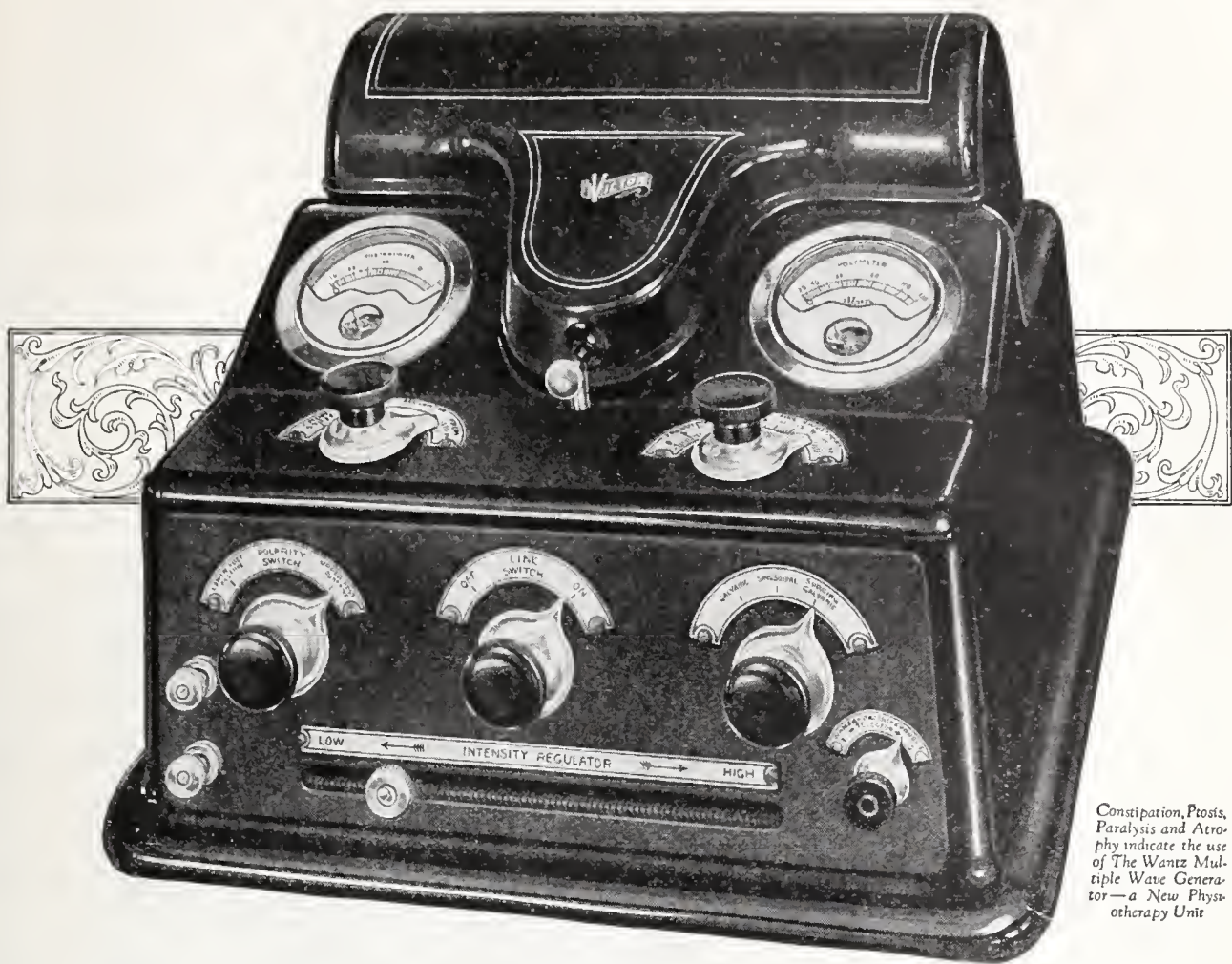


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Another Journal Adopts Council Standards—Year by year the Council on Pharmacy and Chemistry continues its efforts for the rational use of drugs. Carried on with the unselfish gift of time and thought by Council members, this work represents a devotion to professional ideals that should arouse the enthusiastic support, not only of all physicians, but of other scientists and laymen as well. Slowly but surely such recognition is coming. The resolution endorsing the Council's work, signed by every member of the House of Delegates at the San Francisco session in 1916, is only the official record of the increasing support and encouragement being given by individual members of the profession. On such support the Council must, in the last analysis, depend for the complete success of its efforts. Practically every medical journal of standing refuses today to accept advertisements of pharmaceutical preparations that have not met the Council's requirements. In this *The Journal* is naturally the pioneer, but its lead has been followed by all official organs of the various state medical associations, with the notable exception of the *Illinois Medical Journal*. The difficulty of financing a strictly professional journal is, no doubt, in a great measure responsible for the failure of some publications to close their advertising columns to any but Council-accepted pharmaceutical products. That the best of these journals, however, desire to support the Council, is shown by a letter just received from the business manager of the *Long Island Medical Journal* announcing the arrival of the hopefully anticipated time when his publication could afford to solicit advertising only from manufacturers of products that meet Council requirements. This journal is the official organ of the Associated Physicians of Long Island. It is a welcome addition to the ranks of supporters of the Council's efforts for the prevalence of rational therapeutics. Henceforth only such pharmaceutical products as are accepted for inclusion in *New and Non-official Remedies* will be advertised in the *Long Island* publication. If physicians will limit their prescriptions to such products in addition to those that are in the *Pharmacopeia*, medical publishers and progressive manufacturers will appreciate the encouragement.—*Journal A. M. A.*, August 29, 1925.



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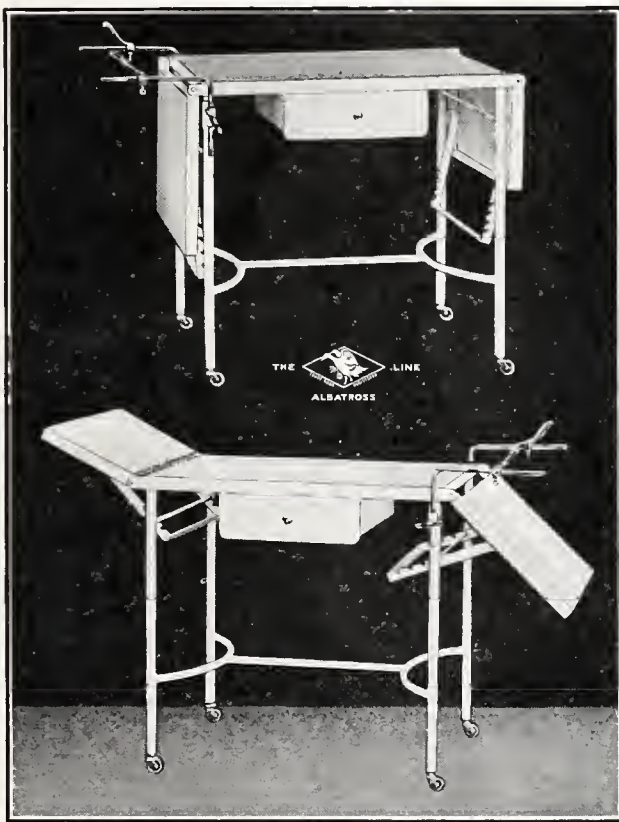
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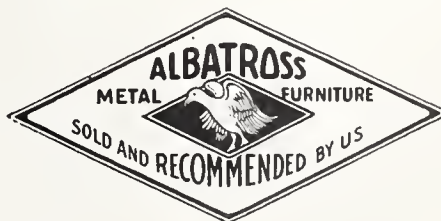
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(Abstracts from reports of Council on Pharmacy and Chemistry, A. M. A.)

Note—These do not represent all of the actions of the Council, but they do represent those remedies manufactured by firms who co-operate with California and Western Medicine in its advertising columns, and thereby with the physicians in California.

In addition to the articles enumerated in our last report, the following have been accepted:

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Scarlet Fever Streptococcus Antitoxin Concentrated (Globulin)—P. D. & Co.—A scarlet fever streptococcus antitoxin prepared from the serum of horses treated with subcutaneous injection of toxic filtrates from cultures of scarlet fever streptococci, and also with intravenous injections of the streptococci themselves. Each cc. neutralizes from 35,000 to 40,000 skin test doses of scarlet fever toxin. The product is marketed in packages of one syringe containing 2.5 cc., and in packages of one syringe containing 10 cc. Parke, Davis & Co., Detroit. (Journal A. M. A., August 8, 1925, p. 437.)

Diphtheria Toxin-Antitoxin Mixture 0.1 L.—A diphtheria toxin-antitoxin mixture (New and non-official Remedies, 1925, p. 333), each cc. containing 0.1 lethal dose of diphtheria toxin neutralized with the required amount of diphtheria antitoxin. Marketed in packages of three 1 cc. vials; in packages of one 30 cc. vial; in packages of ten vials, each containing three doses. Eli Lilly & Co., Indianapolis.

Typhoid Mixed Vaccine, Prophylactic and Therapeutic (New and Non-official Remedies, 1925, p. 360).

—This is also marketed in packages of three 1 cc. vials. Eli Lilly & Co., Indianapolis.

Germicidal Tablets of Potassio-Mercuric Iodide (P. D. & Co.)—Tablets containing potassium mercuric iodide, potassium iodide and sodium bicarbonate, colored blue. (For a discussion of the actions, uses, and dosage of potassium mercuric iodide, see New and Non-official Remedies, 1925, p. 239.) This product is supplied in two forms: germicidal discs of potassio-mercuric iodide No. 2 (P. D. & Co.), each tablet representing mercuric iodide

$\frac{3}{8}$ grain, potassium iodide $\frac{3}{8}$ grain, and sodium bicarbonate 16 grains, and germicidal discs of potassium mercuric iodide $1\frac{1}{2}$ grains, potassium iodide $1\frac{1}{2}$ grains, and sodium bicarbonate 45 grains. Parke, Davis & Co., Detroit. (Journal A. M. A., August 15, 1925, p. 517.)

Smallpox (Variola) Vaccine (Glycerinated) (New and Non-official Remedies, 1925, p. 342)—This is also marketed in packages of one tube. E. R. Squibb & Sons, New York.

Tetanus Antitoxin—Lilly (New and Non-official Remedies, 1925, p. 333)—This is also marketed in syringes containing 10,000 units. Eli Lilly & Co., Indianapolis.

Tetanus Antitoxin (Purified) (New and Non-official Remedies, 1925, p. 333)—This is also marketed in packages of 20,000 units. E. R. Squibb & Sons, New York.

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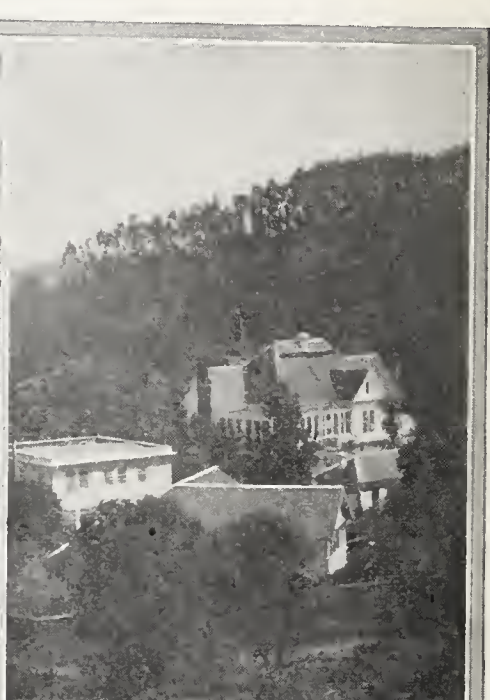
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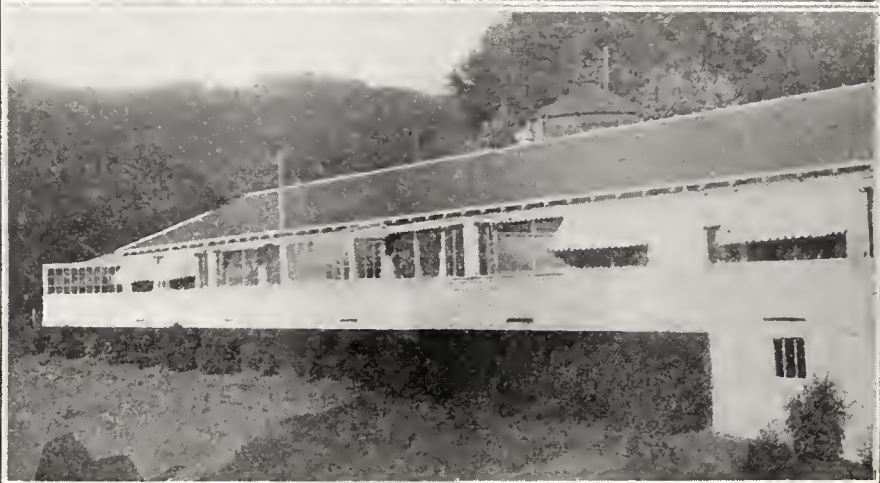


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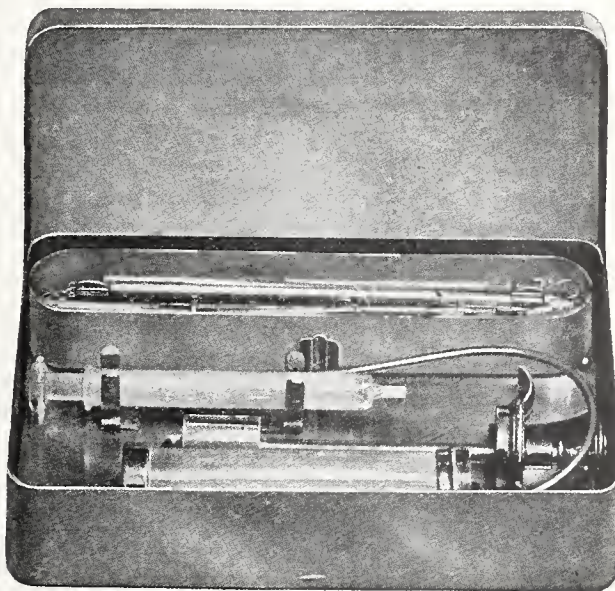
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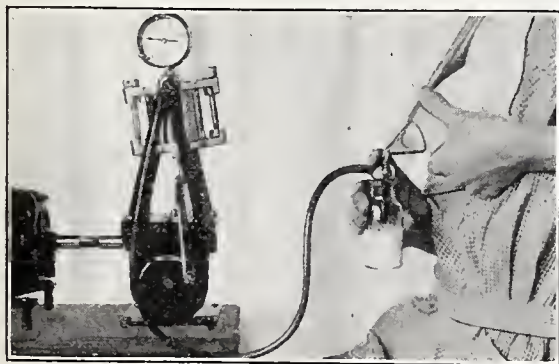
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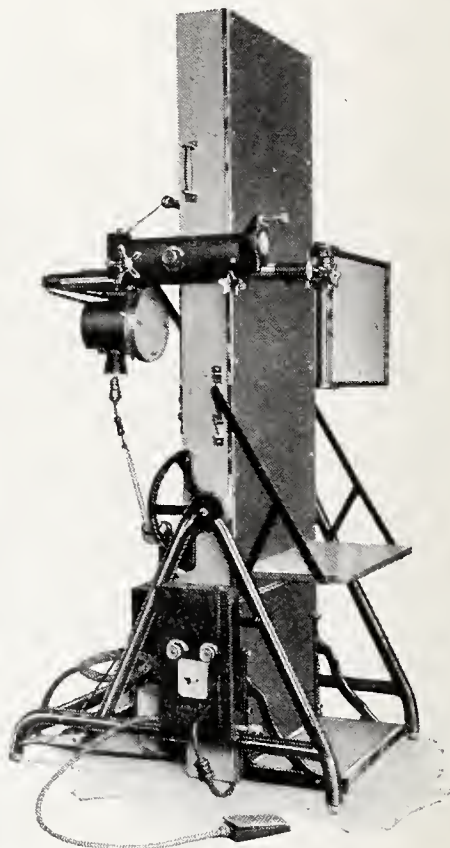
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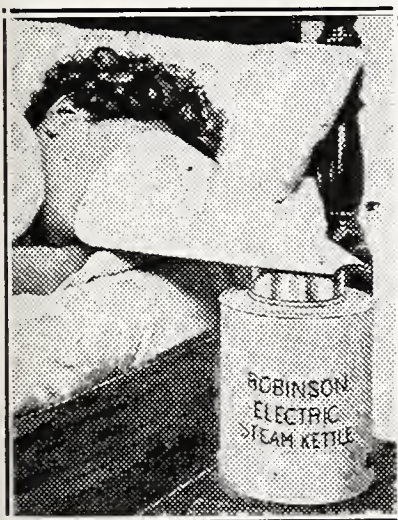
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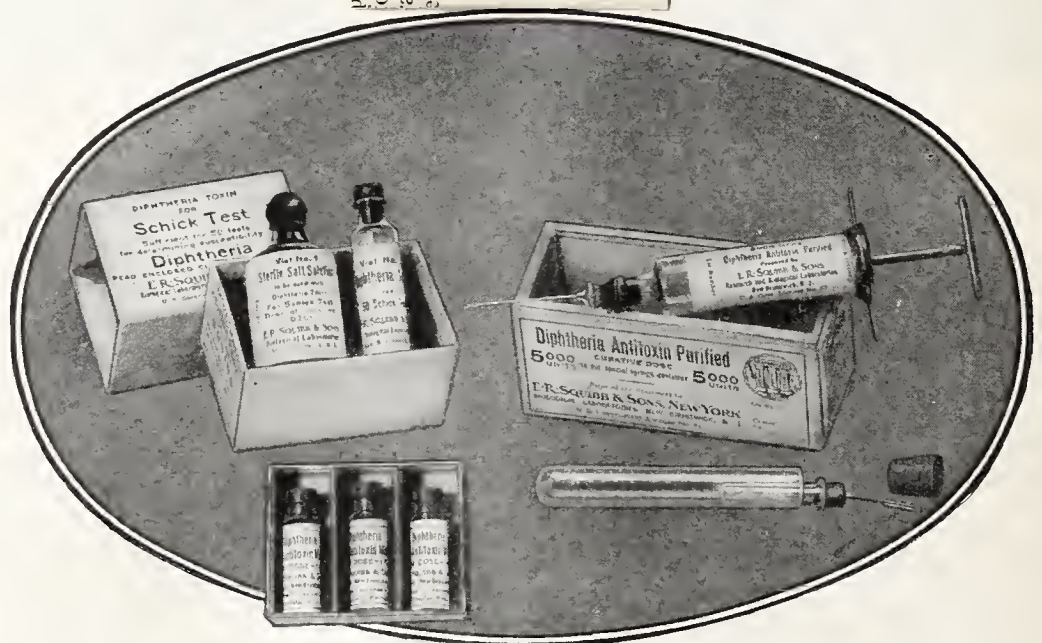
putations; by K. C. Elmslie. The organization and equipment for the limless; by Sir John Lynn-Thomas.—II. Anatomy of spinal nerves; by A. Melville Paterson. Diagnosis of peripheral nerves; by T. Grainger Stewart, and W. Rowley (Continued on next card)

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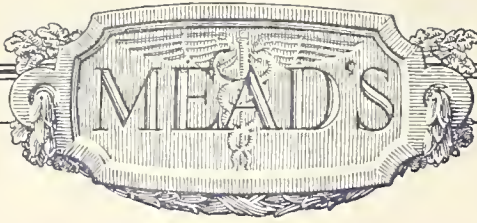
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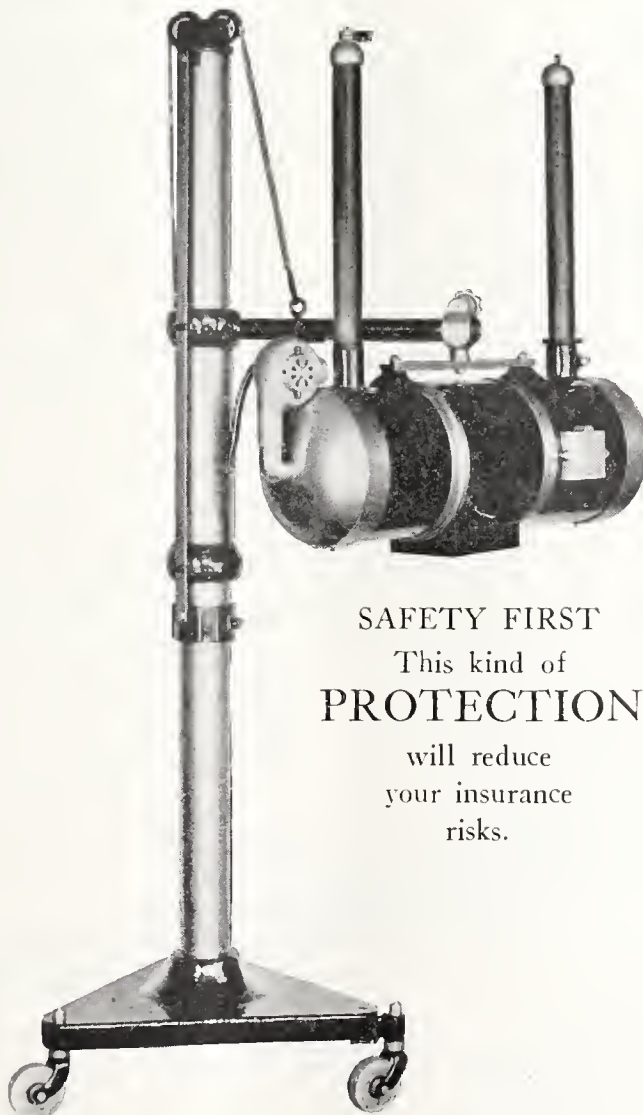
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NOVEMBER, 1925

No. 11

Subscription prices, \$5.00 (\$6.00 for foreign countries); single copies, 50 cents.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 10, 1918.

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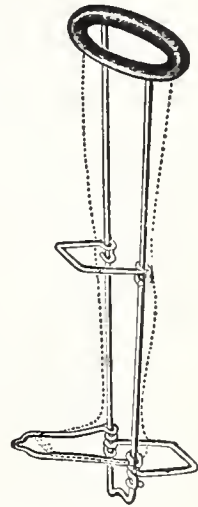
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Carl H. Greene, Charles S. McVicar, Waltman Walters and Leonard G. Rowntree, Rochester, Minn. (Archives of Internal Medicine, October 15), report investigations on "Functional Tests in Cases of Carcinoma of the Liver and Biliary Tract." They concluded that:

"There are definite limitations to the use of functional tests in the study of hepatic disturbances, and in our experience the extreme difficulty attending the early clinical recognition of malignant involvement of the liver and biliary passage was again manifest. We believe that the serum bilirubin and the phenoltetrachlorophthalein tests are of clinical value in the early diagnosis of carcinoma of the liver and biliary tract."

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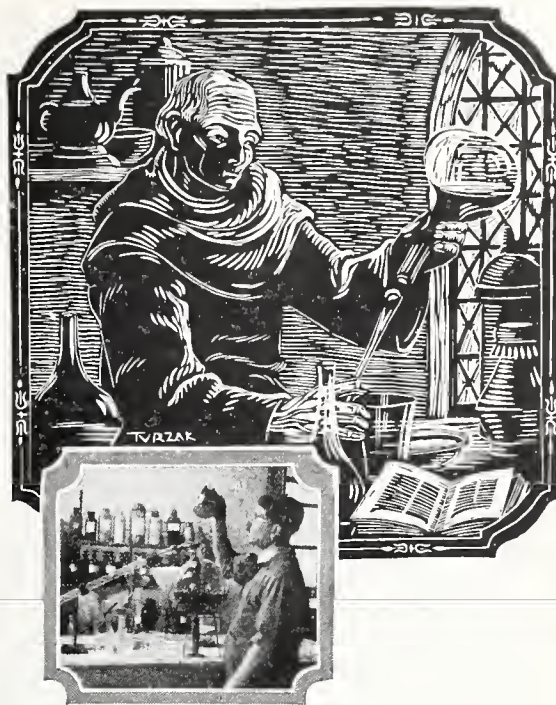
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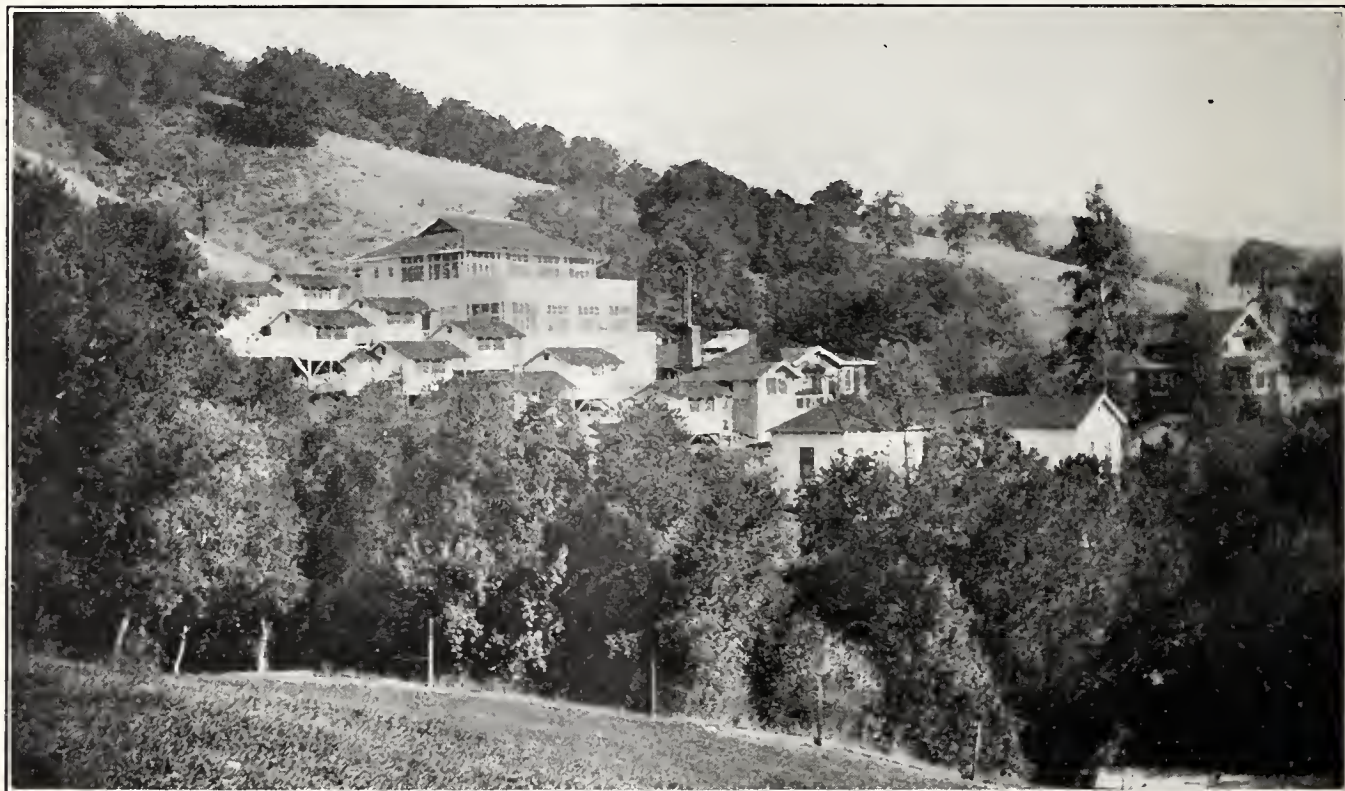
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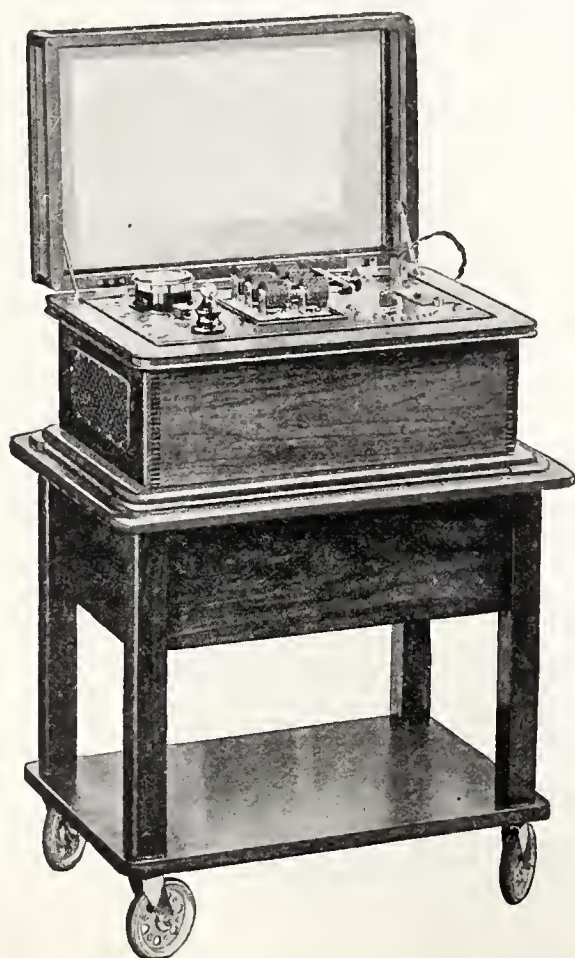


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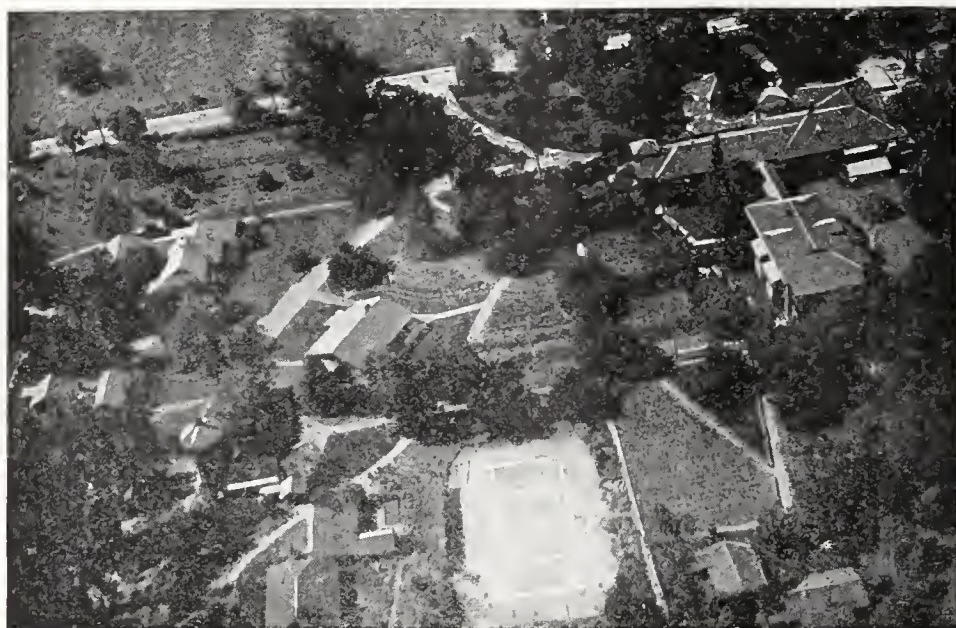
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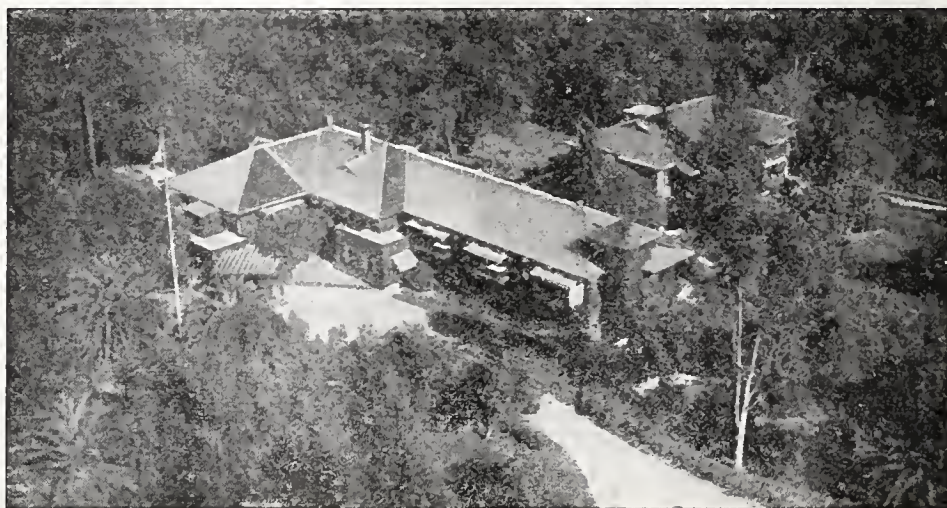
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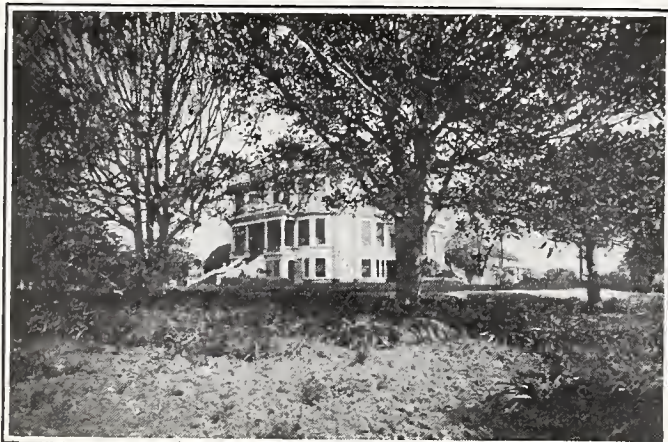
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 Thursday 8:30 a. m.—Eye, Nose and Throat Operations. Aaron Green, M. D., and Herbert Cohn, M. D.
 Thursday 9:00 a. m.—Medical Ward Rounds. Emil O. Jellinek, M. D.
 Friday 8:30 a. m.—Clinical X-Ray Conference. Lloyd Bryan, M. D.
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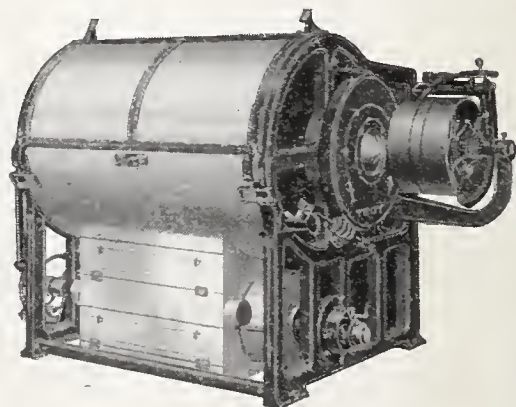
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Modern Medicine, Its Theory and Practice, in Original Contributions by American and Foreign Authors. Edited by Sir William Osler, M. D. Third Edition. Thoroughly Revised. Re-edited by Thomas McCrae, M. D. Assisted by Elmer H. Funk, M. D. Volume 1. Bacterial Diseases; Non-Bacterial Fungus Infections; The Mycoses. Illustrated. Review copy by courtesy of Lea & Febiger, Philadelphia and New York, 1925. For sale by advertisers in California and Western Medicine.

An Introduction to Objective Psychopathology. By G. V. Hamilton, M. D. With foreword by Robert M. Yerkes, Yale University. Review copy by courtesy of the C. V. Mosby Company, St. Louis, 1925. For sale by advertisers in California and Western Medicine.

The Surgery of Pulmonary Tuberculosis. By John Alexander, M. D. With introductions by Hugh Cabot, M. D., and Edward R. Baldwin, M. D. In compliance with directions in the will of Samuel D. Gross, M. D. (1805-1884), announcement is hereby made on the title page that this monograph has been awarded the 1925 quinquennial Samuel D. Gross Prize by the Philadelphia Academy of Surgery. Illustrated with 53 engravings and 12 plates. Review copy by courtesy of Lea & Febiger, Philadelphia and New York, 1925. For sale by advertisers in California and Western Medicine.

Diseases of the Nose, Throat, and Ear—Medical and Surgical. By William Lincoln Ballenger, M. D. Revised by Howard Charles Ballenger, M. D. Fifth Edition. Illustrated with 551 engravings and 32 plates. Review copy by courtesy of Lea & Febiger, Philadelphia and New York, 1925. For sale by advertisers in California and Western Medicine.

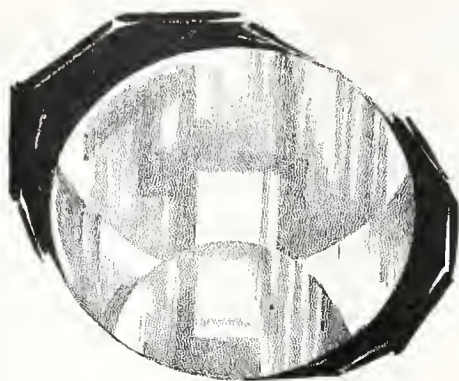
An Intermediate Textbook of Physiological Chemistry, With Experiments. By C. J. V. Pettibone, Ph. D. Third Edition. Review copy by courtesy of The C. V. Mosby Company, St. Louis, 1925. For sale by advertisers in California and Western Medicine.

A Practical Psychology of Babyhood: The Mental Development and Mental Hygiene of the First Two Years of Life. By Jessie Chase Fenton. With Illustrations. Review copy by courtesy of Houghton Mifflin Company. The Riverside Press, Cambridge, Boston and New York, 1925. For sale by advertisers in California and Western Medicine.

Development of Our Knowledge of Tuberculosis. By Lawrence F. Flick, M. D. 738 Pine Street, Philadelphia, 1925.

"The Chiropractic Initiative Proposition—As the proposal now stands, submitting to the people of Ohio at the November election the question of a separate licensing board for chiropractors is opposed by all earnest public health groups and by the Licensed Chiropractor Society of Ohio as well. The Ohio State Medical Journal says that the provisions of the proposal would permit the so-called 'National Board of Chiropractic Examiners, a paper organization,' sponsored by the Palmer School of Chiropractic, to grant licenses by reciprocity; that is, this particular school would be able to set standards for chiropractors in Ohio. The initiative bill was rejected by the general assembly, February 26, and a supplementary petition filed with the secretary of state, May 29, two days after the expiration of the ninety-day period provided by the constitution of the state. If voted on favorably in November by the people, this proposal would admit chiropractors to all the privileges of physicians, destroy the value of vital statistics, abolish the single board of licensure and allow the state to be overrun by a horde of cultists."—*Federation Bulletin*.

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J. W. Warren, M. D., Roentgenologist

E. D. Ward, M. D.

REX DUNCAN, M. D., Medical Director

Universalizing Breast-Feeding in a Community—

Frank H. Richardson, Brooklyn (Journal A. M. A.), states that universalizing breast-feeding in a community has become standardized. This procedure consists of three essentials. 1. There must be a group of physicians who are convinced of the overwhelming superiority of breast-feeding over bottle-feeding; who believe it attainable for the vast majority of infants, and who are familiar with a working technic for making breast-feeding possible for the individual child. There must be the co-operation of the birth-recording department or bureau of the community, whether of the city or of the state department of health. There must be an organization controlling sufficient nurses trained in the technic of breast-feeding, to visit each newly made mother as soon as a birth certificate is filed, in order to instruct her in the desirability of keeping her baby on the breast, as well as in the way to accomplish this. These three fundamentals have formed the basis of the Nassau County (New York) breast-feeding demonstrations in 1923 and 1924—the first large-scale piece of work along this line. The New York State Department of Health, which was interested in putting this on as a demonstration of what might be done anywhere in the state, supplied in its own machinery the second and third essentials. The Brooklyn Pediatric Society, with which there was the closest co-operation throughout, furnished the first essential, viz., the group of physicians vitally interested in the spread of breast-feeding. The demonstration dealt with 2815 babies. Nineteen-tenths of the mothers succeeded in nursing their babies for one month, and two-thirds of them did so for seven months. The infant mortality rate of the 2815 babies studied was 49 per thousand. That of Nassau County for 1923, the year of the active campaign, was 64. That of Nassau County for the years 1920, 1921, and 1922, the years preceding the experiment, was, respectively, 70, 67, and 78, with an average of 72. That of Nassau County for the year 1924, when the "hangovers" only were being visited, was 74.

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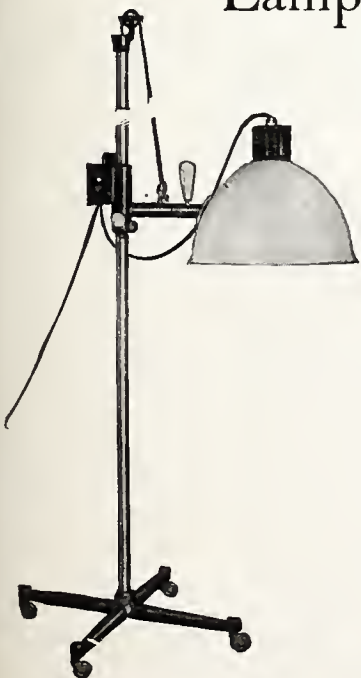
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ROBERT A. PEERS, M. D., *Medical Director*
Colfax, California

CALIFORNIA AND WESTERN MEDICINE

VOL. XXIII

NOVEMBER, 1925

No. 11

HOW TO MAKE A DOCTOR

AN UNUSUAL SYMPOSIUM ON THE ESSENTIALS OF MEDICAL EDUCATION

By PRESIDENT RAY LYMAN WILBUR, M. D., *Stanford University*; WILLIAM ALLEN PUSEY, M. D., *Former President American Medical Association*; DAVID A. STRICKLER, M. D., *President Federation of State Medical Boards*; N. P. COLWELL, M. D., *Secretary Council on Medical Education and Hospitals, American Medical Association*; FREDERICK C. ZAPFFE, M. D., *Secretary Association of American Medical Colleges*; J. S. RODMAN, M. D., *Secretary National Board of Medical Examiners*; WILLIAM OPHULS, M. D., *Dean Stanford University Medical School*; L. S. SCHMITT, M. D., *Acting Dean University of California Medical School*; PERCY T. PHILLIPS, M. D., *President California Board of Medical Examiners*, and PERCY T. MAGAN, M. D., *Dean College of Medical Evangelists. With an introduction by the Editor of CALIFORNIA AND WESTERN MEDICINE*

INTRODUCTION

By WILLIAM EVERETT MUSGRAVE, *Editor*

AT THE 1924 session of the Association of American Universities, President Ray Lyman Wilbur delivered an address on "Maintaining Standards Without Excessive Standardization." This address forms the basis of the following remarkable symposium, written in the order in which it appears. All discussants, therefore, had before them not only a copy of the original address, but in addition what each preceding discussant had said. This symposium, therefore, is no mere extemporaneous ramble, but represents the deliberate conclusions of a galaxy of medical teachers upon a vital problem not heretofore brought together in such consecutive order. Sustained and prolonged but unsuccessful efforts were made to secure the co-operation of President W. W. Campbell, University of California. All others who were invited lent their enthusiastic co-operation.

DOCTOR WILBUR, in his original address, which is too long to reproduce in full, said:

"'Maintaining standards' were the words that symbolized academic arrival a few short years ago. Now the very word 'standard' brings with it a sense of reproach because, in the efforts arbitrarily to force certain standards upon education, the life juices of intellectuality and initiative were being squeezed out and the divine right of the human to be different and yet achieve success was in danger of being denied in the very place where advance comes best with a large measure of freedom."

"The attempt to measure results and to make choices and yet remain responsive to new ideas, new discoveries and new methods of instruction has tangled our whole educational scheme, particularly when, as in medicine, legislation, with its crippling and crystallizing tendency, has entered the field. Parrot teaching where the fountain pens of the student reproduce the record, often an old one of the teacher, flourishes where set standards, set examination questions and conscientious but unimaginative examiners keep up the bars against the unfit."

"The history of medical education during the past quarter of a century offers an unusual illustration of the losses and gains possible with the projection into a field of science and into a profession of educational standards based upon new ideals and new demands."

"With the adoption of the standard curriculum through the efforts of the American Medical Association there developed a nationwide inspection of the facilities of medical schools and the methods used in instruction. Standards were set up for equipment, laboratory space, number of beds and out-patients per student, etc."

"At the same time a general movement for an improvement in the legislation of the various states in connection with medical practice brought about the adoption of medical practice acts with very definite

required standards set up in the law. These were administered largely by boards made up of men belonging to the profession. In a number of states the standards set by the Association of American Medical Colleges became automatically the standards of the state for those obtaining a license to practice medicine and surgery, and a unique situation was developed by which, when the Association of Medical Schools had joined in a common action regarding the curriculum, it became the law in certain of the states. Throughout this whole quarter century there was a steady advance in science, in the field of medicine, and a complete revolution of viewpoint in the teaching and in the practice of medicine."

"The medical curriculum, although practically confined within the limits of four years, took on in a number of schools a fifth or intern year. The absorption of practically all the time of the student in set tasks was most unsatisfactory. The medical student upon graduation was gorged with the stuffing he had received, but was not ready for the actual practice of medicine. At the same time medical faculties found themselves teaching to meet the requirements of state board examinations. They found it necessary to keep up a certain number of schedule hours in subjects that no longer needed emphasis in the undergraduate medical work because of the legal requirements. The Frankenstein of medical standards, built with so much enthusiasm and devotion to ideals, began to destroy individual initiative and to stand in the road of progress, bringing stasis in a stream in which ever more rapid motion was necessary."

"Subjects once introduced, although perhaps of decreasing importance, still had their adherents. The tenacity of the teacher in hanging on to all that he can get of the student's time is one of his most laudable but troublesome traits. The dead hand of the past maintains a strangle-hold on the curriculum. What has been must always be until in the usual faculty wrestling match the new wins a foothold."

"The handling of the pre-medical requirements, as well as those of the medical school, became one largely of figures. Addition of numbers with proper titles and to obtain proper totals became the object of deans everywhere. That this method had its ridiculous side was evidenced when the osteopathic and other similar schools were found capable of multiplying and adding faster before legislative committees in presenting curricula of their schools than could the so-called regular schools. Standards had resulted in a situation where quantitative measures became predominant. The cubists in medical training began to find a ready opening for short-cuts and to insist that theirs was the real art and that fundamental training in anatomy, etc., belonged to the past."

"We cannot say that this situation has passed, but there are evidences of a change in viewpoint. There is an increasing effort to diminish the number of actual required schedule hours, a willingness to put forward optional and elective courses and an earnest effort to reduce the work of the medical curriculum to the more fundamental subjects, leaving the specialized or more technical ones for work

beyond the M. D. degree. More choice and less imposition is now the tendency."

"It seems to me that it is quite clear that the basis of university and professional training should be one of maintaining standards. The great difficulty is to define these standards and not to consider standards, quality and progress as synonymous terms. Choices in every field of education are difficult, and choices made by the teacher of the material in the subject in which he is interested for the instruction of students becomes of paramount importance. When these choices must be made upon an artificial basis because of some requirement which the student must eventually meet, we have interfered materially with the individual initiative and possible inspiration of the teacher concerned. It is particularly because of this that required set standards demanding absolute fact knowledge or knowledge of technique should be kept down to the absolute minimum."

"Since, if we are to maintain standards without overstandardization, we must enhance the quality of the work, magnify the initiative of the teacher and enlarge the capacity of choice by the student, we must at the same time have some solid form of examination of a character to test the ability of the student to carry on in the work which he has begun, rather than a mere memory test. It is inevitable that such examinations should be insofar as possible of a practical character and that they must be prepared by those who are at the top, the greatest experts; those who view their particular fields from the standpoint of fundamental principles, rather than of the class so prone to make out examination papers who seek for exact information in the more minute forms of knowledge. The full advantage can only come if the teaching profession of the country agree to do less work for their students."

"In building our academic structure of standards we should think in terms of stresses and strains, rather than merely visualize a more or less decorative bric-a-brac. Standards evolved by joint action of those best informed are essential for the development of students, for the protection of teachers with an excess of initiative, and for the advance of education and science in civilization. Standards set by those with high ideals are needed in every domain where knowledge is used in practical human affairs."

"In concluding may I suggest the following procedures as worthy of some thought:

- "1. Reduce rigid requirements radically.
- "2. By careful studies by experts outline central core of essential parts of required subjects.
- "3. Insist that every college student shall take at least one subject where he can obtain facts firsthand.
- "4. Hold the student to solid achievement in tasks once undertaken.
- "5. Increase the number of set papers required of students to stimulate individual work.
- "6. Provide a marking system which will serve as a basis of self-valuation to the student.
- "7. Make calendar consumption secondary to actual achievement.
- "8. For admission to the university there should be required:
 - (a) A record of scholastic achievement.

(b) The passing of an intelligence test appropriate for a student who has covered the high school period.

(c) A record of the personal qualities of the student, physical, mental and, if possible, moral. Some form of character test is particularly required.

"9. Provide a comprehensive examination at the end of the sophomore year along the lines of the college entrance board examinations, covering any four subjects, in order to test the student's capacity to go beyond elementary college work. This will provide for the gradual unfolding of the American university, beginning with the junior year, and for the development of the necessary junior colleges, and will also serve as a standardizing device in the acceptance of transfer students and of students whose courses have been irregular.

"10. The standard for the degree of doctor of philosophy should be so changed that the recipient of that degree should be freed from the necessity of taking set courses of any kind during the latter part of his work. It should be a degree conferred upon one who has done original research. Standardization of this degree so that its recipient reads certain languages and has covered certain minors and majors is a mistake. The departments recommending candidates for this degree should take full responsibility for them.

"11. *Degrees in engineering, medicine and law, once granted by a reputable university, should serve as a basis for admission to practice before the public in the domain in which the university has given certification. Those who wish to practice these professions, and who are not graduates of recognized universities, should be required to take examinations under the auspices of the state universities. The setting up of examining boards, while advantageous in many ways, has reached a point where it handicaps the development of the professions more than it helps. Either the boards must change their type of examinations, making them of a practical character, or some other device must be found to free the universities and their professional schools from the narrowing influences of rigid legal standards in the field of education.*"

These abstracts from correspondence between President Wilbur and the Editor have a pertinent bearing upon the discussion:

DR. WILBUR TO THE EDITOR—"It seems to me that with the transfer of medical education over to the universities of the country the time has now been reached when the degree of Doctor of Medicine should be protected by the universities rather than be associated with all the fads and isms that have to be recognized by state legislatures in setting up boards of medical examiners. My personal feeling is that the universities ought to assume this responsibility, that they can carry it on better than anyone else, and that through them we can get a distinct line drawn between the holders of the degree of Doctor of Medicine and all the others who make attempts of one sort or another to treat the sick."

THE EDITOR TO DR. WILBUR—"There is one point upon which I am not clear as to your meaning and that is, whether or not the assumption of educational ability by the state universities would be the limit of their responsibility and their work, therefore, auxiliary to the Board of Medical Examiners, or whether you intended to suggest that all of the duties and responsibilities relating to license, discipline and control and law enforcement in general, should be undertaken by the university with elimination of the Board of Medical Examiners."

DR. WILBUR TO THE EDITOR—"In the development of medical education in the United States the universities have assumed the responsibilities of the instruction of medical students. This is more and more true of state universities. *I feel that the M.D. degree should mean ability to practice medicine and that the certification directed by the universities that a man is ready for practice when he has that degree will do more to bring back the art of medicine than anything else.* As you fully realize, the emphasis has been so strongly upon the scientific side that the actual instruction in the methods of actual practice has suffered materially. The very diversion of this responsibility over to a state board of examiners has been often quoted to me as removing the responsibility from the medical faculties. My idea is that the universities, that is the state universities and those with well-established medical schools, should make the degree of Doctor of Medicine as granted by them mean that a man is ready for the *practice of scientific medicine*. I see no reason why they should not certify their men for the practice in the states in which they are located and why the university should not be able to work up reciprocity among the various states with well-established institutions, since the educational institutions are well posted as to the qualifications of their sister institutions. I think, too, that the National Board of Examiners should be brought into this machinery in such a way that it will take care of those with foreign or diversified training and can act as the co-ordinator where the educational standards differ as between the North and the South, etc. I feel that we will still want a board of medical examiners to protect the degree of Doctor of Medicine from encroachment by those who are not fully trained and to protect the public against the illy educated of all sorts who treat the sick. I should be rather inclined to favor a board made up partly of laymen for this purpose so that the statement of trying to control treatment could not be urged against the regular profession. It will be several hundred years, in my judgment, before we are able to develop a point of view on the part of a large part of the public unfavorable to the cure-all type of practice. Men always have wanted to be fooled, and I imagine that many of them will want to be for a long time."

Many years' experience in practice; in teaching, and as dean and executive officer of a fine medical school; hospitals, research institutions and welfare organizations, in extremely trying circumstances, and many more years of reading and editing medical manuscripts, long since has convinced this editor that *the most important things a doctor should know are not medicine at all and are not taught in medical colleges or elsewhere effectively.* These are character, sympathy, industry, charity, patience, economics, the spirit of consecrated service—in a word, *the art of medicine as it was once understood.* Medical students received much of this under the preceptor method of teaching, long since discontinued, *without providing anything to take its place.* To paraphrase: That wholesome mass service is but the lengthening shadow of a man, is particularly true in bedside medicine. It is quite as true with machine-made doctors today as it was in those days when students starved to follow and absorb the personalities of great leaders. It was more the human qualities of the immortal Osler than his scientific attainments that endeared him to his disciples and patients. Fortunately, he was super-endowed with both a knowledge of the humanities and of science. Many able medical teachers of today would be much surprised to know what it is in themselves that particularly and permanently influences the after lives of their students.

William Allen Pusey, M. D., former President American Medical Association—The sugges-

tions of President Wilbur that efforts should be made to free medical education from its strict standardization and increase the responsibility of the universities for the medical education they give are, to my mind, sound and of great practical importance. The important matter in medical education, after all, is that students should be well prepared. Under ideal conditions the proper requirements for the practice of medicine would be that the applicant for license, after character and intelligence, should have the requisite amount of knowledge, skill, and experience. How he obtained his preparation would not be a matter of essential concern. But we are not living under ideal conditions, and I have no feeling that we can go that far at the present time.

I am strongly of the opinion that it would be to the advantage of medical education if responsible high-class medical schools should have the greatest possible freedom in the teaching of medicine to their students. At the present time no such situation exists. Medical education is bound up tight to the specified requirements that have been set up by the various examining boards, largely under our direction. They specify so much of this, so much of that, and so much of the other. We are tied to a formal curriculum which not only allows the universities practically no leeway, but makes no allowance for the varying ability of students. It would conduce to the improvement in the quality of medical teaching and in medical education if we could give our students to the universities and tell them, turn them out properly prepared; how you do it is your affair.

I am entirely in accord with President Wilbur's suggestion that responsible institutions of proper standing might very well be permitted to certify their graduates to the licensing boards of their respective states and have these students accepted for license on that basis alone. That, however, is a course that is open to great abuse, as shown by our experience before thirty years ago, when medical schools practically owed their existence in many cases to the fact that their diplomas were accepted as a license to practice. It would be a matter for the individual states. If this privilege were confined to institutions of high standing it might very well strengthen the licensing situation by the effect it would have upon the licensing boards; and that is an exceedingly important matter. Medical education would be on a pretty sound basis if we got away from formalism and standardization and if the candidate for the license knew that all that would be required of him would be for him to show unquestioned competency to begin practice. It would give the able student his opportunity. It would supplant time standards, which are so expensive and so uncertain, by quality standards which are the only proper measure. It would open up to medical schools opportunity for initiative, originality and, as a consequence, progress.

In short, I believe President Wilbur's suggestions are steps in the direction of real progress in medical education which we should follow as rapidly as we are equal to them.

David A. Strickler, M. D., President Federation of State Medical Boards—The question as to how far and by whom fixed standards shall be established in the education of medical students, is a broad one involving many problems as viewed from different angles. The primary object of a medical education differs with individuals. Here, as elsewhere in education, there should be some flexibility in the course offered by our worthwhile universities and colleges. *For that large class of medical students who have as their primary object the practice of medicine, we think the first essential is stability of character, honor and integrity. In no other calling is true manhood more essential.* Two men of equal mental capacity, training and general educational opportunity are in no sense equally safe in the interest of public health or morals if one essays to major surgery or other highly specialized work without adequate technical training, while the other conscientiously prepares himself for his chosen tasks and keeps within his field of preparation. The former from within the medical profession is more dangerous to a community and does more to damn the medical profession than a dozen cultists can do from the outside. From the viewpoint of an administrator of a Medical Practice Act, we hold that for one to hold himself out as a specialist without specific preparation, is to attempt to do what he has no moral right to do, and that such practice bears specifically on the moral character of the applicant, even to the extent of denying him the right to take an examination, because not satisfied as to his good moral character.

Secondly, we would stress a close inter-relationship between study of medicine and its practice throughout the course of training. To have the first four years a disconnected study of science, with two final years devoted to clinical study is, in our opinion, a serious mistake which should not be made.

The student should be taught to constantly associate his studies with their ultimate purpose. *To be so highly trained in pure science and in scientific methods as to lose sight of the individual who is sick, is to lose an influence that the medical profession can ill afford.* I fear our present trend is too strongly inclined toward science and method, with too little thought of the individual needing care. The proper relationship between physician and patient is a complex, not learned from textbooks nor test tubes. *The days of the preceptor held much to be commended that has not been supplied by advanced educational institutions.* There is that something in all of us which demands attention to the ego. If the medical profession fails to recognize it and provide for it, there will always be those of less training in science who will administer to it, because human nature is much the same the world over.

We believe that individualism in our great institutions of learning, like initiative in the student, should be encouraged. *That present-day standardization is a leveling down instead of an upbuilding process. It inhibits initiative and retards progress.* For this reason we think it a mistake for a state to make statutory provisions for any fixed educational standards with required hours on various subjects, as is sometimes done. It should rather be the func-

tion of an educational institution to determine the details of an education which will justify the granting of a degree which it may and can protect; of the state, for purposes of licensure, to require of the educational institutions adequate time and opportunity under favorable conditions before a degree may issue.

A degree granted under these conditions supplemented by an examination, both written and practical, by a competent board of examiners would best meet the needs of the state in the interest of public health.

If the degree of M. D. were properly protected by educational institutions, and if the state insisted that only those who hold such protected degrees may be licensed or allowed to practice medicine, the Board of Examiners might be dispensed with. Unfortunately, none of these conditions holds. The degree is too often meaningless; the state frequently does not require the degree of M. D. for a license to practice the healing art, and the Board of Examiners is incompetent either by virtue of inherent weakness or statutory provisions preventing a thorough and efficient examination.

We know of no panacea for these unfortunate conditions. We suggest, as lines of worthwhile effort, wider discretionary powers to our better educational institutions with better protected degrees; closer supervision by the state of institutions authorized to teach and grant degrees within its domain, more thorough and complete examinations by state boards when necessary; broader recognition of credentials, including well-protected degrees, supplemented by National Board certificates for licensure without examination.

N. P. Colwell, M. D., Secretary Council on Medical Education and Hospitals of the American Medical Association—In his article Dr. Wilbur recognizes the need of certain standards, and points out that they should not be emphasized to the extent of having them substituted for that education and testing which are necessary to ascertain the actual knowledge possessed by the student. He shows that quantity measurements, as indicated by hours, terms, years, etc., should not be permitted to displace the methods and measures by which quality can be determined.

Few people today realize the extremely serious conditions of medical education only twenty brief years ago. In 1900 this country had over half of the world's supply of medical schools and, of the 160 then existing, only two from the standpoint of preliminary education could compare favorably with those in the leading countries of Europe; less than thirty were actually requiring a high school education for admission; a large majority were stock corporations conducted for the profit of their owners; the majority were seriously lacking in teachers, laboratories and laboratory equipment and, finally, only a small proportion had adequate relations with hospitals and dispensaries where clinical material was available which could be used for teaching purposes. The 160 schools varied all the way from those which were out-and-out diploma-mills up to those which were worthy of or possessed recognition around the world. Under such conditions, of

course, it was highly important that fairly definite minimum standards should be established, as was done by some of the more progressive state licensing boards. The establishing, in 1904, of two standards by the Council on Medical Education—one for immediate adoption and the other, the so-called ideal standard, for future adoption—brought tremendous results for good in medical education. These standards were held up, however, not as rigid requirements, but for their suggestive value, and the advances obtained were through the prompt and enthusiastic adoption of these standards by the majority of medical schools.

The changes in medical education since 1900 are such as could not be anticipated at that time. These changes, however, are but a parallel to the stupendous developments in other social and scientific fields. Indeed, the last twenty-five years have witnessed scientific developments such as have no parallel in all previous ages. Instead of the old candle-dip and the oil lamps, our homes are now brilliantly lighted with electricity. In transportation, the ox-cart, the saddle horse, the four-wheeler, and the horse-drawn street-cars have given way to the more rapid transit of electric street-cars and interurban trains. The modern boulevards and highways, the automobile, the movies, airplanes, and other improvements during the last twenty-five years have brought about marvelous and unprecedented changes in social and economic conditions. So also have our medical schools developed from the single lecture-room institution in many instances to the great campus with its multitude of medical buildings and hospitals. From only one or less full-time expert laboratory teachers on the average, there are now twenty or more in each institution. These changes have taken place in an amazingly short space of time. The skeleton structure of the greater medical teaching institution has been completed; now is the time to make the very essential internal developments and modifications.

Most prominent among the improvements in medical education is the fact that now 80 per cent are integral parts of high grade, reputable universities, and these are enforcing, with fair rigidity, an entrance requirement of two or more years of college work. There is no longer need for several of the requirements still retained in state medical practice laws, which were highly important under the chaotic conditions existing twenty-five years ago. Certain standards, indeed, are still essential, but these should not be so minutely detailed as to prevent the further essential progress in medical education. Nor should they be such as will cause an extreme hardship, if not an actual injustice, to certain exceptional students.

Responsibility for the essential changes in medical education belongs properly to and can be safely left with the officers of the medical schools. In this development, as Dr. Wilbur well points out, the student should have the chance to do for himself rather than to have so much done for him. There should be a larger provision for optional or elective courses, and the actual schedule of hours should be reduced sufficiently to allow the student to properly master the subjects to which he is assigned. These subjects, furthermore, should not only be limited to the essen-

tials of the medical training, but also should be correlated so that as principles are learned they may also be applied in the care of patients in dispensary and hospital.

At present there appears to be a tendency to deprecate the changes brought about in medical education and to forget the utter lack of standards and the chaotic conditions existing twenty-five or more years ago. *Let us not go too far in this deprecation, but rather look with thankfulness on the great improvements made and continue to strive until conditions which are still unsatisfactory have been corrected.* The steadfast purpose of medical education is to provide for humanity the best possible medical service.

Frederick C. Zapffe, Secretary Association of American Medical Colleges—As for Dr. Wilbur's paper, as a whole, I am in full accord with most of the points made, but being given the opportunity to comment on the situation generally, I shall endeavor to do so.

Most discussants seem to overlook the fact that many of the undesirable features connected with medical education today are the result of evolution. The same is true of standards. It is only comparatively recent that anyone not connected with a medical school or a state licensing board took any interest in medical education. Even the administrative officers and executives of universities that had integral medical schools apparently were only too willing to leave medical education in the hands of the medical faculty or those few in the faculty who took an interest in it. Therefore, the present-day awakening of the university officials is gratifying, although not all of them seem to grasp the full significance of everything that has been done. This statement is based wholly on the results of personal contact with university executives. As one who has been in intimate touch with this work for more than twenty-five years, I have had opportunity to see and observe. *I am convinced that much progress has been made; that the situation is becoming better year after year; that eventually enough responsible persons will become interested in medical education to work out its future and be in a position to meet new problems as they arise, and new ones arise every year.* I do not believe in fixed rigid standards, although I am convinced that we must have standards which shall serve as a starting point. If I had to set the standard for admission to medical schools, it would be based entirely on knowledge possessed and mental fitness, and not on semester hours or credits. That system is a most pernicious one and wholly detrimental to every form of education.

It is equally as bad as the antiquated requirements laid down by state examining boards because of state laws enacted many years ago that the applicant for medical licensure must have attended four annual sessions in four calendar years, making it impossible to carry on teaching in the medical school in any other way—except by subterfuge, although I do not mean to say that such a thing is being done. The pre-medical requirement can easily be fulfilled by any ambitious youngster who applies himself and puts in the required hours and secures the needed credits. That does not, however, signify

that he is fitted to enter on the study of medicine. Dr. Wilbur's suggestion to make mental tests part of the admitting machinery certainly would help tremendously to straighten out matters in this direction.

Many errors have been corrected; others will be corrected in the near future. After about ten years of deliberation and study, the present medical curriculum was evolved. It is a good curriculum, but it is not yet being enforced sufficiently well. Its greatest advantage is that it is not in any sense rigid. On the contrary, it is exceedingly elastic—and it is aimed entirely to make good doctors of medicine, not specialists—a job that should be relegated to the post-graduate schools. A recent review of medical school curricula made by me and reported on at the recent meeting of the Association of American Medical Colleges showed that much remains to be done before all the medical schools will take this so-called standard curriculum and adapt it to their particular facilities. *Whenever more co-operation is evinced between the various departments of medical schools, the hospitals, the state licensing boards and all agencies concerned in education, medical and otherwise, a more perfect curriculum will be evolved.* Why should state laws stand in the way of better medical teaching? Why should the state of mind of hospital trustees and superintendents stand in the way of better medical teaching?

Medical education is not for the individual. It is for the community. It is a part of the large educational movement in which laymen, as well as professional men, are interested because the end sought is better health. Co-operation, leaving the final working out of any plan to those most concerned with it, is what is needed at this time. Much co-operation must come from medical teachers and educators. The latter must realize that while pedagogic principles must prevail, only the medical teacher can apply these principles to medical teaching. And the medical teacher should realize, more than he does now, that he must do more real teaching which will fit the medical student for the practice of medicine. We can learn only from research; we must have research; we should do everything to foster research and to encourage men fitted for it to go into research; but what we need more than that, even at this time, is more teachers—men who are willing to devote themselves to teaching rather than to research; men who are sufficiently well trained to get all there is to get out of research and work over the result for presentation to the student.

There never can be given to teaching all the time needed to teach everything; nor is it possible to teach everything, because what is new today is old tomorrow and discarded the next day. But the present medical curriculum is an admirable one for the teaching of principles which will make it possible for the young graduate to continue his studies and become a really good practitioner. Let the hospital people, the State Board of Examiners, and the medical school people get together and work out a plan, regardless of fixed and set state laws, entirely on an educational basis. The men engaged in this work can be trusted to do the right thing, because they are well grounded in the essentials of the job. They

know what is needed and they know what should be done to meet the needs of the situation. It is not a difficult job; on the contrary, it is comparatively easy of accomplishment if all the people concerned in it will get together and make an honest effort to work it out on the basis of needs, and not fixed standards.

I. S. Rodman, M. D., Secretary National Board of Medical Examiners—Nearly everyone will agree that, as necessary as it was to fix and maintain rigid standards of medical requirements in the years just gone by, the need for such a rigid standard has now passed. The pendulum, however, must not be allowed to swing too far backward, as it is so apt to do in any reaction. All of us thoroughly appreciate why the law back of the State Board of Medical Examiners found it necessary to safeguard such a vital matter as public health when there were over twice the number of medical schools turning out graduates as there is today. That most of these schools graduated a poorly equipped product is also well known. Much good has come, therefore, from these standards that are now, as Dr. Wilbur says, "squeezing out the life juices of intellectuality and initiative"; and good also has come from making of the study of medicine a part of the academic life of a university in recent years. We believe, however, that the safeguarding of public health is so vital a matter to the whole people that it should never be entirely free from the necessity of one's demonstrating the ability to apply the knowledge acquired in undergraduate years before being publicly declared fit for this greatest of responsibilities. We also believe that, while the majority of the medical schools existing today should be allowed a free hand in determining just how this training should be given, the product should still be judged by the measuring stick of one common standard.

This conviction has become firmly fixed with the writer after an experience of several years in examining the graduates of most of the medical schools of this country. It is inevitable, if these schools are to enjoy even greater latitude than they now do, that some of the graduates of each of them will find some subjects more interesting than others and thus slight one or more, a thorough knowledge of which is necessary to make a safe practitioner and that, of course, is the chief aim of a medical training.

Unquestionably, too much fixed instruction is now crowded into the undergraduate curriculum, and much that is now crammed into the medical student should be taught in graduate schools. Ideally there should be an "irreducible minimum" established for one to thoroughly master before being declared fit to practice medicine. Who shall set this irreducible minimum? We believe that such will come, but only through the rather tedious evolution that we are now following of free discussions of this problem by the Association of American Medical Colleges, the Council on Medical Education of the American Medical Association and others interested.

We believe that it is a matter of concern only to the medical schools themselves just how "this irreducible minimum" shall be taught; that the proper way to accomplish this end does not mean a rigid

adhering to a fixed schedule of scholastic hours, days, months, semesters and years, but that an impartial judgment should be passed on the product of such training after a thorough and searching examination into one's ability to actually demonstrate that such a training has provided this "irreducible minimum." We also believe that such qualification is best provided by one being required to show this evidence of fitness before an examining board which has the same standard for this entire country.

William Ophuls, M. D., Dean of Stanford University Medical School, San Francisco—I have read President Wilbur's address, "Maintaining Standards Without Excessive Standardization," with the greatest interest, and fully agree with him that it is foolish to let standards supplant ideals. The universities should be in a position to develop their teaching in any direction with perfect freedom and according to their best ideals, and should not be hindered in their natural development by a lot of burdensome and often unnecessary regulations. There must, however, be some control by the state relative to the entrance of university graduates to the professions, but this control should be exercised with tact and discretion and with an open mind to possible improvements in the future. What applies to all professions naturally also applies to the medical profession. *Among all others, the medical profession is the one most difficult to regulate, and judging by the protests which we hear from all sides, it is also the worst regulated one of all of them.* This is true not only with us, but practically all over the world. I need not discuss here the inherent difficulties in an attempt to control all those who wish to practice the healing art in one way or another, but the question immediately before us is, what shall be done in the case of those who have received a degree of doctor of medicine from well-recognized educational institutions like a real university. It seems a waste of time to re-examine these men after the strict examination which they have already gone through, and what is more important, the state board examinations may interfere with the proper education of the student if they insist, for instance, too much on book knowledge and give the student no opportunity to display those parts of his training which really make for future success in his profession. Such exactions may lead to slighting on the part of the students of matters of real importance in order to acquire the knowledge required to pass his state board examinations. Two remedies may be found for this situation: either the state boards may accept the examinations conducted by such institutions as equivalent to their own and admit these applicants on a "reciprocity" basis,* or they might appoint the university teachers as members of special boards of examiners who would conduct the examination for state license under the board's supervision. In the latter case the question would arise whether it would not be best to refer all candidates applying for license and to be examined to the university examining boards established in this way and distribute them among the examin-

* Such reciprocity might be established also with university medical schools outside of the state.

ing boards if there are more than one first-class university medical school in the state.

This would throw a considerable extra burden on the examiners among the university faculties, and the task should not be undertaken by them lightly on account of the real hardships connected with it, as is shown by the experience in countries where this custom prevails—for instance, in Germany. These examiners certainly should receive adequate compensation from the state for this additional work.

The boards of examiners would retain the general supervision over the medical schools in their states, but any too detailed requirements in regard to subjects taught and time spent on them should be eliminated. The boards would continue to pass on all credentials and would grant a license only when they had thoroughly satisfied themselves that the candidates actually have conformed with all general requirements in regard to the practice of medicine which the law may contain.

The whole question is one of the greatest importance to the profession, to the teaching bodies, and particularly to the public at large. We should make all efforts to increase the esteem in which the medical profession is held by the public, and this can be done only by supplying the public with physicians of the highest character and with a training that improves at the same rate as we advance in our knowledge of the science and practice of medicine. Any changes in regulations should, therefore, be considered most carefully, with this fundamental point of view in mind.

L. S. Schmitt, M. D., Acting Dean University of California Medical School—President Wilbur has pointed out that quantitative standards have served a useful purpose, but today their need is not so essential as it was twenty years ago.

Nevertheless, in a large measure, we tell the high school student intending to study medicine what he *should* do, and the collegiate and medical student what he *must* do in order to receive a degree of Doctor of Medicine.

In addition, when the candidate is enrolled in the academic departments of a university, he is required to conform to certain rules and regulations concerning prerequisites, upper and lower division courses, major and minor subjects, etc.

These restrictions have built up a long narrow passage through which all must pass. No side trips or short-cuts are permitted, regardless of the personal equation. The candidate, also, must constantly bear in mind the various requirements of the several state examining boards.

In 1914, President Lowell of Harvard concluded an address before the Tenth Annual Conference of the Council on Medical Education, with the following statement:

"Let me repeat. I am not urging the admission to medical schools of men with an inadequate preparation, but I am arguing for a measure of that preparation which shall be a real test of a man's knowledge not solely of the courses he has been through, and which will not, for a failure to decide early on his career, keep out the man of power."

(J. A. M. A., Vol. LXII, No. 11, March 14, 1914.)

Eleven years later, throughout the entire course of medical education, the necessity for such a measure is just as great.

As a result of these conditions (1) students must make their choice of a calling early in their scholastic career; (2) well-prepared students suffering from excessive formalism are debarred from Medicine as a profession; (3) medical schools lack freedom in the preparation of their curricula; (4) all students are considered to have the same intelligence quotient and identical capacity; (5) students in medical schools are measured by the number of "units" they are able to acquire rather than by their retained knowledge and power to reason.

President Wilbur has suggested certain procedures, all pointing in the right direction. These suggestions should receive wide discussion before any attempt is made to change or amend present procedures. Changes such as these should be brought about by evolutionary rather than by revolutionary methods. Perhaps many could be gradually evolved by setting up, in the various states, some machinery to control the granting of charters to educational institutions and to oversee existing institutions.

In 1910, the Academic Senate of the University of California presented a memorial to the regents to the effect that a diploma in Medicine, Dentistry, or Pharmacy from the University of California should qualify the holder to practice Medicine, Dentistry, or Pharmacy in the state of California. At that time, it was not considered feasible to recommend this procedure, but the time has now arrived when standards may be maintained without excessive formalism.

Should a degree in a learned profession, granted by a reputable university, serve as a basis for permission to practice such profession, some authority should be maintained charged with the control of law enforcement and discipline. State universities should not be required to assume this function.

Universities may eventually be utilized as agents to set a test to determine one's capability to practice a profession. Other agencies may be granted authority to revoke this privilege if it is abused.

P. T. Phillips, M. D., President California Board of Medical Examiners—The evolution of medical education has been interesting. From the scientific standpoint it has been truly wonderful in the speed of its development and in the breadth of its field. From the practical standpoint, is it satisfactory? To my mind this is the whole question.

The scientific aspects of medical instruction are bound to increase with increased facilities for investigation and research. *Will the teaching faculties of our universities, now largely influenced by full-term men with no experience in actual practice, be able, with their vision, to sift the wheat of reality from the blinding chaff of uncertain theory?* There should be employed a sufficient number of teachers experienced in all the problems the M. D. meets, to supply a practical training in the homely duties of treating the afflicted. *Helping the young practitioner to a broader, more sympathetic attitude to-*

ward the patient and his troubles is as vital to successful practice as technical foundation. An appreciation of these duties has been overlooked and neglected for the more interesting scientific investigations. *In other words, we are becoming so technical that we do not appeal to the public who are not as yet universally educated to the necessity of scientific medicine.* Much unscientific practice flourishes on the basis of sympathetic appeal, and our training schools will fall short of their obligations if they fail to recognize this element in human nature.

I am optimistic enough to believe that in another generation or two scientific medicine and no other will be demanded. This will come as a result of our present-day propaganda of health discussions in the daily papers, our health journals, and our popular health lectures by capable men added to the results accomplished by the application of intelligent hygiene and treatment. Then the M. D. degree will need no protection by legislation. In the meantime we must be patient as well as progressive, training our young practitioners to cope with the situation as it actually is and not as we hope and expect it to be. Here we may discuss medical legislation in relation to medical teaching.

All laws are for the protection of the people. Until such a time as they are sufficiently educated to refuse what is not for their good in medicine, theoretically at least, the law must protect them. The theory is right, its practice falls short because laymen make the laws, and thus unscientific as well as scientific and sound methods are allowed and upheld. The answer: Proper education inside and outside the schools. This is the only way the M. D. degree will be appreciated and protected.

Boards of medical examiners are almost entirely composed of men who are in actual practice, and I do not believe their examinations are "unimaginative," but rather of a character to better measure the practical ability of the graduate than those of the theorist and technician of the medical faculty. Medical boards do not fix the standards. The provisions of the laws are based on the advice of our teaching institutions and organizations. The boards stabilize and do not standardize the work, and with the present conditions of teaching and practice, changing like spring bonnets from year to year, I think this stabilization is necessary. If the laws contain undesirable features interfering with proper teaching, change them. In a matter of this kind we usually find our legislators sympathetic and willing to take our advice.

Percy T. Magan, M. D., Dean College of Medical Evangelists, Los Angeles—The world-old problem, how to train our youth for the most efficient service in life, has recently burst into forked flames over the question of the education of medical students. In this connection, President Wilbur's address is at once constructive and conservative—two qualifications much needed in the present hour. It is reformatory without being revolutionary. In his arguments, he, as Theodore Roosevelt would say, is traveling along a radical road in a conservative way.

There is a disposition at the present time to ruthlessly and unqualifiedly condemn all that has been

so painfully built up in the realm of medical education during the last twenty years. There is a constant harking back to the "good old days of the country doctor." Personally, I have most profound misgivings as to whether they were good days in any sense of the word. They were days when no abdominal surgery was there to snatch the sufferer from the jaws of the grave. They were days before a Semmelweiss had conquered the horrors of puerperal fever. They were days in which no Lister lived to make the operating theater safe by sterilization and antisepsis. They were days preceding Koch's isolation of the germ of tuberculosis, by which he brought from ambush the most deadly weapon in all the armamentarium of death. They were days antedating the light which radiated from the life of the immortal Pasteur. They were days before the gentle soldier physician, Ronald Ross, had discovered that "little thing" which "a myriad men" has saved. Surely the processes of medical study, education and research of modern times have brought forth from the womb of mystery thousands of blessings to man and womankind. Nowadays it seems to be even popular to bless the past and curse the present. However, the highway of history would seem to reveal that such has been a favorite pastime in all ages, for Professor Gilbert Murray of Oxford tells us that one of the oldest documents known to man—a cuneiform fragment from the lowest, most ancient stratum of the ruins of Babylon—begins with these words, "Alas! alas! times are not what they were!"

No, the "good old days" were, methinks, not so good after all. The constant glorification of them by people who know a lot that isn't so brings to mind a quaint little anecdote of an Englishman who mourned to a North Briton, "I greatly fear the London Times is not nearly so well edited as it used to be." To which the canny Scot replied: "I hae mae doubts if it ever was." However, these folk who are so busy trying to reform everything that everybody else is doing seem to be worse than their ancestors in that, as General Booth of the Salvation Army once put it, "the priest and the Levite of the present day differ from their forebears, in that they not only pass by on the other side, but return and vigorously punch the head of any good Samaritan who attempts anything really worth while."

I have listened to and read much learned prattle of late that young men and women should be taken direct from high school and placed at once in the medical college without any pre-medical college training. Besides, it is further argued that the course in medicine need not exceed three years in length. In support of these contentions, it is urged that many a good doctor in an earlier day had no more than grammar schooling and a two years' medical course.

The fallacies of these proposals can be easily understood when the tremendous responsibilities of the present-day doctor are compared with those of his predecessors. *Compare, for instance, the responsibilities of the physician of some years ago and to-day in the case of acute appendicitis.* This disease was undiagnosed then, and there was no surgery for its relief. The patient got a pain; the doctor came

and talked about "inflammation of the bowels," and prescribed a cathartic and possibly some warm applications. If the patient got well, the doctor received praise he did not deserve. If he died, the Almighty got blamed for what he did not deserve. Take affections of the gall-bladder, which now call for cholecystectomy or cholecystotomy, as the case may be. In those days the doctor treated them much the same as he treated appendicitis, and with similar results. Or, think of carcinoma of the uterus. Well, the poor woman "had a lump," for which nothing could be done, and the ways of Providence in taking such a good mother away from her family were surely a mystery hard to be understood. Or, in the realm of internal medicine, when a person was stricken with diabetes, special diet might be resorted to, but that was all. In a case of cretinism, all the doctor had to do was to tell how sorry he was and prescribe plenty of wholesome food and fresh air. And so I might proceed *ad infinitum*. Nowadays, however, it is much more difficult for the doctor to lay his ignorance as a loving offering at the feet of the Eternal's Throne than it was in "the good old days." He must *know* whether the case is appendicitis, or intussusception, or gall-stones, or gastric ulcer, or what not. He must *know* how to differentiate correctly between all of these. He must *know* how to operate in each particular case, or he must know when the difficulty is beyond his power to do and have sense sufficient to take the patient to somebody else. He must know how to administer insulin and carry a most elaborate and scientific dietetic program along with his insulin therapy. He must know what thyroid or iodine will do for cretinism, and he must know it in a most precise, mathematical and scientific way. And if he does not know all these things theoretically and practically, he is very liable to find himself faced with most expensive damage suits, and un pitying publicity. Verily, there is no comparison between the doctor's responsibilities today and the responsibilities of those who trod his professional path in days of yore. And yet we are expected to teach him all of these things in the same length of time in which preceptors of by-gone days imparted their little stock of medical lore to those who sat at their feet.

I have all respect for the great work which the Council on Medical Education and Hospitals of the American Medical Association and the Association of American Medical Colleges have done. To disparage the labors and achievements of these earnest men is just a case of punching the head of the Good Samaritan. We must remember that medical education is a legal even more than a medical question, and that the difficulties of honest reform are Herculean. It is true that there is danger of overstandardization. Our courses of study are not sufficiently flexible. But these things require not only wise experiment for their solution; they also require in the aggregate the expenditure of vast sums of money to secure their successful accomplishment. And on top of this a world of work educating legislators and laymen to amend or abrogate old laws is necessary. And, in the homely language of the Sunday-school boy when the teacher told him, "Johnnie, God can do everything," Johnnie blasphemously replied, "No, Miss Mary, He can't make a three-year-old

calf in a minute." Equally, all these things cannot be accomplished by the wave of a magic wand, as our idealistic friends seem to suppose.

Great reforms are being made all the time. By clinics in the first and second years in the medical course, the great gulf between the ancillary and the clinical years is being bridged. Our little school is endeavoring to work out the experiment of placing freshman and sophomore medical students in hospitals and other medical institutions during every other month of their medical course. They work as orderlies, aides, assistants, and technicians of one sort or another. In this way they are brought into a place where they absorb the patient's angle of vision, of the care and treatment he is receiving. They come into humble and intimate touch with him and with the women who are nursing him, and thus a better understanding of the viewpoint of the patient, of his relatives, and of the hospital is secured, and the student becomes possessed of a much more sympathetic and, may I say, spiritual knowledge of his patient's needs. We are hoping that this contact will have a tendency to neutralize the alleged haughtiness, uppishness, and lack of kindly feeling toward their patients with which doctors are being so freely charged at the present time. We hope it may help in impregnating the students with the quaint and deeply valuable philosophy of King Solomon: "Be not righteous overmuch; neither make thyself overwise; why shouldst thou destroy thyself?"

I do think that times are changed, and that the work of the Council on Medical Education is so firmly enwrought in the public conscience that we might now safely make some modifications in the powers of State Boards of Licensure. *It is possible that a plan might be worked out to examine the medical school rather than the medical student, and to trust the examination of the medical student to the medical school instead of the unmedical state.* In any event, the object of the state board examinations should be directed toward a plan designed to ascertain the capacity of a would-be practitioner to think and to do rather than to an examination of his powers of memory, which in many instances is about all a state board examination amounts to. In fact, some state board examiners remind me of what Lord Macaulay once said of the Dons of Oxford, that the greater their erudition, the denser their ignorance of what was really required of them. State board examiners need to imbibe the philosophy of the great Billroth: "The sum of the contents of memory at any moment is no measure of the capacity of a man. We forget much, but if we have practiced in a certain kind of thinking, it, like the ability to swim, will never be lost as long as we retain the full use of our mental powers."

"By the Term, 'Allied Sciences,' as applied to medicine, is meant those subdivisions of general science that are held by teaching institutions of standing and reputation conferring the degree of Doctor of Medicine to have a place in the professional education and training of a physician."

Since the number of medical schools has been greatly reduced, and the requirements for medical education have become more uniform, it is easier to determine whether medical schools are fulfilling all necessary requirements.—Federation Bulletin.

CALIFORNIA'S LEAGUE FOR THE CONSERVATION OF PUBLIC HEALTH

By WALLACE I. TERRY, M. D., San Francisco

INTRODUCTORY NOTE

Doctor Terry's remarkably able review of some of the important work of the League for the Conservation of Public Health should inspire every true physician to renewed efforts in the public welfare. It outlines an amazing record of a unique and remarkable organization devoted solely to the interests of better health for all Californians.

The weakest link in the forward march of applied medicine is admittedly the lack of sufficiently cohesive intelligent action. Retail medicine as practiced by individual doctors for individual patients is advancing faster than is mass medicine for the masses. This latter field of applied public health is so intricately honeycombed with associations and organizations, political, altruistic, mercenary, and what not, that they get into each other's way and slow up progress. They fail to combine on most matters of moment and consequently they accomplish little in those places where accomplishments are wisely effective.

The League for the Conservation of Public Health has done, and is doing, more intelligently effective work for the cause of better health than are all other groups combined. It has done and is doing more to cement worthwhile individual doctors together so as to bring coherent mass action to bear upon the vital problems of health than is any other influence. Its membership includes only the kind of doctors we all wish we were and strive to be. The other kind—and they are few—are its enemies, which is the greatest compliment the League could have. There are classes and classes of doctors as there are classes and classes of other people. The League membership roll comes nearer being a directory of the kind of doctors another doctor wants when he is ill, or who are sure to be as interested in public health as they are in the personal health of their individual patients, than any other group anywhere.

An occasional doctor—usually an uninformed or disgruntled one—wants to know why the California Medical Association cannot do all the things that the League does. Any thinking person would find enough of an answer by reading the constitution of the California Medical Association. The House of Delegates several years ago were so favorably impressed with the work of the League that they unanimously invited the League to act as the California Medical Association's section on Medical Economics, Hospitals, Public Health, Medical Legislation, and similar matters. This fine co-operative spirit has continued to produce the most effective kind of harmonious team work.

Better Health magazine and the Better Health Service are the most effective answer that has been provided anywhere to the justifiable demand for authoritative information about health for the man on the street. The secret of that success, as Doctor Terry says, is impersonal service given out under the name of an organization rather than by any one man. That it is effective, is most amply demonstrated by the more than 100,000 letters of inquiry, comment, and commendation its editors have received and answered in the last four years.

Not only every physician, but every other person genuinely interested in the health welfare of his fellow-men should read Doctor Terry's able analysis of the doings of the League for the Conservation of Public Health.—
EDITOR.

SOME ten years ago the medical profession of California was faced with a momentous question of medical economics. An imported plan for the medical and hospital care of a large percentage of the population was plausibly presented and actively promoted by prominent doctors and laymen with the support of influential official groups. Social Health Insurance was the attractive name of a "panel system," which, it was claimed, would im-

prove medical service and solve the financial problems of physicians and patients.

The doctors divided and disagreed upon the question, and debates before the various societies produced much heat, but little light. Leaders of the American Medical Association, including the president, were outspoken in favor of the measure. The California State Medical Society remained neutral and declined to oppose social health insurance. The advocates of the new proposition were naturally confident because they had the distinct advantage of organization, "statistical" reports, publicity and official endorsement. The question became a burning issue and, after several years of propaganda, the legislature was induced to place social health insurance upon the ballot as a constitutional amendment to be decided at the general election November 8, 1918, by the vote of the people of California.

Some of the doctors who believed that the movement was a menace, and that the compulsory, paternalistic measure proposed would not only undermine the efficient voluntary hospital and medical service of California, but also take away the individual independence of the doctors, resolved that something had to be done to defeat the measure. They recognized, however, that resolutions were futile, and that to make their opposition effective they must have an organization to conduct an aggressive campaign. They realized that to depend upon other organizations that were dividing and confusing the issue would get them nowhere. And so it happened that leading members of the medical profession of Southern, Central, and Northern California organized the League for the Conservation of Public Health.

DEFEAT OF SOCIAL HEALTH INSURANCE

How efficient the League was in conducting that decisive statewide campaign, and how effective its publicity and literature proved, can all be summed up in the single statement: The League defeated social health insurance, despite all its propaganda, official endorsements and influential backing, by the conclusive majority of 224,466.

The sound judgment of the doctors of California in forming an independent organization was vindicated. The practical need and value of such an organization was quickly recognized, and so the League for the Conservation of Public Health has continued to meet its growing responsibilities with increasing effectiveness.

Since its first statewide campaign eight years ago, the League has blazed many a pathway in the field of publicity, legislation, medical economics, education, and hospital betterment. Its activities have steadily increased in response to urgent demands for its co-operation and counsel. The purposes of the League, as summarized on the organization's letterhead, are: To spread wider and more accurate knowledge of what scientific medicine is doing and can do for the promotion of health, the prevention, control and limitation of the various diseases; to counteract pernicious propaganda and warn the people of the dangers of quackery by presenting reliable information through Better Health, Better Health Service, and other proper channels of publicity; to encourage the enactment and enforcement

of better health laws; to promote and maintain more and better hospitals wherein educated physicians may render better service to every community of California. This is the constructive program upon which the League rests its right to claim the approval of the public and the profession. It is a worthy program, and it demands an efficient organization to carry it on worthily. Each of the several types of service which the League renders requires specialized knowledge, experience, and executive ability. Doctors, more than any other group, appreciate the need for training, information, special data, and thorough examination before making a diagnosis. To diagnose a publicity problem, a legislative problem, a problem that may involve the changing of public opinion, or of official attitude, or of community sentiment or prejudice, or a mass of more or less unsound views, or finding and informing the factors that make or break any movement—these things often require much investigation and a more searching history than is often needed for the diagnosis of hidden troubles of an individual patient.

The progress of medical science, of medical colleges, hospitals, laboratories, health departments, and all agencies of scientific health work are becoming more and more dependent upon the education of the public, the action of legislatures and the co-operation of communities. It is generally acknowledged that the medical profession has ample scientific knowledge and experience now at hand, if it were universally applied, or even accepted by the vast majority of people, to prolong the average human life many years and make all the years more efficient and happy. The development of the League is bound up with the welfare of California, for as the League's slogan aptly expresses it, "The Health of the People is the Wealth of the State."

PUBLICITY MOULDS PUBLIC OPINION

Public opinion is the most potent force in putting "over" or putting "under" any movement. Public opinion cannot be reduced to charts, curves and cycles, but it can be fairly well gauged by a student of publicity who can diagnose its trends and who has newspaper experience in analyzing its growth, climax, and decline, and can interpret the behavior of crowds. The most powerful moulder of public opinion is publicity, and it can be made the strongest ally of scientific medicine. There is plenty of evidence that the misrepresentation and misinformation that is constantly being spread by anti-scientific groups in scores of magazines and hundreds of newspapers is undermining public confidence in scientific medicine. Busy doctors have been so preoccupied and so self-satisfied that they have overlooked the trouble-making possibilities of the cults and their growing capacity to handicap and hinder the practice and progress of medicine.

A national magazine stated last year, after a survey of the second largest city of the United States, that only 33 per cent of the people, when sick, relied upon the services of educated physicians. The other 67 per cent divided their patronage among the various cults, charlatans, religious healers, physical culturists, semi-educated practitioners, patent medicine vendors, and what not. The commercial

success of the anti-scientific forces was attributed to publicity and political activity.

The League has proven in California that most people prefer authoritative information on health subjects when they understand where to get it and what "authoritative" is. The public cannot co-operate intelligently with the medical profession without the facts, and the facts must be presented in language they can understand. We have no reason to fear the verdict of fair-minded people when they know the facts.

The League, through its Better Health Service, which is published every day of the year, is furnishing the facts to hundreds of thousands of readers of what scientific medicine is prepared to do for the promotion of health and the prevention, control, cure, and relief of sickness. "Give the people the light," said Dante, "and they will find their own way."

To answer pernicious propaganda through medical journals is ineffective, for the laity do not read them. It may be answered effectively in two ways: through the newspaper, which is the daily textbook of the people, or through a popular magazine sold at news stands. The League does both and has won the highest commendation of leading publishers, editors, officials, doctors, educators, legislators, and thousands of appreciative letters from readers generally. The League is giving the medical profession publicity that is creating good-will that cannot be bought at any price.

It is obvious that the quality of service which the League is giving newspapers cannot be handled as a side issue or in haphazard fashion. We know that spasmodic articles can accomplish very little, and that we must not only inform the public, but keep on informing them.

BETTER HEALTH SERVICE

Better Health Service is more than the stereotyped newspaper articles on health subjects that are mere expressions of opinion of individual writers. The Better Health Service, organized by the League, struck the keynote for the new order of impersonal publicity. As all the other League activities, its popular newspaper service is entirely impersonal, which has won for it the widest approval and support of the medical profession. The impersonal policy overcomes the very proper objection leveled at many newspaper health columns that exploit and advertise individual doctors.

In looking over the four past years of the League's daily and Sunday Better Health Service, we find hundreds of valuable messages on important aspects of medical work that serve to clear up misunderstandings, correct misinformation, and place convincing facts before the people. The articles and answers are not theoretical or technical, but contain the kind of practical and reliable information that the reading public needs and wants. Over three hundred leading surgeons and physicians, dentists, health authorities and specialists in the various branches and fields of medical, hospital, and public health work, contribute to the League's Better Health Service.

Thousands of letters are received by the Better

Health Service, which give an index to what people are saying and thinking about doctors, hospitals, clinics, welfare movements, etc. The questions asked and the answers given to the questions react further and touch deeper than anyone unfamiliar with the active interest of the public in health subjects may think.

It is a fine thing for the public as well as for the profession to have such a reliable health service, and the people appreciate it. But it must not be overlooked that the League's daily and Sunday Better Health Service demands a vast amount of tireless and unrespired hard work, both daily and Sunday. Its responsibilities are always great and sometimes grave. The opportunities for costly mistakes are ever present. That none have occurred in four years of steady work, is a sufficient endorsement of the high quality of the service and the care and capacity of its management.

The publicity service of the League embraces more than furnishing material to the press and magazines. The League is on terms of cordial co-operation with the press and often is called upon for information, and many times keeps sincere editors from being imposed upon by new "cures" and old frauds.

PIONEER POPULAR HEALTH MAGAZINE

Some essential health, hospital, and medical subjects cannot be adequately discussed in mass-circulation newspapers. It is obvious that many newspapers do not wish to lose certain advertisers and subscribers. The League established the pioneer popular health magazine, *BETTER HEALTH*, to supplement the Better Health Service. Its title is considered so valuable, as it so appropriately expresses the magazine's mission, that not a few have tried to borrow, buy, or steal it. It is a different kind of magazine from any published, and it does not duplicate or imitate any other periodical. *BETTER HEALTH* has no trammeling connections whatsoever. It knows and reflects California, although there is nothing provincial about it.

At the 1925 session of the legislature, and during several previous sessions, the League's position on important bills was clearly set forth in *BETTER HEALTH*. Leading legislators expressed approval and appreciation of this valuable service. In every session of the legislature bills are introduced that are highly prejudicial to medical practice, medical research, to the teaching of medicine, to hospital administration, nursing education and public health protection. I cannot attempt to give in this paper a detailed review or even a complete outline of the work which the League has done during the last four sessions of the legislature. It would require a series of papers to do the subject justice. The records show that much dangerous legislation which would have jeopardized important health agencies would have passed if the League were not on the job, and a number of constructive measures would have been defeated without League support. Time and again the League has been called upon by hospitals, medical colleges, groups of doctors, nurses, dentists, veterinarians, public health officials, social workers, women's clubs, and other groups interested

in some angle of health work. When the League is convinced it has always responded effectively.

SOME LEGISLATIVE ACTIVITIES

I can mention only a few of the long list of legislative activities of the League: In two statewide campaigns and in three legislative sessions, the League opposed anti-vivisection. People throughout the country were profoundly concerned in the outcome, for a victory by the anti-vivisectionists would nullify the advances made by scientific medicine in recent decades. In each instance the League won by an impressive vote. A measure which Illinois permitted to pass was introduced as an economy measure by the administration here to combine and place the Board of Medical Examiners, Board of Dental Examiners, Board of Optometrists, State Board of Embalmers, Board of Examiners in Veterinary Medicine, Board of Pharmacy, boards of architecture, librarians, accountancy, all in one Department of Professional Standards. The law provided that a layman was to be appointed director of the new department by the Governor, with full power to issue licenses to practice for all professions and to suspend and revoke licenses. The League's courage to challenge, and its judgment in fighting and defeating this dangerous measure, is now acknowledged by all. In the last session of the legislature a measure was offered by a certain cult that would have made treatment by prayer or any spiritual means a sufficient and full compliance with all the provisions of the Workmen's Compensation Act. If adopted, it would have demoralized industrial, medical and hospital service and added to the complicated problems of industry, additional health hazards and controversial religious problems. Under the provisions of the Act, spiritual healers of any and all sects could treat cuts, breaks, fractures, lead poisoning, hernia, valvular heart defects, tuberculosis, defective vision, burns, syphilis, communicable and infectious diseases, and all the shocks and ailments that industry is heir to. One would think that manufacturers, insurance companies, labor organizations, railroads, and those who know the constant need of medical and surgical service in industry would hasten to Sacramento to fight a measure that affected them so vitally. The reverse was the case. The fighting was left to the League. The proposed law was defeated by a very narrow margin. Bills to unionize nurses, x-ray bills, bills that would license persons to practice without adequate education, milk bills that would impose costly and unnecessary requirements on hospitals, hospital bills that would jeopardize the interests of worthy hospitals and their patients, many kinds of disguised paternalistic measures, anti-health bills of all varieties were successfully opposed by the League.

Constructive legislation to provide adequate facilities for the study and treatment of mental diseases, to provide better hospital service for the needy sick, to surround the title of doctor with definite legal safeguards and protect the public from misrepresentation, imposition and fraud of advertising doctors, legislation to meet the demands of the research, laboratory, anatomical and other departments of the medical colleges of California, anti-diploma mill bills were promoted by the League. On the agitated

question of narcotic drug addiction the League has done a great deal of investigating, held conferences and co-operated with groups intelligently and seriously interested in handling the problem under proper institutional conditions medically supervised. The League sponsored and passed the first anesthetic bill passed anywhere. A new optometry bill was passed which restored rights to oculists and other physicians and removed arbitrary regulations from skilled manufacturing opticians. The old law created a virtual commercial monopoly in favor of optometrists, and oculists keenly felt its unfair restrictions on their practice. How profitably certain groups of optometrists used the old law was made clear. The optometry law just passed curbs the monopoly of the optometrists, and is of benefit not only to physicians, but to their patients who must wear and pay for glasses.

THE PENALTY OF LEADERSHIP

The League is not boastful, as it realizes that all victories are temporary, and that eternal vigilance is the price of medical freedom, the same as it is the price of commercial, religious, and political freedom. At intervals, some disgusted doctor, after reviewing the many quacks, fakes, anti-medical movements and the many problems that remain unsolved asks, "What's the use? Cultists continue to multiply, the politicians continue to side-step, the public is indifferent, and why should we worry about what happens to our successors?"

In all other fields the people bear the burdens of their day. The penalty of leadership is to meet constant opposition. In all contests competitors try to knock the leaders off their pedestals. This can be escaped only by those who avoid responsibilities.

A few seem to think that quackery is benefited and not injured by adverse legislation and publicity. They assert that if physicians were rendering the high type of service that we should render that there would be no room for quackery, and it would disappear from lack of patronage. This viewpoint is unsound and contrary to direct and collateral evidence. It is not alone in the field of medicine, in the selecting of doctors, that people make serious mistakes. There is nothing wrong with the legal coin of our country minted by the Government; nevertheless, counterfeiters unopposed and unexposed would flourish and pass spurious coinage and victimize many in every community. No thoughtful person interprets the fact that billions of dollars are wasted annually in wildcat schemes and on worthless stocks as a reflection on the standard stocks that are as good as gold. The Government knows and financiers appreciate that they must keep the public informed and be vigilant themselves when laws are being made which they must observe. Without information, without the facts, the public has no way of distinguishing the true from the false, the counterfeit doctor from a genuine physician. When the profession is indifferent to what the public thinks, it follows naturally that the public becomes indifferent to what the profession thinks.

The League's influence at the legislature and on political thought has increased steadily because it has acquired the reputation of fairness, accuracy, and fearlessness. One of the chief reasons why the

League has been so surprisingly right on most questions is that it consults so many sources and gets information and opinions from all angles. The League never endorses, advocates or opposes a bill or a policy until it has examined the various sources of information. The League takes time to gather evidence and does not try to force its opinion or conclusions on anyone. It submits them with candor on their merit. One thing is sure, the League is not afraid to act, and it does not act one thing and believe another.

A discussion of men and measures at the League office is always illuminating. It brings out angles, background, motives, inducements, financial interests, fraternal, club and social ties in significant relationships. The League is a clearing house of legislative information and can tell you why certain legislators voted for and against measures and why certain doctors were neutral and the reason for the opposition of others. Why one organization reversed itself three times on one measure and why some chambers of commerce were silent and others endorsed the cult viewpoint on legislation. Lincoln once said: "Now, there's Mr. ——. He thinks he is fooling me. I let him think so, but I don't let him fool me." It must be borne in mind that much of the information received by the League is confidential, and will be used only in the interests of its service, but will not be disclosed.

HOSPITAL BETTERMENT SERVICE

The League has confidential information about hospitals, for instance, which, if blazoned forth, would be a seven-day sensation and do irreparable damage. But the League Hospital Betterment Service is constructive and works for the benefit of all. In addition to the important legislative and publicity work which the League does for hospitals, it answers numerous calls for assistance from all parts of the state and on all sorts of problems, from expansion and new construction to reorganization of staff, school of nursing, record systems and questions relating to every other department. "Hospital betterment" is a term coined by the League, and in California means service—active and operative every hour of the day and night to every patient in the hospital.

When the League began its hospital betterment work in 1918 no one had collected the facts about ownership, costs, number of beds or where new hospitals were most needed, and no one had sufficient information to even guess at the character of service which the hospitals of California were rendering or prepared to render to the people of the state. There was no generally accepted definition of what a hospital should be, no comprehensive record policy, accounting system, and no firm policy with regard to cults. In the October issue of *BETTER HEALTH* the foresight of the League on this dangerous question is shown in the article on page 401, entitled "Invasion of Hospitals by the Cults."

The first convention of the hospitals of California was called by and held under the auspices of the League for the Conservation of Public Health, and these annual hospital conventions are proving of the utmost interest and benefit to the directors, admin-

istrators, staff, nurses, and technicians in solving common hospital problems.

A Certificate of Honor, signed by Dr. Ray Lyman Wilbur as president of the American Medical Association, was awarded "The League for the Conservation of Public Health for the exhibit relating to hospital betterment, Better Health Service, the state campaigns for high standards of medical practice and for the improvement of laws relating to preventive medicine and the prevention of legislation that would lower the standards of health and retard the progress of medicine."

EXTENSION OF "CALIFORNIA PLAN"

One of the distinct services of the League has been to inspire doctors of other states to organize along the lines of the "California Plan." Responding to repeated invitations from leading doctors of Oregon and Washington representatives of the California League went to those states some years ago, held conferences, addressed the doctors of Seattle, Bellingham, Tacoma, Spokane, Yakima, Portland, and other places and started their leagues. Doctors from many states regularly visit the League office and receive practical illustrations of how the "California Plan" produces results. California, because of its composite, cosmopolitan, changing citizenship, its great area, embracing all climates the year round, has more new and complex problems, "hold-overs" brought here from other states, than any other place. It is the greatest experimental field for health and anti-health movements of all kinds. Health insurance skipped all the other states and came to California, anti-vivisectionists selected California for their first statewide campaign, and the anti-vaccinationists followed suit. It is observed that where good grain grows profusely weeds will also flourish.

The California League is often called upon and is always glad to give counsel to other organizations, but it assumes no responsibility and believes that all should settle their local troubles according to their own devices. It is obvious that in the last analysis each state must work out its own salvation. No plan or method of organization is automatic or will work uniformly under different conditions with changed personnel. It is proverbial that doctors disagree, but in California this proverb is disproved.

For those who may wish to look upon the darker side of the picture I answer the question, "Has the League no faults and no enemies?" Surely. It is made up of human beings, and to err is human. No human organization can function with 100 per cent efficiency at all times. The best surgeons do not cure all their patients, and every doctor loses fights for the lives of patients, and scientific medicine is confronted with many problems it has failed to solve. If the League were composed of steel parts it might function automatically. But a machine is not open to suggestions, and the League is always. It is safe to say that the League officials are more aware than their critics of the measure by which they fall short of perfection. It is absolutely safe to state that they would welcome nothing better

than constructive help and suggestions to enable the League to render better service.

EIGHT YEARS OF PRACTICAL WORK

The League has opposed and defeated very active groups. It has made enemies as well as friends, because it does so much. All the cults are unanimously against it, some hospitals that prefer to run loosely, others who dwell in the twilight zone and officials and politicians who want to be half-quack and half-scientific to get the votes of all, and a few who do not understand why the practical every-day work of the League is necessary, because they themselves are such successful doctors and have "arrived" and are not troubled by or interested in the problems of those who are only on their way or just about to start. It is a common fault of successful men in all walks of life to play lone hands and let the devil take the hindmost. It is pleasant, therefore, to say that most of the work of the League is done by men whose position in medicine and in the community is assured, whose practices and income are large and who are dedicating part of their time to this public service with no personal or selfish purpose whatsoever. They give up a lot of time to League work, dig up information, articles for the press, iron out troubles of different groups, help elect better legislators and other officials, keep abreast of things that are happening on questions that affect directly or indirectly the field of medical practice, give a helping hand to the younger men and pay their own good money for the privilege of serving others. With such examples of service, we may look with confident optimism to the future of the League. The officers and personnel of the League, on the whole, constitute a body of men and women in whose ability and integrity the public and the profession can place trust and confidence.

What one finds in the final summing up is, the "California Plan" of the League for the Conservation of Public Health has aroused other organizations in other states to a larger sense of leadership and public responsibility. Eight years of service in California have proven its practical value in constructive publicity, in better health service, in hospital betterment work, in promoting good measures and movements, and preventing bad legislation. The ideals and spirit of co-operation of the League and its conceptions of public responsibilities are fundamentally sound. The process by which it has developed and carried on its varied activities is a gradual one, but it is, nevertheless, sure. Its influence in moulding a healthier public opinion for the benefit of all worthy health agencies is growing greater and more extensive. Its scope of service has broadened and bettered each year. It is a very busy organization with daily work that counts for steady progress. It is giving every worthy work valuable publicity except its own. It is too busy with much serving to tell us its own story, and that is what prompted me to review some of the important work of this unique organization. The League's record reflects great credit upon the ability and willingness of the doctors of California to work together for the common benefit of the public and the profession.

THE MEDICAL PROFESSION AND THE MEDICAL OFFICERS' RESERVE CORPS

By W. E. MUSGRAVE, M. D., *San Francisco*

THE National Defense Act, approved June 3, 1916, and as later amended, establishes the Army of the United States, the components of which are (a) the Regular Army, (b) the National Guard while in the service of the United States, and (c) the Organized Reserves.

Under this law, all Reserve units—including Medical Department units—after being organized become part of the permanent defense forces of the United States. As such, they are destined to share in whatever military operations and successes may be engaged in by the nation in the future. A Reserve general hospital allocated to California, for example, has the same permanency of history and function as a regiment of Regular Army cavalry at Monterey, or an infantry regiment of the California National Guard. The same need for their organization and maintenance dominates them all, and is an obligation laid by the nation at large on each local community. So far as the personnel and units of the Medical Department are concerned, they represent a definite obligation laid by the nation upon the medical profession of such communities.

The Regular Army has its duties in peace as well as in war. The National Guard may be called out by the state authorities in case of local trouble, or in a national emergency by authority of the President. The Organized Reserves can only be called out in a national emergency declared by Act of Congress. *In the latter case, the man-power of the nation generally can and will be called out, whether it belongs to the Organized Reserves or not.*

In general terms, the Regular Army and National Guard represent the first line of defense; the Organized Reserves represent the second line of defense. Behind these combatant lines, the bulk of the burden falls on Reserve personnel and Reserve units.

The latter fact is particularly true in respect to the Reserve Medical Department. The Regular Army has its few fixed hospital establishments, adequate for its own needs in time of peace, but susceptible of only limited expansion in time of war. The National Guard has its medical service attached to troops, but no provisions for hospitalization. The Organized Reserves, through the Medical Officers' Reserve Corps, are expected to meet not only Organized Reserve needs generally, but the hospitalization, and other needs back of the combat zone, for an expanded Regular Army and the eighteen Divisions of the National Guard as well.

The maximum effort under the National Defense Act calls for the raising of 6 Field Armies, which include 9 Regular Army Divisions, 18 National Guard Divisions, and 27 Reserve Divisions. Besides these 54 combatant divisions, the plan calls for a large number of special troops, and the co-ordinate organizations and establishments of special branches. The total personnel required for these six Field Armies is approximately 4,000,000 men, all of which are to be raised within one year.

The part which the Medical Department is called upon to fill in this vast general plan of defense is

very great. Its required personnel will aggregate over 500,000—officers, nurses, and enlisted men—and this personnel will handle hospitals aggregating some 400,000 beds. The minimum officer requirements to be provided for the Medical Department are 43,156; of which 30,783 are medical officers, 5188 are dental, 2766 are veterinary, and 4419 are medical administrative and sanitary.

The raising of this force is apportioned among the states of the Union according to their military manpower, and these states are grouped, for purposes of military administration, into Corps Areas.

The Corps Area of local interest is the Ninth Corps Area, which includes the states of California, Nevada, Utah, Wyoming, Montana, Idaho, Washington, and Oregon, and the territory of Alaska.

The Reserve medical problem allocated to this Ninth Corps Area includes the raising of 2050 medical officers of the Medical Department and their organization into specific medical units.

The last medical directory shows the number of physicians licensed to practice in the above states and Alaska to be 12,443. Out of this total, 2050, or 16.5 per cent, are required for the Medical Reserve Corps. If all states furnish Medical Reserve officers in proportion to their licensed physicians, their respective quotas are shown in the following table:

State	Physicians registered	Medical Reserve Officers required
California	7,549	1,243
Nevada	140	23
Utah	497	82
Wyoming	263	43
Montana	568	94
Idaho	452	75
Washington	1,756	289
Oregon	1,158	191
Alaska	60	10
Totals	12,443	2,050

While many branches of the service can and will enroll officers from any or all walks of civil life, only the medical profession can furnish medical officers. Its part cannot be confused or misinterpreted. The number of physicians who actually enroll themselves in the above states will clearly evidence the relative degree of patriotic and professional interest therein.

The fundamental patriotism of the medical profession at large was abundantly shown in the last war. Physicians then enrolled for service by the tens of thousands, often at great personal sacrifice. For enrollment now in the national defense no sacrifice is now required. No duty is asked which the Reserve medical officer may not wish to give. All that is required is that the physician be willing to serve his country in national emergency, and, in the meantime, to lend his name and influence to the building up of effective medical organizations, fit for prompt service in case of such emergency.

If in the meantime he desires to be in line for promotion, he has the opportunity to fit himself by correspondence course training, or by attendance at summer camps, for the duties and responsibilities pertaining to the higher grades open to him.

The matters of appointment and promotion in the

Medical Reserve Corps are governed by Army regulations. Former officers in the World War; physicians who contributed to the success of the war by service on the Council of National Defense, as a draft examiner or a member of draft board; a former officer of the Navy or Allied Armies, or who was connected with essential public establishments as educational institutions, hospitals, public health organizations, or was a public administrative officer, may be originally appointed in a grade commensurate with his age and standing in civil life. Others enter as first lieutenants and are promoted by regular steps in gradation to fill vacancies for which they are qualified. *Rank is not an index of professional ability, but of competency in a military sense.*

That there shall be appropriate gradations in age and experience as well as rank, Army regulations require the following periods of service, by grade, of qualified officers: As first lieutenant, two years; as captain, five years; as major, five years; as lieutenant-colonel, three years. A young physician entering the lowest grade could thus be promoted into the grade of colonel, with command of the largest medical units, in the short space of fifteen years—or a little more than half the time it takes for a medical officer of the Regular Army to reach that grade and command.

Medical service may be defined as "combat" and "non-combat" service. "Combat" medical service is that performed by medical officers directly attached to combatant troops. It is usually of an emergency nature and not professionally definitive. "Non-combat" medical service is that performed in units not attached to combatant troops, and often far in the rear of the lines of defense. It gives definitive medical treatment and professionally approximates the work of the medical practitioner in a civil community. In round numbers, the assignments of medical officers as to these divisions of service represent about one out of four for "combat" service, and three out of four for "non-combat" service. Whichever type of service is chosen depends on the personal preferences of the individual medical officer.

At present, the need for Medical Department officers particularly relates to "non-combat" units. Within the Ninth Corps Area, a total of eighty-one such units are required. Some idea of their nature and numbers may be inferred from the fact that the following totals are required: Three hospital centers; 14 general hospitals; 10 evacuation hospitals; 15 station hospitals; 8 surgical hospitals; 8 hospital trains; 5 medical laboratories; 1 army medical laboratory; 1 medical supply depot; 1 convalescent hospital; 2 corps medical services; 2 medical regiments; 1 veterinary convalescent hospital; 3 veterinary evacuation hospitals; 2 veterinary station hospitals; 7 veterinary general hospitals. To staff the foregoing units with medical officers, alone, will require a total of 1214 such officers.

The foregoing units have been apportioned to states within the Ninth Corps Area, and within states they have ordinarily been assigned home stations at large centers of population. The allocation of these units is as follows:

California, 43; Oregon, 15; Washington, 12; Utah, 4; Idaho, 3; Montana, 3; Wyoming, 1; Nevada, 0.

In assigning an officer to a unit and duty, his preference and that of the commanding officer of the unit considered are habitually consulted. The general considerations for assignment are that the unit is located in the community or vicinity of the residence of the officer concerned, that an appropriate vacancy exists in the unit for a man of his technical qualifications, and that such assignment would be acceptable to all concerned. The latter point is more important in a Reserve unit than any other. Regular Army, and even National Guard units, have a more or less rapid turnover of personnel. *But the personnel of a Reserve medical unit established in a community, and officered by the physicians of that community, will, except for death, and ordinary casualty, remain largely unchanged and permanent in its make-up of personnel.*

In time of peace, no Medical Reserve officer can be ordered out for a longer period than fifteen days for training in any one year. Any objection that this might some time be inconvenient is purely hypothetical. Funds are not available to send to training camps more than a very small percentage of even the present enrollment. As a matter of fact, they are not sufficient to send to training camps more than a fraction of those who apply for the privilege. Those who are thus ordered out, of course, receive the pay and allowances of their grade while so serving, and those who have attended such training camps have been enthusiastic over their interesting and enjoyable experience. *But whether an officer goes to training camp or not depends upon his own desires.*

As to service, in time of war declared by Congress all Medical Reserve officers will be ordered to the colors. So, too, will the medical profession at large under the draft law. The Medical Reserve officers, who already have commissions of high rank and positions of authority, will be in command of the late-comers.

There are physicians who have not yet enrolled in the Medical Reserve Corps, thinking that it would be sufficient for them to offer their services in time of war. Such delayed action is not the full measure either of patriotism, humanitarianism, or self-interest. In respect to patriotism, such delay stands in the way of the desired development by the nation in advance, of the organizations which will be sorely needed immediately on mobilization day itself, to care for the illness and injury incident to aggregations of men. As to humanitarianism, delay up to the eleventh hour means that the nation's defenders in the first line will not receive that efficient, systematized medical and surgical aid to which they are entitled. From the standpoint of the self-interest of the individual, it means disappointment. *The draft will become effective, medical men needed will then be enrolled without the privilege of volunteering, and they will be given such lower rank, status and professional assignments as conditions may warrant. In other words, they will take what is left, irrespective of their prior good intentions and professional standing in civil life.* Medical officers who have helped to build up the nation's relief establishments in time of peace, and who have tried to prepare themselves for their duties in connec-

tion therewith, will not be displaced from positions of rank, authority, and professional congeniality in order to meet the desires and personal interests of belated patriots.

As to who should enroll in the Medical Officers Reserve Corps, there is need and place for any practicing physician who can satisfy the physical and other requirements. The service is of such nature that general practitioners are essential. Likewise, with units of such diversified nature and function, specialists in all the major professional specialties are required.

The older men, and especially the veterans of the last war, are needed to lend their prestige and experience to the creation of these great relief organizations, and to ensure their proper development and smoothness of operation. Their patriotic assistance will very likely take no further shape than a contribution to preparedness.

Younger men of the coming professional generation are needed to round out these organizations, to maintain them, and to succeed to their control. Future actual medical emergencies must be met largely or wholly by medical personnel of the future. It devolves on the younger professional generation to take the colors from weakening hands, and press forward.

Medical men who enroll in the Reserve Corps in advance of emergency are assured of rank, steady promotion as they demonstrate fitness for it, increased pay and authority, an assignment to such professional duty as they are best qualified to perform, and association with a congenial unit made up of friends and neighbors of their home communities.

In so enrolling, they are rendering a great humanitarian, as well as patriotic service. They are helping the nation to prepare for its needs in an hour of extremity. They are helping to avert unnecessary suffering from its future defenders. They are helping the medical profession to avoid many of the general and personal difficulties it experienced in the last war, lending their aid to the plan for medicomilitary preparedness.

THE TIME HAS COME FOR THE MEMBERS OF THE MEDICAL PROFESSION TO STAND UP, BE COUNTED AND, AS MEMBERS OF THE MEDICAL RESERVE CORPS, TO COME TO "FRONT AND CENTER."

"There are some forms of propaganda issued in support of the periodic health movement which would lead the readers to believe that preventive medicine and public health movements originated outside the profession and were being forcefully thrust upon physicians, as part of their citizenship duties.

"The author of these apparently has never heard of the Hittite inscription that appears on the aged temple walls in Cappadocia. As in ancient times, this same inscription covers today the services of the physician. It says:

"*Then Zarthusstra, the Sage, stood forth and spake: 'Go often to your physician, O, people, that you may know yourselves. Some, being in good health, he will instruct, and keep so; some have beginning maladies—these he will make whole; some have illnesses—these he will help or cure; some are beset with dire diseases which exist not except in imaginings—these he will reassure.'*" (Ohio Med. Jour.)

PRESIDENT'S ADDRESS, UTAH MEDICAL ASSOCIATION *

By SOL G. KAHN, M. D.

ELECTED to the highest office in the power of this Association to bestow, I am deeply sensible of the sincere compliment you have paid me and of the great trust you have placed in my hands, and I wish to assure you of my appreciation of this mark of your favor, this evidence of your confidence. I wish also to thank you and my associates in office for the efficient co-operation and active support which have been accorded me, all of which will have served to make this, the thirty-first annual meeting of the Utah State Medical Association as successful as its outlook promises.

Great changes have taken place in the period covered by the life of our Association, and we may speak with pride of the achievements in both medicine and surgery during this generation, but I scarcely need remind you of them in detail. Every physician is proud of the record, and happy to live in an age when so much has been done for the comfort and well-being of the human family by the noble profession to which he belongs.

The delivering of an address by a retiring president is an ancient and honorable custom, and frequently consists of many words and consumes much time. Since "brevity is the soul of wit" and "tediousness the limbs and outward flourishes," I will not, I trust (after the same manner as Shakespeare's Polonius) "be brief," nor shall I attempt to be witty.

A few topics must be outstanding ones in my talk:

First, Change of Time of Meeting—In the hope that the general interest in the work of the Association might be promoted, your officers and committees, gentlemen, have seen fit to make certain changes in the scientific program for the meeting this year. Instead of breaking into two weeks, it was decided to combine the time of the committees scientific work, and education and post-graduate work into one week of intensive study and application. This also gives us the benefit and pleasure of having here at our meeting the medical men who come from outside the state to give our post-graduate work. We hope this innovation will meet with your approval and that the experiment may prove a success.

Second, the Matter of the State Board of Health—It is gratifying to note the increasing spirit of co-operation between the medical profession and the State Board of Health. There can be no question as to the physicians' importance in the public health program, and it should be their duty to acquaint themselves with the work and aims of the health officials who may be depended upon to welcome their co-operation and assistance.

These facts were especially demonstrated in the recent goiter survey of the State Board of Health.

In another instance, our advisory committee to the University was able to aid in the correction of

* Delivered at the banquet of the Thirty-first Annual Meeting of the Utah State Medical Association held at Hotel Utah, Salt Lake City, Utah, September 8, 1925.

a situation where public health interests were involved. For many years the bacteriological laboratory had been located at the University of Utah, where examinations were made when authorized by the State Board of Health. For reasons that need not be discussed here, the service was unsatisfactory alike to the Board of Health, the medical profession, and the University. Dr. Beatty, executive officer of the board, finally prevailed upon the International Health Board to fully equip a laboratory in the State Capitol, and steps were immediately taken to effect its installation.

Objection was raised by some of the University authorities to the taking of the health work away from the University laboratories. The Advisory Committee, in behalf of harmony, studied the situation and favored the change.

Dr. George Thomas, President of the University, then introduced a bill into the legislature, which was enacted, repealing the law which authorized the University to provide public health laboratory service.

With entirely new and complete equipment, and in charge of a bacteriologist of high standing, the laboratory is now furnishing prompt and efficient service, which is available free of cost to all physicians of the state, when called upon, to assist in the diagnosing of communicable diseases.

The policy of the State Board of Health is, to the full extent of its power, to render laboratory service that will promote the public health. Purely clinical laboratory work will not be done except in the case of indigents.

Third, Medical Ethics—Medical ethics is having a difficult time during the present era of commercialism. I learn from recent graduates that medical ethics is, in most medical schools, taught in a perfunctory manner or not at all, and from my experience on the committee on Public Health and Legislation for the Salt Lake County Medical Society the past two years, I feel that more stress should be placed upon "the treatment one gentleman should accord another." It might be well for the State Association and the County Societies to take this matter up for discussion once a year so as to familiarize all concerned with the usage, the practical application and the benefits of a few of these old practices. Many men profess to practice a specialty and yet take all classes of cases that come to them, which is neither ethical nor fair. It creates enemies, disrupts the profession, causes the laity to lose faith in us, and lowers the standing of the real specialists. Specialist is a term which, according to the dictionary, means "one who devotes himself to some specialty." Let us try to live up to the definition and not claim to be something we are not.

Then, too, many young men are rushing into the specialties without proper preparation, either by virtue of having practiced general medicine for a number of years and then devoting two or three years to perfecting themselves for the particular specialty, or by having training as an assistant for a number of years. An examination by a board, similar to that conducted by "The American Board of Ophthalmic Examiners," or "The American Board of Otolaryngology" should be the determining factor in establishing a specialist's claim to his title and prac-

tice. In the same connection might it not be suggested that specialists to whom general practitioners recommend patients, adhere strictly to their particular line of work? The ethical code, though concise, seems not to be thoroughly understood by some.

Fourth, Malpractice—A shrug of the shoulders, an elevation of the eyebrows and the attitude of "well" appears to continue to obtain with some physicians regarding this subject, as evidenced by the fact that we are still having malpractice suits. No malpractice suit can be carried on or even started without some M. D. lurking in the rear of the battlefield and supplying the ammunition. Let us watch ourselves with greater care each succeeding year, and when people who have been treated elsewhere come into our office let us attend strictly to our own affairs and be like the

Wise Old Owl that sat on an oak
The more he saw, the less he spoke;
The less he spoke, the more he heard,
Let us all be like that wise old bird.

Opportunely, come to mind the oft-quoted lines:

If you your lips would keep from slips,
Five things observe with care:
Of whom you speak,
To whom whom you speak,
And how, and when, and where.

Official Visits—Your officers have made an official visit to five of the seven constituent societies during the year. Harmony and good feeling seemed to prevail among the members of the profession in our state. We regret our inability to call upon the Carbon and Uintah county societies. We feel confident, however, that the next administration will make a special effort to pay them a visit.

May I Make Some Suggestions?—I have two suggestions to offer which I consider of importance. One was presented to the House of Delegates at our last meeting and received unfavorable consideration. However, I feel that by a little further discussion and consideration by all members of the Association, it will meet with approval. This suggestion is to pay a part of the expenses of our delegate to the annual meeting of the A. M. A. The sessions of the A. M. A. are usually held in the East and the expense, to say nothing of the expenditure of time, is too great for anyone to incur annually over a period of years. A delegate who attends one session rarely knows what it is all about until the session is over. In order to be of value to the Association a man must have an acquaintance and be familiar with the routine. This cannot be accomplished, except in rare instances, unless one has attended several meetings. No delegate from this Association has ever attended two or three successive sessions. I attended several during my incumbency, but never two in succession. If we were to set aside \$100 or \$150 to assist in defraying the delegate's expenses, I feel we would meet with better success, because the longer a man is a member of the House of Delegates of the A. M. A. the more valuable he becomes to both the A. M. A. and to our own Association. There are men who have been in the House from ten to fifteen years and they are a power.

The other suggestion is that we have a nominat-

ing committee of five (no two to come from any one constituent society) and that we do not depend upon spontaneous combustion to nominate and elect our officers.

The introduction of the next theme I should like to discuss may appear irrelevant, but I feel that it concerns so nearly the fate of our youth and the necessarily active part we are called upon to take in the preservation of life, that I have conscientiously incorporated it in my address.

Rev. Stanley A. Curtis, in a lecture on Americanism delivered on April 17, 1924, at Salt Lake, stated that in a recent visit to the Juvenile Court he learned that they had just caught the bootlegger who supplied booze to the students at the East Side High School, and that they were hot on the trail of the bootlegger who was supplying bootleg to the students of the Junior High; that they were both aliens and that what we needed was not so much restriction on immigration, but a few boatloads of emigration. While we do not wish to mix in politics, as that is not our province, we *do have* the young manhood and womanhood of our great land as our particular charge. We know from our daily experience that the boys and girls of high schools consider it a great lark to pass a bottle of moonshine around. We are also familiar with the results of many of these so-called larks. I feel we should raise our voices in protest against anything which has a demoralizing influence upon children. If we follow the suggestion of Mr. Curtis and do something to see that any alien who supplies bootleg to students is deported, we are only performing our duty.

While many of us (and I among them) do not sympathize with the workings of the eighteenth amendment, we are strongly opposed to school boys and girls indulging in intoxicants. I, therefore, suggest that we request either the A. M. A. or our representatives in Congress to introduce an amendment that any alien caught supplying bootleg to school children be deported, and any American caught doing the same be put in Leavenworth for not less than ten years.

Permit me to thank you all again for your great kindness, forbearance and courtesy and for honoring me with your confidence. Allow me to close my remarks with my most cordial good wishes and repeat to you a quotation which has but recently come under my notice. It is from Robert Louis Stevenson's *Dedication to the Underwoods*:

"There are classes of men that stand above the common herd; the soldier, the sailor, and the shepherd not infrequently; the artist rarely; rarer still, the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilization; and when that stage of man is done with, and only remembered, to be marveled at in history, he will be thought to have shared as little as any in the defects of the period and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practice an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in thousand embarrassments; and what are more important, Herculean cheerfulness and courage. So it is that he brings air and cheer into the sick-room and often enough, though not so often as he wishes, brings healing."

POLIOMYELITIS

The San Francisco County Medical Society recently devoted one of its sessions to a symposium upon this very important subject. California and Western Medicine has not the space to give all of these four papers in full, but we did offer to publish abstracts of all of those that were sent in in time for our November issue. Abstracts as given below have been received.—EDITOR.

PUBLIC HEALTH ASPECTS OF POLIOMYELITIS

By GEORGE E. EBRIGHT, M. D., *San Francisco*

THE writer called attention to the following points:

It has never been possible to enforce a law that is not approved or not understood by the people whom it affects, and health regulations are of no avail unless supported by a sufficiently strong public sentiment in their favor. The most potent single factor in creating proper public sentiment that shall operate in the control of preventable disease is the influence that may be wielded by the individual physician.

Important factors concerned in the dissemination of poliomyelitis are not yet clearly known, especially the role of healthy human carriers.

The paper traces the history of the disease, beginning with early Egyptian times down to the present moment, and refers to its experimental production in monkeys, the recognition of a filterable virus, the presence of immune substances in the blood of convalescents, the diversity of virulence of various strains of the virus and recognition of the virus in various parts of the bodies of persons dead from the disease.

A consideration of the fact that immune bodies have been found in 66 per cent of persons who have been in close contact with cases, of the large number of abortive cases, and those showing, during an epidemic, a great diversity of symptoms without paralysis, leads to the assumption that the disease and a resulting immunity is probably infinitely more widespread throughout the population than has formerly been suspected.

Prevention—Patients are to be isolated in the acute stages in much the same way that typhoid cases are, with the similar precautions regarding body discharges.

Nose and throat sprays of antiseptic solutions are useless, in that they do harm in removing a natural protective substance in the nasal secretion which neutralizes the virus of the disease.

The most efficient agency of control of an epidemic is the public health nurse.

The closing of schools is advised against. A study of the 1925 epidemic of poliomyelitis in California showed that the number of cases of the disease was greatest about the first week in August, and in spite of the return of over 200,000 pupils to school at that time, the number of cases in the succeeding two months steadily diminished.

PATHOLOGY OF THE NERVOUS SYSTEM IN ACUTE ANTERIOR POLIOMYELITIS

By CHARLES E. NIXON, M. D., *San Francisco*

The lesions of the nervous system produced by poliomyelitis involve both ectodermal and mesoder-

mal tissues; the most striking clinical feature—the flaccid paralysis—is due to the involvement of the anterior horn cells, but poliomyelitis is not to be considered as a disease affecting the anterior horn cells, or even the anterior gray matter primarily or exclusively, for oftentimes the mesodermal tissues—the pia, blood-vessels, and lymph spaces—are predominantly involved. Neither are the lesions found in the spinal cord alone, for almost every fatal case shows evidences of an extension of the inflammatory process in the brain stem and often, also, to the cerebrum. Many patients have symptoms pointing to involvement of the cranial nerves, and in some the process is essentially bulbar, pontine, or mid-brain, giving pupillary changes, extra-ocular paralysis, ptosis, nystagmus, facial paralysis, or difficult respiration and deglutition. A more accurately descriptive term would, therefore, be acute polio-encephalomyelitis. Whether the polyneuritic-like symptoms are due to a true neuritis or to a posterior root ganglion inflammation or central in origin, is not known. However, the process most commonly involves the lumbosacral region of the cord, and this localization gives the characteristic clinical picture.

The gross changes usually are not very marked, though sometimes conspicuous. There may be noted, macroscopically, hyperemia of the meninges, spinal cord or brain; occasionally there are hemorrhagic and necrotic areas.

Microscopically, the usual picture is an inflammatory process with mononuclear-celled infiltration of the leptomeninges extending into the anterior fissure and along the pial processes and vessels into the cord where there is perivascular infiltration, engorged vessels, glial proliferation, and chromatolysis of the ganglion cells.

ANTERIOR POLIOMYELITIS THE ORTHOPEDIC PROBLEM

By LEONARD W. ELY, M. D., *San Francisco*

From the time when the diagnosis is made, two problems are presented: to prevent deformity, and to secure the maximum amount of terminal function. The amount of residual paralysis will depend upon the extent of damage to the anterior horns of the spinal cord. We have no means of influencing this, except by keeping the patient absolutely quiet. Massage, electricity, and the various other procedures of physical therapeutics are useless. They may be actually harmful in the early stages.

During the early stages our sole purpose is to prevent deformity. Deformity is the result of gravity and of imbalance of muscle. If all the muscles of a limb be paralyzed we have little to fear it, but with the return of some of them to function, active measures of prevention become necessary. If nothing be done, the active muscles shorten and produce contractures and subluxations.

In the lower extremities the most common deformity is a foot drop, from paralysis of the anterior leg groups. The tendency to deformity is increased by the weight of the bed clothes. To forestall this we apply some form of splint. We have little to fear at this time from contractures of other

muscles. The recumbent posture and the bed clothes prevent flexion contractures of the other joints.

As the patient begins to go about, other contractures must be prevented. The treatment at this stage is more active than in the earlier stage. The object is to preserve the full range of motion of the joints in the direction of the paralyzed muscles and to get the greatest possible function by the remaining sound muscles.

After the acute stage of the disease, we get the patient up, and by exercise and training let him learn to educate his remaining muscles to perform their maximum amount of function.

At the end of about a year we shall know about how much permanent paralysis confronts us. In the less extensive cases we may proceed on the same lines. When growth has been attained, the tendency to deformity usually ceases. For cases of medium severity various operative measures have been proposed to stabilize the joints.

Tendon transference is often useful if we know its limitations and understand its technic. It is of little good to perform elaborate operations if the patient cannot use the transferred muscles to move his limbs.

With a paralyzed quadriceps extensor cruris, the patient often learns to super-extend the knee in walking, thus locking it, attaining a fair degree of function. If not, then a stiffening operation is advisable. Operations for stiffening the hip are not usually very satisfactory. For an unstable foot I prefer the Whitman astragalectomy.

Involvement of the trunk muscles may cause a marked rotary-lateral curvature. Its treatment is difficult.

To sum up: In the early stage, rest; in the stage of improvement, prevention of deformity; in the late stage, braces or operation.

TORTICOLLIS

By WILLIAM ARTHUR CLARK, M. D., *Pasadena, Calif.*

Review of the literature.

General discussion of the condition.

The results of operative treatment are very good.

The younger the patient, the better will be the result.

Complete correction and disappearance of facial asymmetry can be expected in children under twelve.

In patients over twenty the change in shape of the cervical vertebra secondary to the long-continued position of deformity may preclude a complete restoration of the normal position.

It is wise to consider carefully before undertaking operation in adults, since there may be obtained only enough correction to accentuate the crooked face, and the patient will consider that he has been made worse instead of better.

DISCUSSION by R. S. Zumwalt, *San Francisco*; John C. Wilson, *Los Angeles*; Lionel D. Prince, *San Francisco*; Walter C. S. Koebig, *Los Angeles*.

THE earliest reference to torticollis which I have found is that of 1641, when Isaac Minnius did an open section of the sterno-mastoid muscle for the relief of this condition. About the same time, Robelais first used the name by which the deformity is known today. Tulpius wrote on the subject in 1650. This, of course, is not very ancient history

in medicine, since it was about 2000 years after Hippocrates and about 1400 years after Galen. Still, it was more than 200 years before anesthetics were used and several years before the first hospital was established in the American Colonies. Minnius was one of those pioneer German surgeons who lived in a time of individual experimenting in surgery, when barbers and surgeons were still undifferentiated.

Not many years later Hendrik van Roonhuyze, who is said to have been the first to practice orthopedic surgery, was doing operations for wry-neck and harelip. Dupuytren, the ablest and best French surgeon of his time, was the first to treat wry-neck by subcutaneous section of the sterno-mastoid muscle. This was in 1822. In 1873 Samuel David Gross of Philadelphia did myotomy instead of tenotomy for lengthening.

Torticollis, or wry-neck, may be structural or functional in character. The structural type may be either congenital or acquired, but most of the cases we see are congenital. Under congenital forms we have the muscular which is most common, and skeletal which is rather rare. The muscular form is due to permanent shortening of the muscles passing from the clavicular and scapular region to the temporo-occipital region, the chief of which, in connection with this deformity, is the sterno-mastoid. The other muscles shortened, probably secondary and to lesser degree, are the trapezius and splenius capitis. The skeletal form may be due to (1) occipitalization of the atlas on one side, (2) synostosis of the atlas and axis, (3) malformations, such as wedge-shaped cervical vertebrae.

Acquired torticollis may also be either muscular or skeletal. Muscle contracture may follow injury especially in early life, but such cases are usually not permanent. Deformity of the cervical vertebrae may result from disease such as tuberculosis and a wry-neck result, but except in a very broad sense of the word this is not a torticollis. Spasmodic contracture of the sterno-mastoid sometimes occurs, usually in adults, causing a torticollis which is functional and intermittent. It comes in the class of habit spasms and occurs usually in neurotic people.

This paper deals only with the structural muscle type.

Among the total number of deformities coming under the observation of orthopedic surgeons, torticollis forms a very small percentage. Only 0.49 per cent occurred among 1444 cases in Hoffa's clinic, 2 per cent and 1 per cent according to others. At the Los Angeles General Hospital I found only three cases in the records of the past five years, and only one of these was a typical torticollis. At the Pasadena dispensary there has been one case of muscular and two of skeletal in the past three years. There seems to be no predilection to sex, but there is a slight majority of right-sided over left-sided cases. Rarely the deformity is bilateral, in which case the shoulders are high, the neck short, and the chin and face point upward somewhat.

The cause of the contracture is not known. Intra-uterine pressure, trauma, ischemia, and infection furnish the basis for various theories. The intra-uterine pressure idea seems most tenable because it

is well known that a muscle adapts its length to the distance between its origin and insertion. If this distance is decreased the muscle shortens itself proportionately. I have recently had an experience which supports this theory. A girl 4 years of age was brought for treatment of a high, right dorsal scoliosis, with right shoulder higher than the left. Soon after the application of a plaster jacket in an overcorrected position, the right shoulder low and the left high, it was noticed that a right torticollis was developing. This gradually increased until the deformity was quite marked, the head in the typical position tilted to her right and rotated to her left. When the patient was put in a permanent leather corset, however, with the shoulders level, the torticollis slowly diminished, and at the present writing, about three months since its appearance, it is scarcely noticeable. The explanation of this seems to be that the right sterno-mastoid and other muscles on the right of the neck were originally shorter than those on the left, due to the higher right shoulder, and when the position of the shoulders was reversed a tension was put on the right side which pulled the head over. If the head of the fetus is held to one side against the shoulder, by pressure of the uterus, it would seem that the muscles on that side would be shorter than those of the opposite side, and when the pressure was released the tension would produce the characteristic deformity. Siffel studied six cases of congenital torticollis in an obstetrical clinic when it was customary to use roentgen ray for diagnosis of position in pregnancy. Four of these had been rayed in utero at five to six months, and an inclination of the head was noticed in all of them. He states that this inclination is more common in breach and transverse positions, and concludes that the subsequent torticollis is due to muscle-shortening, either from arrested development or from inclination of the head in the uterus. Schubert, however, regards the intra-uterine theory as untenable, because the deformity is sometimes associated with other malformations, usually hemilateral, and because of the frequent instances of heredity. He places the origin in a primary disturbance of the central nervous system. Roger and Pourtal found anomalies of the cervical vertebrae in seven out of eight cases, but thinks that these may be secondary and that the true source of the trouble may be in the brain.

The ischemia theory is supported by Meyerding, whose paper is based on a study of twenty-six cases. He regards the condition as a chronic interstitial myositis resulting in ischemia, caused by interference with the blood supply from pressure. This, of course, is analogous to Volkmann's contracture. Eight of his cases gave a history of trauma at birth, which may have resulted in hematoma of the sterno-mastoid and consequent pressure. Other adherents to this theory are Volker, Kempf, Ritter, and Schloesmann.

Mikulicz assumes an infectious origin; a chronic inflammatory process resulting in a myositis. Stroe-meyer's trauma theory has very little support.

The microscopic pathology of the muscle has been studied by Bouvier, Krogius, Volkmann, Mikulicz, and others sufficiently to establish the character of the muscle change. There is a substitution of fibrous connective tissue for muscle, sometimes almost total

replacement, producing a fibrous band. The muscle fibers which are left have lost their cross-striations.

Symptoms are almost all objective. There is usually no pain or discomfort. The objective signs in the typical case are inclination of the head toward the side of the contracted muscle, and rotation of the face and chin toward the opposite side. This is purely a mechanical result of the muscle pull. The skull as a whole acts as a lever in its antero-posterior line, the fulcrum being at the articulation with the atlas, the power end at the occiput, and weight end in front. The sterno-mastoid insertion is on an elongated area beginning at the mastoid process and extending posteriorly, about one-fourth being on the occipital bone. The pull of this contracted muscle, then, is practically all posterior to the atlas articulation, which, of course, throws the other end of the lever (the face) in the opposite direction.

The facial asymmetry, which is present in most cases of long standing, is explained by retarded development of the skull on the contracted side, probably as a result of relatively poor blood supply. The eye is lower and the entire vertical length of the face is shortened on the affected side. Close observation will show that there is a broad vertical curve in the face, the concavity on the affected side. It has been shown in some cases that on the affected side the carotid artery is actually smaller than on the other side. Other theories which seek to explain the facial asymmetry are atrophy of disuse and irregularity in fusion of ossification centers in the skull. This asymmetry tends to disappear after the torticollis is corrected if the patient is not too old. Immediately after correction, however, it is more noticeable because it looms up in contrast to the new straight position of the head. The patient and parents should be warned of this beforehand.

Diagnosis of muscular torticollis is not difficult with an obvious contracture which is easily seen and felt. Occasionally one sees a case in which no contracture is present, and then attention should be turned to the cervical spine. It should be carefully studied by roentgenogram, as well as clinically, for evidence of anomaly or disease. A tubercular spine would, of course, be limited in motion in all directions by muscle spasm. In such a case the chin points to the same side as the inclination of the head. The same is true for any other form of arthritis in the neck. If the spine is found normal the cervical lymph nodes should be examined for inflammation, the eyes for defects in vision, the ears for suppuration, the teeth for abscesses, and the general musculature for evidence of paralysis.

In a well-developed contracture of the sterno-mastoid the only effective method of treatment is to relieve the contracture by cutting. The only question is where to cut—at the mastoid insertion, in the middle of the muscle, or at the tendinous clavicular end. Incision at mastoid, as done by Mikulicz, has the advantage of a concealed scar, but the disadvantages outweigh this. The insertion is rather extensive, and it is easy to miss some of the muscle fibers which may later cause a recurrence of the deformity. There is danger of injuring the spinal accessory nerve in this region. Myotomy in the middle of the muscle and lengthening by Z-shaped incision is done by some surgeons, but

here also the amount of tissue to be cut is large and hemorrhage is extensive. The internal jugular vein is more in danger here than elsewhere. Tenotomy near the clavicle is the method employed by most surgeons. Open incision about 3 cm. in length along the upper border of the clavicle, beginning at the proximal end and extending outward. The tendon is carefully separated from the underlying veins and cut on a dissector, which is passed under it. As soon as the tendon is cut, the head should be twisted into an overcorrected position. This immediately brings out any uncut fibers of the tendon or any other contracted tissues which can then be severed. Delrez cuts, not only the sternal and clavicular tendons, but the fascia clear back to the border of the trapezius. He does not immobilize, but allows free movement so that the deformity can correct itself. In severe cases it is advisable to resect one or two centimeters of the tendon and muscle, as insurance against recurrence. Schubert reports a case in which it was necessary to resect the entire muscle and the spinal accessory nerve to obtain a good result.

After operation the patient is more comfortable, and a better result is insured if the head is immediately immobilized in an overcorrected position. This may be done by applying a plaster cast while the patient is still under the anesthetic. Some surgeons wait until nausea and vomiting are over to avoid soiling the cast, but others have found that, on account of tenderness, it is difficult to get the patient's co-operation sufficiently to obtain at this time the extreme overcorrection necessary to insure a good result. The cast must come well down on the thorax, to furnish a firm anchorage for the head piece. In a method which I observed in Belgium during the war the cast included the shoulder and upper arm on the side opposite the tenotomy. An objection to this method is that with adduction of the arm the head tends to move back toward the original position of deformity.

In lieu of a cast there are several forms of harness-like appliances which hold the head in the proper position, provided the patient does not loosen the buckles.

Complications during or following the operation may occur. The jugular vein may be opened and serious hemorrhage result. Nerve injury may be caused by stretching of the upper spinal nerve roots while making the overcorrection. Engel reports a case of paralysis of the deltoid, biceps and supination longus, which was noticed on removal of the cast. It seemed to have been due to tension on the fifth and sixth roots, and gradually disappeared.

After immobilization for about four weeks, massage and motion is started. The chief aim of massage and passive motion is to prevent recurrence of the contracture and adhesion of the scar to the bone. Active exercises should include all the muscles around the neck and should begin early, to avoid protracted stiffness. Stimulation of the circulation by baking is a valuable aid in obtaining the softening of the tissues, which is necessary to free motion. If the patient is treated three times a week for a month, and observed once a week for two months thereafter, there will not be much chance for recurrence.

In children under about 3 years of age torticollis may be completely cured by physiotherapy without operation. The same may be said of very mild cases at any age. Treatment should be given daily, consisting of forcible stretching followed by exercises. Some form of retention apparatus may be worn to maintain as much correction as possible between treatments.

Cases on the border line, where it is doubtful whether operation ought to be done or those patients who refuse any cutting, may be given an anesthetic and the tight muscle forcibly but slowly stretched. A cast is then applied, maintaining as much overcorrection as possible. This procedure may be repeated as often as necessary, and is followed up by physiotherapy in the same manner as after open operation.

The results of operative treatment are very good. The younger the patient, the better will be the result. Complete correction and disappearance of facial asymmetry can be expected in children under 12. In patients over 20 the change in shape of the cervical vertebra secondary to the long-continued position of deformity may preclude a complete restoration of the normal position. The asymmetry of the face in such cases may not completely disappear. It is wise to consider carefully before undertaking operation in adults, since there may be obtained only enough correction to accentuate the crooked face and the patient will consider that he has been made worse instead of better.

810 Professional Building.

DISCUSSION

R. S. ZUMWALT, M. D. (960 Guerrero Street, San Francisco)—I have read Dr. Clark's very able paper, and congratulate him upon the thorough way in which he has covered the subject.

I was glad to notice the warning he gives regarding adult patients with facial asymmetry in addition to their torticollis, a very frequent combination.

JOHN C. WILSON, M. D. (1136 West Sixth Street, Los Angeles)—The subject of torticollis has been very thoroughly covered by Doctor Clark.

The question of etiology brings up some interesting discussions. The theory of interstitial myositis being the principal cause seems the most rational. A hemorrhagic myositis has been known to develop into an interstitial myositis with contractions even with massage, and it would seem that trauma during passage through the birth canal, with ensuing hemorrhage and fibrosis, must be regarded as the most probable cause. If such is the case the term "congenital torticollis" becomes a misnomer.

Correction as early as possible is always proper because of the danger of a cervical scoliosis, which is certain to develop during the period of growth if the deformity of the head is not corrected.

Serious accidents have been reported following the immediate application of plaster of paris dressing after operation, probably due to stretching of the vagus nerve. As a rule, the head can be held in position by sand-bags or adhesive plaster for two or three days, and a plaster dressing may then be applied in safety without lessening the correction.

If the condition has been of long duration, structural changes in the cervical spine become the most important factor in the treatment. Exercises, both active and passive, may be necessary for several months.

LIONEL D. PRINCE, M. D. (Flood Building, San Francisco)—Doctor Clark has given us a very excellent paper on torticollis. The etiology of congenital torticollis, in common with other congenital anomalies, has always been a source of controversy. While there is no doubt that the cause and pathology may be definitely determined in certain cases, the origin of cases which are either associated

with combined congenital anomalies or where heredity is in evidence has not as yet been explained. The pathology frequently seen, such as lessened contractibility of the involved muscles or a fibrous myositis, except in those cases where there is a history of trauma or infection, may be secondary changes resulting from the anomalous condition.

The facial asymmetry associated with a case of torticollis is purely static and simply another instance of accommodative anatomical changes to abnormal posture. If the one-sided position of the head is corrected during the developmental period the asymmetry will gradually disappear. One occasionally sees this same type of asymmetry in children where the head has been tilted over a period of a number of years, as a result of an acquired condition such as tuberculosis of the cervical spine.

The operation of choice is that best described by Clark, namely, a tenotomy at the lower end of the muscle. Subcutaneous tenotomy is dangerous and should never be employed. In most cases it is necessary to incise both the sternal and clavicular attachments of the muscle.

The maintenance of the overcorrected position in a plaster paris splint, following operation, is extremely essential. The application of the splint two or three days after the operation is preferable in those cases where the type or disposition of the patient will permit it. A precaution which I have found valuable, especially where the cast is to be applied immediately after the operation, is to have in writing, for reference, the desired position of overcorrection of the head.

W. C. S. KOEBIG, M. D. (1052 West Sixth Street, Los Angeles)—Doctor Clark has covered the subject of torticollis in a very thorough manner.

The etiology of torticollis offers a large field for discussion. There is much to be said in support of both those who hold the theory that it is congenital, and those who think that it is acquired. It would be reasonable to suppose, however, that the men who hold the theory that difficult delivery is a result rather than a cause of torticollis, owing to the abnormal relationship of the parts in the birth canal, have much to support them. There can be further injury to the muscles during birth. It would be interesting to note the number of cases of muscular torticollis there are following the Caesarean operation, and compare the percentage with that following delivery in the normal way. If the developmental theory holds true, then the percentage would not be diminished by Caesarean operation.

While the operation of choice is a tenotomy of the lower end of the muscle, in selected cases the operation in which the sternal branch is divided close to its insertion and the clavicular branch as high up as possible, followed by uniting the two cut ends, seems to be ideal. Convalescence is shorter and there is not so much formation of scar tissue.

The early maintenance of the head in overcorrection, held by plaster, is exceedingly dangerous, except in the very young, where the underlying tissues are pliable. The shortened blood-vessels, nerves, and other structures may be injured. Application of the plaster splint in as much correction as possible without using too much force, is preferable. In a day or so the cast can be split and more correction given. This can be followed every alternate day until the full amount of overcorrection is obtained. This method will give uniformly good results if judiciously carried out.

According to a Decision of the Judicial Council, A. M. A.—"By the term 'contract practice,' as applied to medicine, is meant the carrying out of an agreement between a physician or a group of physicians, as principals or agents, and a corporation, organization, or individual, to furnish partial or full medical services to a group or class of individuals for a definite sum or for a fixed rate per capita."

"Let everyone in every department of medical endeavor be forgetful of self, but mindful of the greatness and majesty of their calling, bend every energy toward the welfare of their patients. Let no diagnostic stone remain unturned to ascertain their trouble and no therapeutic measure neglected to insure their recovery."—*F. W. Mann, Ohio Med. Jour., Oct. 1, 1925.*

X-RAY DEEP THERAPY INSTALLATIONS IN CALIFORNIA

By W. EDWARD CHAMBERLAIN, M. D., and ROBERT R. NEWELL, M. D., San Francisco

On theoretical grounds the ionizing action of x-rays should afford the more useful measure of their intensity for biologic purposes.

An ion differs from a molecule by virtue of the electric charge it carries.

For about six months we have used the method of direct measurement of x-ray output and found that with the same setting, giving the same sphere gap voltage and with same milliamperes load, the x-ray output varied only a few per cent.

DISCUSSION by Frederick H. Rodenbaugh, San Francisco; John M. Rehfisch, San Francisco; Albert Soiland, Los Angeles; W. O. Weiskotten, San Diego.

IN THIS country x-ray dosages are usually recorded in milliamperes minutes, specifying the voltage, filter, distance, and area irradiated. But we have known for years that the same power input does not yield the same amount of x-ray on different machines, or with different tubes.¹

Various units have been advanced for specifying the x-ray intensity or total dosage at the patient's skin. Many of these depend upon relatively insensitive methods of measurement. The H unit (Holzknecht) depends on change of color in barium platino-cyanide, which is among the least sensitive. The X unit (Kienbock) depends on blackening of photographic paper, and is slightly more sensitive. The Furstenau intensimeter depends on changing conductivity of selenium and is sensitive, but is subject to theoretical and practical objections.

On theoretical grounds the ionizing action of x-rays should afford the most useful measure of their intensity for biologic purposes. Inasmuch as the x-rays which act are those which are absorbed, therefore the degree of ionization in an absorbing medium containing the same range of atomic weights as vital tissue should give a satisfactory measure of biologic dosage. The close correlation between biologic action and ionizing action in air has been demonstrated by several investigators.

An ion differs from a molecule by virtue of the electric charge it carries. Inasmuch as the charge is a definite quantity, one can use electrical units to measure numbers of ions. The unit usually chosen is e, the electrostatic unit of charge, which equals the charge on 2,100,000,000 monovalent ions. A unit of x-ray dosage has been derived from this and named E. It is that amount of x-ray (intensity x time) which will produce 2,100,000,000 ions in 1 cc. of dry air (under standard conditions of temperature and pressure).² It can be measured easily and accurately by measuring the one electrostatic unit of electricity that those 2,100,000,000 ions will ferry across an air gap. Such small quantities of

electricity are measured by an electrometer, an electroscope or a sensitive galvanometer. We have chosen the latter instrument as being the most easily calibrated and giving the fewest insulation difficulties. The one we used gives 2.5 mm. deflection for a current of 1 e per second. In order to get large deflections we used ionization chambers of large volume (210 cc.).

For about six months we have used this method of direct measurement of x-ray output and found that, with the same setting giving the same sphere gap voltage and with same milliamperes load, the x-ray output varied only a few per cent. Dr. J. M. Rehfisch of this city has had the same experience over a much longer period. The output of the two installations differed markedly. We get 1.3 E for each milliamperes minute with $\frac{1}{2}$ mm. of copper at 70 cm. He gets 2.1 E for each milliamperes minute with the same filter and phantom. This made it appear that x-ray dosage had better be recorded in E. This would be easy if we should determine for each laboratory exactly how many E per minute is delivered at its standard setting.

We, therefore, carried our ionization chamber imbedded in the surface of a large paraffin phantom and our galvanometer and calibrating instruments to the various deep therapy laboratories of California. We are supplying each laboratory with the actual x-ray intensity in E per minute produced at the surface of a standard phantom under a set of standard operating conditions. We have also compared their own filters. In order to apply these intensity determinations to ordinary operating conditions, it is only necessary to apply factors for distance, port-size and thickness of filter.

We have also compared the 10 cm. depth dose in paraffin for all the machines measured and find no significant variation. Paraffin was chosen for the phantom because of the necessity of its remaining constant during transportation. We plan to make comparisons between paraffin and water, and to transmit to each laboratory any important corrections.

Stanford University Hospital.

DISCUSSION

FREDERICK H. RODENBAUGH, M. D. (516 Sutter street, San Francisco)—The importance of Doctor Chamberlain's and Doctor Newell's measurements can hardly be estimated, particularly when it is the endeavor of this society to standardize, and compare the results of radio therapy of various laboratories throughout the state.

The greatest stumbling block to therapy has been the wide variability of methods of measurement. Each worker has biologically calibrated his own machine; a relatively inaccurate, and difficult procedure, and it has been very difficult to translate results from one installation to another.

The most important step in estimating the effects of radiant energy is to know the quantity required to produce a constant biologic response, if such a result is to be duplicated. Chamberlain and Newell, in calibrating our installations, have performed a very valuable service to roentgenology, and I am certain that their careful work will extend the usefulness of radio therapy.

JOHN M. REHFISCH, M. D. (St. Luke's Hospital, San Francisco)—This work of Chamberlain's and Newell's is extremely important. Aside from the invaluable data that they have given us in enabling us to transliterate terms of dosage with one machine into terms of dosage with another, it seems to me that they have made two

¹ The difference in x-ray output of different x-ray tubes has proven a very important factor in the case of the Universal Coolidge Tube, operated with moderately light filters or without filters. With the relatively high filtrations used in High Voltage Therapy, however, the differences become much less important. Using a filter of 0.05 mm. copper, we have found differences as great as 12 per cent.

² Corrections for humidity, temperature and barometer are negligible.

important contributions, contributions which I have been able to check and confirm in my own laboratory with different instruments and using a somewhat different technical method. First, they have exploded the honored fallacy that there is any difference in the x-ray output of different tubes under deep therapy conditions when a heavy metal filter is used. Variation from tube to tube is, in every sense of the word, negligible. Second, they have proved that, regardless of the fact that the various types of deep therapy machines in the market give very various x-ray intensities under equal conditions of milliamperage and filtration, the quality or penetrating power of their various beams is substantially, and for all practical purposes, the same. This is due to a fact that Chamberlain and Newell have not thought it worth while to bring out, but which I think should be mentioned, since it seems to be so generally ignored even among roentgenologists, and this is—that the penetrating power of all x-ray beams, under equal conditions of heavy metal filtration, is practically uniform, though their exciting voltage may vary anywhere from 120,000 to 250,000 volts. This, of course, is due to the much neglected fact that the overwhelmingly predominant constituent in the x-ray beams we use at and between and above these voltages is the characteristic radiation of the tungsten target. Although Milliken's law, that the minimal wave length varies constantly with the exciting voltage, is a scientific truth, it is not of any practical importance to radiotherapists on account of the fact that the small quota of gradually decreasing wave-lengths, produced by the gradually increasing voltage applied to the tube, is entirely overshadowed by the relatively enormous output of tungsten characteristic. A very useful article could be written upon the subject and I look to Chamberlain and Newell, to whom we are already so much indebted, to write it for us.

ALBERT SOILAND, M. D. (1407 South Hope street, Los Angeles)—One of the most important phases of x-ray therapy is the proper standardization of the dose. In the many complexes of radiation therapy, the measuring of the x-ray output can be accomplished if we avail ourselves of the lessons given in this valuable contribution by Doctors Chamberlain and Newell. We should all work to the end that will standardize our own instruments so that we can indicate intelligently to our colleagues the sum total of x-ray energy used in any given case. Our laboratory will be glad of an opportunity to co-operate with Chamberlain and Newell in this splendid work.

W. O. WEISKOTTEN, M. D. (First National Bank Building, San Diego)—For years it has been the aim of roentgenologists to develop a standardized technique for both diagnostic and therapeutic work in order that this technique may be the better described and duplicated as the occasion would demand. With the newer diagnostic apparatus and refinements in roentgen laboratory methods, it may be said that we are on our way toward more satisfactory end results. The aim of the diagnostic technician is to produce a perfect film from the diagnostic standpoint and be able to duplicate this film any time, regardless of the size of the patient, within reasonable limits. We feel that we have nearly approached that standard. But when the question of roentgen dosage is considered we have other problems and factors which enter into the proposition—the very problems so well described in this article. After all is said about x-ray dosage, it is the biologic effect that must be standardized and the method of measurement which produces the accurate biologic standard is the method to be employed. The older methods of dose measurement have their disadvantages and it seems to me that Doctors Chamberlain and Newell have the right idea. The solution of the problem lies in the standardizing of the output of each individual installation so that duplication of results may be obtained and accurate dose units may be described in literature for the benefit of others.

Health is not to be purchased by sloth and idleness; for those are chief inconveniences of sickness; and there is no difference between him who thinks to enjoy his health by idleness and quiet, and him who thinks to preserve his eyes by not using them, and his voice by not speaking. For such a man's health will not be any advantage to him in the performance of many things he is obliged to do as a man.—*Plutarch's Rules of Health.*

GASTRIC MOTOR DISTURBANCES AND THE VISUALIZATION OF THE APPENDIX

By R. C. SHAWHAN, M. D., *Los Angeles*
(From the X-ray Service, Veterans' Bureau Hospital
and National Military Homes for Disabled
Volunteer Soldiers)

THE stomach is the chief regulator of the rate of small intestine motility; the rate in the jejunum is very rapid, periodic and segmental; and the ileal motility lacks these characteristics. The rate decreases from the duodenum to the ileocecal valve. This valve has a dual function; to prevent a too rapid flow of intestinal contents and to prevent a reflux of cecal contents into the ileum. Any pathology which might disturb these factors will influence the intestinal motility.

In sthenic types the intestine is high; in asthenic it is low, the coils are less discrete, and demonstrate a less degree of tonus. There are modifications and degrees of conditions and habitus, but organic diseases make definite changes readily demonstrable in the x-ray film; for instance, obstructive carcinoma of the colon results in a proximal dilatation, reflexes diminished, motility lessened, stasis, defects in barium fillings, and reflex disturbances noticeable throughout the intestinal canal. While a duodenitis, colitis, or small ulcer cause a hypertonus, hypermotility, the meal passes so rapidly that the films are ill-defined or must be taken in rapid succession to give definite knowledge; right here the fluoroscope is our best friend. In fact, the day will soon come when the gastro-enterologist will enter the fluoroscopic rooms with the roentgenologist and see for himself. While a good film is the best argument for a statement, still a first-class demonstration with the fluoroscope will make many reports superfluous. The best time to ask questions and pick flaws is at the fluoroscopic seance, where any turn or movement has its peculiar movement visualized for only a moment, then it is lost forever.

The routine x-ray examination in most hospitals is to review the esophagus, see the meal enter the stomach, view the duodenal cap, take a few films, have the patient return in six hours; at this time the small intestinal canal is well filled and emptying. To see this filling, observations should be made more frequently and the passage of the barium observed. If the physician is present at the examination no films will be necessary, or, if taken as a matter of record, may be made at definite intervals.

There is a wide range of anatomical variation from the usually accepted normal in form, position, density, capacity, and patency which may not be inconsistent with perfect working ability. The same individual may operate his alimentary canal differently under different conditions. The roentgenologist must keep these various factors in mind, and only by constant vigilance, by repeating hundreds of similar examinations and constantly eliminating the ever present defects can he come to conclusions which are valuable in diagnosis. Probably we may get definite information of a more satisfactory character if we are privileged to ray the second generation. Some of our favorite diagnosis may turn out to be family characteristics if watched through these changes; or be the metamorphosis of evolution. Anatomical members which the surgeon is readily

eliminating from society may be the embryonic formation of a future useful organ. Let us make progress slowly, view with leisure freakish advances and reserve our opinions for a more sane expression of facts.

That the appendix does or does not fill is unimportant. What takes place after filling is of real moment. Like diverticulitis, which implies inflammation, diverticulosis means only a small inoffensive pouch. Emptying is far more potent, and still more significant are the effects in the alimentary canal.

Most appendices are discovered in routine gastrointestinal series work and are visualized without any special technique, although Knox says by special care from 80 to 90 per cent can be seen. I do not know of any means by which I can either cause the appendix to fill or keep it from filling. Barium enemas seldom fill the appendix, although they may cause an apparent incompetency of the ileocecal valve, which is in no other way pathological.

The gastric findings which are so frequently associated are vigorous peristalsis, hypertonus, pylorospasm, irregular hypermotility, defective duodenal cap, and duodenal ulcer, the absence of reversed peristalsis, pyloric adhesions, gall-stones, and frank organic lesions.

Visualized appendices are classified as follows: Angulated, kinked or coiled, beaded, broad, narrow, long, short, high, low, horizontal or vertical. The appendix may be well filled, yet so placed behind a well-filled cecum that it is not seen. Skinner states that the visualized appendix, after the age of 30, is pathological. Case says that he has seen barium retained for six months. I have seen the visualization at one examination and not a trace to be found in another in the same patient. Some appendices will fill and empty in a rhythmic manner quite as regular as the stomach. The fact that it fills or does not fill has little to do with determining the pathology. One may fill at 10 or 50 years of age; it may empty in twenty-four hours or may retain the barium for months and not be pathological. What really takes place in the appendix determines the pathology; and a diseased organ will also cause gastric and intestinal disturbances registered on the x-ray film and in the fluoroscope.

Visualized appendices with hypertonic stomach, vigorous deep peristalsis, irregular motility, pylorospasms, cecal stasis, duodenal ulcer, and adhesions in the right iliac fossa, can safely be classified as x-ray evidence of chronic appendicitis or the determining etiological factors of acute appendicitis.

I do not like the term laboratory diagnosis or x-ray diagnosis. Let us simply report our findings. We are all physicians collaborating our specialties for the benefit of mankind. My enthusiasm may cause me to see more and place more importance on small matters; your broader practice may cause you to consider bigger things; the patient's anxieties and his responsibilities to his family may determine his decisions—but each of us when we seem cocksure may stand aghast at the autopsy findings.

Take the reports of any specialist and trim them of their technicalities, their fads and their fancies, clear away the chaff. You may not have much left, but it will serve a genuine purpose and may be the one strong link in the chain of diagnosis.

X-RAY DIAGNOSIS OF KIDNEY TUMORS

By MARK BROWN, M. D., Ogden, Utah
(From the Department of Roentgenology, Dee Hospital)

Radiography a very important aid in the diagnosis of kidney tumors.

DISCUSSION by George Lee Eaton, San Francisco, and Lloyd Bryan, San Francisco.

IS IT necessary to make pyelograms in order to diagnose kidney tumors? We find that by using a fine focus tube and a low spark gap we are able to outline the normal kidneys in a patient up to 175 pounds. We also have found that in patients less than 180 pounds the kidney outlines are more distinct without a Bucky diaphragm. This is because soft tissue shows more distinctly when a three-inch gap is used than when a five-inch gap is used, as is necessary with a Bucky diaphragm.

If the kidney tumor is on the right side and a differential diagnosis from enlarged gall-bladder is desired, it is necessary to make an exposure with the patient on his abdomen. If the outline of the shadow is smaller and clearer when the patient is on his back than on his abdomen, the tumor is nearer the back and closer to the plate, and hence is probably a kidney shadow.

In four recent patients, radiographs showed abnormally shaped kidney shadows in which a diagnosis of kidney tumor was made. In three of these, operation confirmed the diagnosis, while in the fourth, autopsy revealed a kidney tumor.

CASE RECORDS

CASE 1—Male, 35. Complaint, hematuria. He had three attacks within one year, each attack lasting two days. No pain and no other symptom and no tumor palpable. He had been cystoscoped three times previously and the source of hemorrhage was not ascertained.

Roentgenograms showed a normal shadow of the right kidney. The left was enlarged and irregular as shown in Figure 1. The cystoscopic examination showed a normal bladder and ureteral orifice. The urine from the left ureter was blood stained. The patient would not consent to an operation until he had had two subsequent attacks and began to have a dull constant pain in the kidney region. Operation revealed a kidney tumor the size and shape of the x-ray shadow. The pathological diagnosis was hypernephroma.

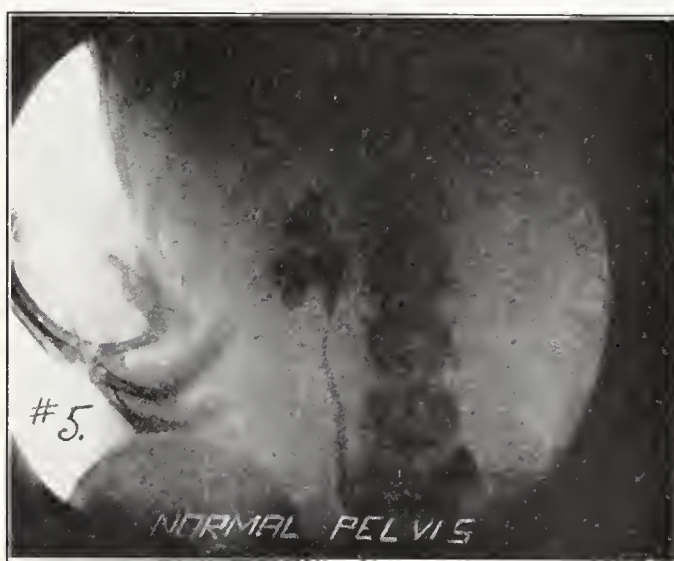
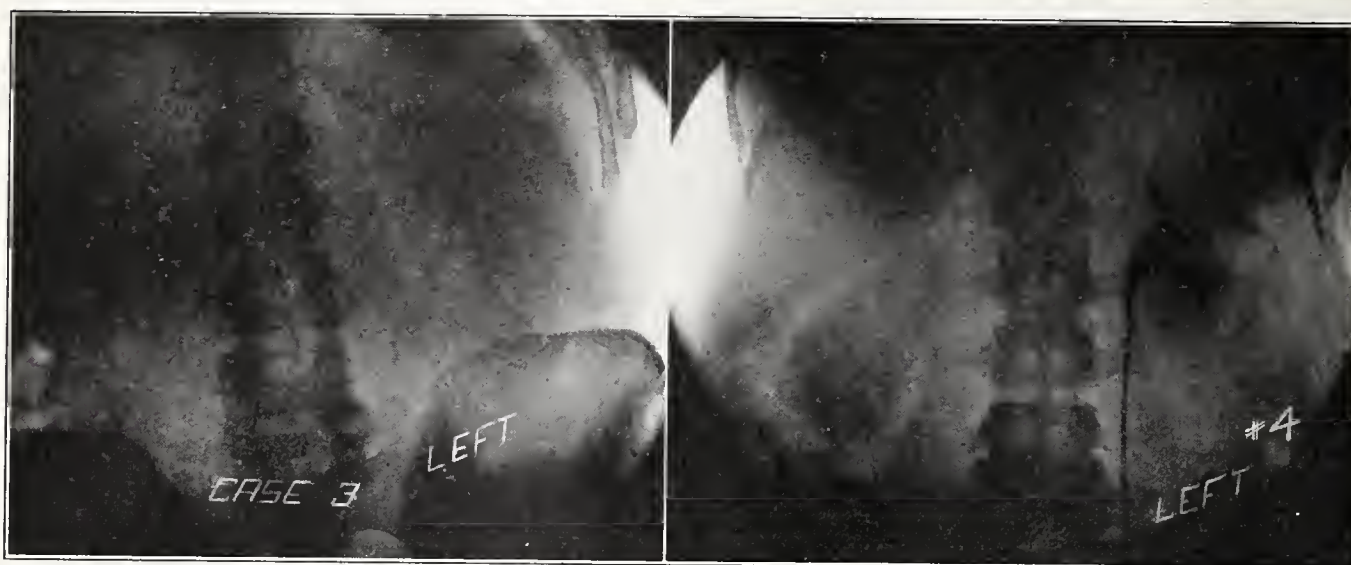
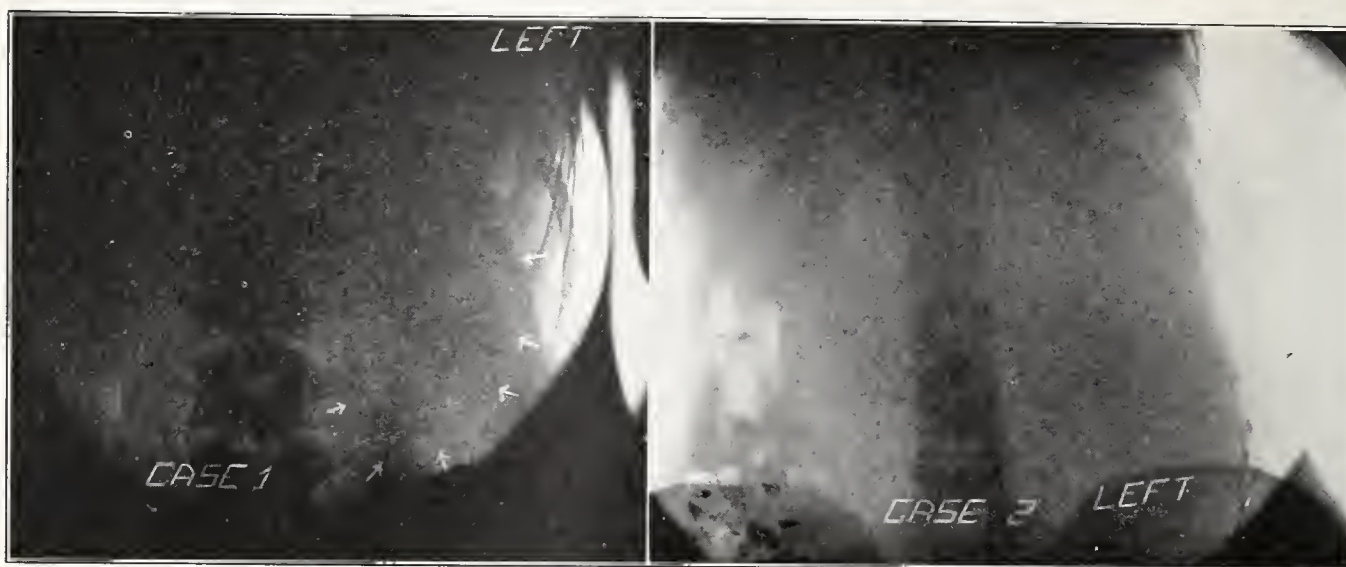
CASE 2—Female, 28. Complaint, pain and a mass in the upper left abdominal quadrant. There was no haematuria or loss of weight. A barium meal and enema showed the mass to be behind the peritoneum. Functional kidney test revealed no phenol-sulphon-phthalein from the left ureter.

X-ray of the kidney region showed a normal right kidney. The left was enlarged, the lower border reaching two inches below the iliac crest. An operation showed a large kidney tumor adherent to the surrounding structures. As it was impossible to remove the tumor the incision was closed. At autopsy the kidney was removed and found to be the same size and shape as the x-ray shadow. Pathological diagnosis: hypernephroma.

CASE 3—Male, 30, weight 180. Complaint, haematuria, but no pain and no palpable mass. Patient had previously been cystoscoped and a diagnosis of papilloma made. Cystoscopic examination at this time revealed the bladder area near the left ureter covered with numerous papilloma.

X-ray showed the right kidney shadow normal. The left was enlarged and irregular. This patient refused operation and lived eight months. An autopsy showed the kidney tumor to be a hypernephroma.

CASE 4—Male, 24. Had gonorrhea two months ago. He



was treated up to two weeks ago with deep instillation of mercurochrome. Two weeks ago he developed fever and pain in the abdomen over the gall-bladder region. One week later a tumor appeared in the upper right quadrant of the abdomen. There was only slight tenderness in the front and none in the back over the kidney.

Five physicians examined this patient, and, because there were no kidney symptoms except a small amount of pus in the urine, which was probably due to the chronic gonorrhea, kidney trouble was ruled out. As the tumor was apparently just under the abdominal wall, a pronounced diagnosis of abdominal tumor was made and the patient referred to the radiologist for examination

and report. The radiological diagnosis of enlarged right kidney caused some surprise to the surgeons. An abdominal incision was first made, but was immediately closed. Incision from the back exposed a very large pus kidney which was removed.

My technique for kidneys is 20 milli-amperes, 20-inch distance with compression, 10 seconds exposure, and only $2\frac{1}{2}$ to 3-inch spark gap.

DISCUSSION

GEORGE LEE EATON, M. D. (Medical Building, San Francisco)—It is a most important question to decide which technique to use when we are confronted with some remote kidney lesions. Roentgenologists are making improvements, and new apparatus to further aid this speciality, as they recognize that perfect kidney pictures that will show distinct lesions of the same are rare.

I am a great believer in the art of x-ray, with radiographic catheter, which, when placed in the kidney pelvis, will answer a two-fold purpose—first the collection of urine and general position of the kidneys, and second, the course of the ureter. With such a plate made upon the Bucky diaphragm, all foreign shadows may be eliminated if not in the ureter or kidney. A second plate follows with each kidney pyelogram and should show any pathological contours of the kidneys, or abnormalities of the calices.

LLOYD BRYAN, M. D. (135 Stockton street, San Francisco)—Doctor Brown is right when he says that it is not always necessary to make pyelograms in order to diagnose kidney tumors. However, I feel that, in the majority of cases, pyelograms, in addition to plain films, would be a much safer procedure. A large kidney shadow, of course, does not always mean a tumor of the kidney. Occasionally congenital lesion, resulting in a

large kidney with a double pelvis, will give a large shadow. Also simple compensatory hypertrophy of one kidney, in cases where the opposite kidney has been disabled by a diseased process, such as tuberculosis, a large pus kidney, hydronephrosis, and occasionally large tuberculous kidneys will also cast large shadows. While in the plain film, the shadow cast by these several conditions may be exactly similar, the picture with a pyelogram will usually help to differentiate between these several conditions. In some instances, with extreme enlargement of the kidney, a definite kidney shadow is difficult to determine. In these cases usually the normal shadow of the psoas muscle is obliterated, and we have found that this has been a definite help in helping to diagnose lesions of the kidney.

SUPRASYMPHYSEAL CERVICAL CAESAREAN SECTION

WITH REPORT OF FOURTEEN CASES

By JOHN VRUWINK, M. D., *Los Angeles*

When dystochia presents itself late in labor and the management of labor has been relatively aseptic, suprasymphyseal cervical Caesarean section will give good results.

It should be forcibly emphasized that the operation has distinct limitations and frankly infected patients are better managed by Porro operation or craniotomy.

DISCUSSION by E. M. Lazard, *Los Angeles*; L. A. Emge, *San Francisco*; J. Morris Slemons, *Los Angeles*.

CLASSICAL Caesarean section offers an easy method of delivery. The relatively simple technic and immediate good results are not, however, always balanced by a smooth convalescence and an absence of complications. The end-result is necessarily of much greater importance than that labor be terminated at a time of distress. A smooth convalescence is dependent, to the largest extent, upon obstetrical judgment displayed in choosing the time for abdominal delivery. Low mortality and morbidity has again and again been demonstrated to be directly proportionate to the time of election for Caesarean section. Consequently, indications and contra-indications will always be the most important factors controlling the success of this method of delivery.

When the time of election for a patient in good general condition is at or near term, or shortly after the onset of labor, with intact membranes and no vaginal manipulations, complications following classical section will continue to be rare. The prognosis of such a patient is that of the ordinary uncomplicated laparotomy. In general, however, such indications too frequently are not discovered until labor has advanced beyond this opportune time. Then the more difficult methods of delivery, through the natural passages, must be considered and obstetrical judgment is never of greater importance. It is hardly necessary to comment on the fact that a Caesarean section is frequently chosen in lieu of formidable operations from below. The end-results of classical section at this time are not always unfavorable, but given the conditions that obtain after twelve hours of real labor, with several vaginal examinations and manipulations of sorts, especially in the presence of ruptured membranes, the maternal prognosis becomes dubious.

Delivery from below, in the presence of dystochia, is always of serious consequence to the mother and

baby. There is a real danger in Caesarean section when conditions are not favorable, but this same danger is not entirely eliminated by vaginal delivery. High forceps, forceps on the unengaged head, is of such serious consequence that it is but rarely attempted by the obstetrician today. Version and extraction, late in labor, when the lower uterine segment is thin, is a favorable condition for rupture of the uterus. Even craniotomy and decapitation in neglected cases have a serious morbidity and mortality.

Late in labor there may be an indication for delivery, but the conditions are neither favorable for a classical section, nor are conditions right for delivery from below. In any type of vaginal delivery, the degree of effacement and dilation of the cervix is of the greatest importance. Under such conditions the delivery of a live child is worthy of commendation, but too frequently such a termination is effected at a frightful cost to the mother. There is not only a definite mortality, but practically all the patients who survive are infected and so traumatized that plastic surgery is eventually required.

The real danger of classical section late in labor is sepsis. It has been proven many times that morbidity and mortality depend directly on the duration of labor, the number of vaginal examinations and hours that the membranes have been ruptured. After classical section, peritonitis is imminent in potentially infected cases whether the uterus is closed in one, two, three, or four layers; whether the abdominal incision is entirely above or below or partly above or partly below the umbilicus; whether the uterine and abdominal incision is closed with silk-worm gut, silk, linen or catgut, interrupted or continuous suture. The danger of sepsis is real, and since we know lochia can pass between the stitches into the peritoneal cavity, it is reasonable to believe that bacteria can pass from the uterine cavity into the peritoneal cavity.

The active etiological factor of a spreading peritonitis after uterine incision is in the uterus after suture and sepsis results from the ability of the bacteria to find their way into the peritoneal cavity. Shock and traumatism of the gut are important predisposing causes, but to prevent sepsis means safeguarding the contents inside the uterus, either by operating before infection gains entrance or by removal of the uterus after infection; or by peritonizing the uterine incision so that infection remains extraperitoneal. Most authorities believe that the spill is of little serious consequence.

Surgeons long ago recognized this danger and careful peritonization is meticulously carried out after removal of the appendix, and after hysterectomy in the care of the cervix. Obstetricians have long recognized the danger attending classical Caesarean section late in labor, and efforts were made early to perfect a technic whereby the child could be removed without exposing the peritoneal cavity to infection. In 1807, Jorg first suggested a true extraperitoneal delivery. The modification of the low cervical section advocated by Beck of Brooklyn and De Lee of Chicago is not a new operation. There have been twenty or more variations of the original operation. The technic simultaneously evolved by them does, however, more nearly approach the aim

of clean surgery, in that the incision is peritonized in such manner that infection, when present, is confined outside the peritoneal cavity.

The technic is much more difficult than that of the classical section but not a valid contra-indication to its use, and the surgeon accustomed to abdominal surgery should find no difficulty in its execution. The skin incision may be either through the midline or a Pfannenstiel incision. The longitudinal incision begins at the pubis and extends 14 centimeters toward the umbilicus. The muscle is divided to the right of the incision, the fascia and peritoneum opened as in the ordinary laparotomy. Such an incision exposes the thinned-out lower uterine segment. The intestines are not visible. A pack is not necessary.

The visceral peritoneum is incised transversely in the midline at a point about 2 centimeters above the bladder and extended to right and left in a curvilinear incision. The visceral peritoneum is stripped from the uterus above and with the bladder separated below. In this manner, exposure is obtained of an area in the lower uterine segment through which to extract the child. The uterus is then incised longitudinally and the child extracted. The extraction is carried out by the operator placing his finger in the baby's mouth and rotating the face into the incision. The forceps, with the cephalic curve to the occiput, are then applied. The liquor amnii and blood is advantageously removed by suction. Allis' forceps or catgut sutures at the upper and lower end of the incision, inserted before the uterine incision, aid in placing sutures. A No. 2 chronic twenty-day catgut suture is either used as a continuous suture with closure in two layers or interrupted sutures are used. Care is exercised in placing the suture down to, but not through, the mucosa.

De Lee has demonstrated a facial layer between the peritoneum and uterine muscle, and this is then closed with a continuous suture. The upper flap of peritoneum is then carried down over the upper two-thirds of the incision and tacked with plain gut-interrupted sutures. The lower flap with the bladder is then carried over the upper flap and sutured with a continuous stitch. The incision in the uterus is thus peritonized and within a few hours a barrier is raised which prohibits a ready access of the uterine contents from gaining entrance through and between the stitches into the peritoneal cavity. Bleeding is not severe if separation of the peritoneum is carried along the lines of cleavage and the uterine incision is in the midline.

It is not necessary to give pituitary extract or ergot because incision is in the non-contractile lower uterine segment. After the baby has been extracted, pituitary extract may be given to hasten separation of the after-birth and to control bleeding from the placental side. Manual removal may be required for the placenta, though it is better to allow separation to occur spontaneously and deliver between the stitches.

There is obviously a distinct advantage in the low cervical section, provided it will do what has been claimed for it by Beck and De Lee. Newell is of the opinion that no operation which conserves the uterus offers a good chance of preventing peritonitis because bacteria may find their way through the un-

opened peritoneum. In the German clinics, the operation has been carried out on patients with a fever with good results. Beck, in his first article, reports a personal series of thirty-seven cases with one death, probably due to eclampsia. He reported later a series of eighty-seven sections by various operators with three deaths, one due to septicemia, hemolytic streptococci were found in the blood on the fifth day; one from peritonitis, probably due to transmission of infection through lymphatics; and one from postpartum hemorrhage two hours after delivery in a patient with an atonic uterus after prolonged labor. An incidence of mortality from sepsis of 2.8 per cent in seventy-one potentially infected cases. Fifty-one patients had been in labor five hours or more. Membranes were ruptured in fifty-three, and more than ten hours in thirty-three cases. There were only twenty-five of seventy-four patients who had not been examined vaginally before operation.

In a personal communication from the Chicago Lying-in Hospital, Doctor Cornell states that there have been 256 of these operations, with one maternal death. This occurred in a primipara aged 45, weighing 278 pounds. She had been in labor four days with ruptured membranes forty-eight hours or more and had a blood pressure of 208/160, with marked albuminuria and edema. Not all of the 256 patients were operated on by members of the staff. Doctor Pierce writes that sixty operations have been done under local anesthesia.

Phaneuf reports five cases with no complications. He reserves the Beck operations for clean cases and the Hirst operation for doubtful cases.

Welton reports eleven cases, seven with potential infection at time of operation. There was no peritonitis and maternal mortality was nil.

Hirst and Van Dolsen report 107 cases done by the low cervical route. All were advanced in labor, in a condition unfavorable for classical operation. Two died, one due to mesenteric embolism and one from acute dilation of the heart, due to chronic myocarditis eighteen days after operation. There were no cases of peritonitis.

John A. McGlinn of Philadelphia says that after twenty years of experience he holds the so-called newer operations with a certain degree of skepticism and, in conclusion, says: "The operation is over a century old. There has hardly been a new thought advanced, pro or con, except variations in technic. The operation has never been generally accepted and it never will be. While it has many advantages, they are overshadowed by its disadvantages. It is a laudable object to perfect technic to reduce mortality, but our real problem is to raise the standard of obstetric knowledge and practice as to make the operation unnecessary."

There should be no necessity for this type of operation, an operation designed to meet an emergency when potential infection has occurred. All patients, when unexpected dystochia arises, should have been operated by section just before or shortly after the onset of labor. For a century there has been a demand for an improved technic. For a century there has been a need for some method of terminating labor; to obviate the bad results late in labor of classical section, and the operative measures necessary from below. Even patients with adequate

prenatal care and during labor may arrive at the point where delivery from below is dangerous and classical section contra-indicated.

At the Los Angeles General Hospital we have been ultra-conservative in advising the low cervical section. There were only eleven cases in the past year, not a great number, and yet each section but one was performed on a patient potentially infected and for that reason of importance. Sections were done on the service of L. G. McNeile and Lazard, by Farrel, Irwin, and Vruwink.

197262. Mexican, age 19, para 1. Wassermann negative; labor 46 hours or more; dilatation of cervix 3 cm.; B. O. W. ruptured 46 hours or more; vaginal examination after rupture of B. O. W., three or more by midwife; O. L. A. head above inlet; generally contracted pelvis. Suprasymphyseal Caesarean section Nov. 9, 1923. Puerperium afebrile and uneventful.

197725. White, age 18, para 1. Wassermann negative; labor 36 hours; dilatation of cervix 2 cm.; B. O. W. ruptured 8 hours or more; vaginal examination—several at home before and after rupture of B. O. W.; 2 in hospital; O. L. A. head above inlet; suprasymphyseal Caesarean section Oct. 23, 1923. Puerperium febrile 102.6 twelve days; 101 four days; 100.6 six days; considerable drainage throughout lower angle of incision; post-operative course uncomfortable because of gas pains.

198642. Mexican, age 34, para 1. Wassermann negative; labor 48 hours or more; dilatation 2 cm.; B. O. W. ruptured ten hours; had "private doctor" first 12 hours; number of vaginal examinations not known. Advised by City Maternity Service to go to hospital after 12 hours of labor; refused; one vaginal examination in hospital. O. D. P. head above inlet; generally contracted and flat pelvis; suprasymphyseal Caesarean section Nov. 9, 1923; puerperium febrile 101.4 fifteen days; 101.8 twelve days; 103.4 one day; 102.4 two days; temperature dropped when drainage through lower angle of incision became established; post-operative course uncomfortable because of gas pains; left hospital well on thirtieth day.

199811. Mexican, age 19, para 4. Wassermann suspicious. Classical Caesarian four years ago with first pregnancy; second and third pregnancies terminated spontaneously; labor 64 hours; no dilatation. B. O. W. intact; two, probably more, vaginal examinations before entering hospital; transverse presentation; thin lower uterine segment; suprasymphyseal Caesarean section Dec. 2, 1923. Puerperium afebrile and uneventful.

214187. Colored, 19, para 1. Wassermann negative. Labor 48 hours or more; threatened rupture of uterus; dilatation of cervix (?); B. O. W. intact; no vaginal examinations; O. D. P. head above inlet; rachitic flat pelvis; suprasymphyseal Caesarean section Aug. 20, 1924; pulse 115, temperature 100; puerperium febrile; 101 three days; 100.4 two days; drainage from lower angle of incision profuse; post-operative course comfortable; left hospital after 32 days.

207885. White, age 35, para 1. Wassermann negative; labor 4 hours. B. O. W. ruptured 4 hours; no vaginal examination; O. D. P. funnel pelvis; suprasymphyseal Caesarean section May 6, 1924. Puerperium afebrile and uneventful.

214887. Mexican, age 34, para 1. Wassermann negative; labor 72 hours; dilatation of cervix 4 cm.; B. O. W. ruptured 96 hours; two vaginal examinations in hospital; O. L. A. head above inlet; mild toxemia; large baby (10 lbs, 4 ounces); suprasymphyseal Caesarean section August 5, 1924. Pulse 84, temperature 102.2. Puerperium febrile 101 one day; 102 one day; 100.2 four days; drainage from lower angle of wound; post-operative course comfortable; left hospital twenty-second day.

215948. Mexican, age 17, para 1. Wassermann negative; labor 51½ hours; B. O. W. intact; midwife for 2 days; vaginal examinations 3-5(?); O. L. A. head not engaged. Systolic murmur and thrill; systolic 140, diastolic 100; edema; urine negative; suprasymphyseal Caesarean Sept. 28, 1924; pulse 96; temperature 94.2. Puerperium febrile, patient died eleventh day post-opera-

tive. Partial autopsy showed the peritoneal reflections intact with no spreading peritonitis. No exudate covered the intestines. Free pus in pelvis which undertaker said followed trocar in uterus. Death evidently due to generalized infection. Porro section would probably have saved this patient. It emphasizes forcibly the advisability of aseptic management of labor and the urgent necessity of hysterectomy in frankly infected patients, especially in the presence of toxemia and exhaustion.

Pathologist's report, G. D. Maner: "Specimen consists of a small piece of uterine muscle. On cross section are seen several thrombosed vessels. Microscopical examination shows the blood vessels filled with septic thrombi. Along the external portion and including serosa there is a very acute cellular inflammatory reaction. The myometrium throughout its whole extent is diffusely infiltrated with polymorphonuclear leucocytes and extravasated red blood cells. Muscle cells are hypertrophied and nuclei show degenerative changes."

215977. Mexican, age 32, para 1. Wassermann negative; labor 48 hours or more; dilatation 4 cm.; B. O. W. ruptured 21 hours; vaginal examinations none; O. D. P. head not engaged; contracted pelvis threatened rupture of uterus; suprasymphyseal cervical Caesarean section Sept. 27, 1924; puerperium afebrile and uneventful.

217210. Colored, para 1. Wassermann negative; labor 79 hours; dilatation 2 cm.; B. O. W. ruptured 76 hours; number of vaginal examinations at home not known; none in hospital; O. L. A. contracted pelvis; suprasymphyseal cervical Caesarean section Oct. 13, 1924. Puerperium febrile 102, one day; 102.8 one day; 103 one day; 101.4 two days; course comfortable; left seventeenth day.

217712. Age 18, para 1. Wassermann negative; labor 34 hours; dilatation 4 cm.; B. O. W. ruptured 9 hours; 3 vaginal examinations in hospital; brow presentation; suprasymphyseal cervical Caesarean section Nov. 1, 1924. Puerperium afebrile and comfortable.

I can add three cases from private practice:

Mrs. G.; para 1, age 33. Labor 24 hours; dilatation 3 cm.; O. L. A. head above inlet; no vaginal examinations; B. O. W. intact; suprasymphyseal cervical Caesarean section Jan. 20, 1924. Puerperium comfortable and uneventful except for stitch abscess.

Mrs. A.; consultation; para 1, age 30. Labor 16 hours; dilatation 3 cm.; B. O. W. ruptured 5 hours; kyphosis with spinal deformity too low to permit of sufficient compensatory lordosis. Suprasymphyseal cervical Caesarean section Aug. 21, 1924. Puerperium uncomfortable because of gas pains. Highest temperature 103; stitch abscess; left hospital after two weeks.

Mrs. J.; consultation; para 1, age 33. Labor 36 hours; dilatation 3 cm.; chin posterior not engaged; no vaginal examination; B. O. W. ruptured 24 hours or more; uterine segment thin; suprasymphyseal Caesarean section by L. G. McNeile, Oct. 22, 24, 1924. Puerperium afebrile and comfortable.

There are advantages and disadvantages to the low cervical section. The disadvantages are:

1. The factor of time and greater technical difficulty. It is true skill should not be acquired at the price of the life of the patient, but neither should the patient be sacrificed by doing a classical section when infection is inevitable, or by doing mutilating operations from below which give a high foetal mortality and at best a maternal morbidity with invalidism.

2. Danger to the bladder and uterus. Abdominal operators are not deterred from hysterectomy when indicated because of this danger. Why should it be a contra-indication for a low cervical section? A retro-peritoneal abscess is much more likely to spread through soft tissue than through the resistant bladder wall.

3. The very frankly infected cases should be de-

livered by section followed by a hysterectomy or by a craniotomy.

The advantages are:

1. A real test of labor is possible. Guesswork and unnecessary sections are eliminated. A very evident advantage.

2. The incision is in the non-contractile portion of the uterus and in the cervix, which stands infection better than the fundus and is unaffected by uterine contractions.

3. The healing of the cervix is better than that of the fundus because active involution and fatty degeneration of the uterine wall defeat the healing power of the tissues (Monroe Kerr).

4. Better coaption, less danger from leakage. Sutures in the cervix can be perfectly coapted and covered with both fascia and peritoneum. Sutures in the fundus must be tight, in strong contractile muscle, and therefore subject tissues to necrosis. If leakage does occur, it is extraperitoneal and consequently less dangerous and more easily handled.

5. Adhesions and subsequent intestinal obstructions are reduced to a minimum. The uterine incision is peritonized by a double flap of peritoneum. The intestines and omentum are not usually in view during operation.

6. Convalescence is easier, there is less shock, as the intestines are not handled; post-operative vomiting and tympany are markedly reduced.

CONCLUSION

There should be no need of an operation to reduce maternal mortality due to sepsis or exhaustion, shock and sepsis with dystochia in labor. Better prenatal care, with classical section at or before labor gives favorable results. When dystochia presents itself late in labor and the management of labor has been relatively aseptic, suprasymphyseal cervical Caesarean section will give much better results. It should be forcibly emphasized that the operation has distinct limitations, and frankly infected patients are better managed by Porro operation or craniotomy. However, the obvious advantages in relatively clean cases may even make it the section of choice.

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DISCUSSION

E. M. LAZARD, M. D. (2007 Wilshire Boulevard, Los Angeles)—Doctor Vruwink's paper on the low cervical Caesarean section brings before us an operation which, in the past few years, has been popularized by Beck and De Lee. So much has been said of its safety in *potentially* infected cases that I fear the impression has become prevalent in the profession that this operation is a panacea for all neglected cases. That it does not remove the danger is proven by the report of Beck quoted by Vruwink, in which there was a mortality from sepsis of 2.8 per cent of seventy-one cases; and of the one death from sepsis in Vruwink's series. While the doctor concludes that this was a frankly infected case, and should have had a Porro, yet she had a pulse of 96 and a temperature of 99.2 before operation, and after 51½ hours labor.

In the early years of my work at the Los Angeles General Hospital nearly all of my sections were on patients who had been in labor many hours, all had had one or more vaginal examinations and several had had operative attempts from below. Yet my first seventeen cases were without mortality and with only a moderate

morbidity. After doing a classical section on a patient upon whom a forceps attempt at home had been persisted in for three hours, and having a convalescence disturbed only by slight stitch infection of the abdominal wall, I began to think my technic was infection proof. The next patient, one who was apparently in better condition than the one first cited, was my Waterloo. She was dead of sepsis within 30 hours after operation.

So I believe that while any attempt to improve our technic with the idea of reducing mortality and morbidity is most commendable, yet, I believe, we should use the utmost care in the selection of cases. Personally, I believe that where there is any serious question as to the possibility of infection, and where abdominal delivery is to be done, the best interests of the patient would be conserved by a Porro operation. The low cervical section, I believe, will be indicated in those cases which have been given the thorough test of labor under competent supervision and where the possibility of infection is reduced to a minimum.

L. A. EMGE, M. D. (350 Post Street, San Francisco)—Doctor Vruwink is to be congratulated on the conservative stand he has taken in regard to the so-called low Caesarean section. Euthusiasm has very often destroyed the good that has come from an otherwise commendable but limited operation. The first low Caesarean section performed in the service of the Stanford Women's Clinic, on a patient potentially infected, ended fatally from embolism. The operator, to this day, is definitely prejudiced against this operation. Personally, I believe that the low section has a definite field, although I speak from only a limited experience. By all means should it be done in the potentially infected patient, provided that circumstances do not demand a Porro operation. As an operation of selection with a primary indication its usefulness should be limited to those patients in whom the head rides unusually high over the symphysis, because here the lower uterine segment has been greatly stretched out and the head delivers itself almost spontaneously after uterine incision. At all other times the operation carries a certain amount of danger from embolism if it is used within ten days before the onset of labor because the lower uterine segment has not yet retracted and the vesico-uterine plexus of veins will have to be disturbed in the preparation of the field to be incised. There is no question that operative skill constitutes a most important factor in this operation. Therefore, it should be undertaken only by those who are thoroughly conversant with the aspects of pelvic operations in general.

There is one great advantage of the low Caesarean section over the classical type in all cases considered, and that is the prevention of adhesions between the upper angle of the uterine incision and the lower angle of the abdominal incision. In spite of the most careful peritoneal toilet and in the absence of fever, such adhesions will prove quite troublesome to the patient.

I believe that the usefulness of the low Caesarean section is definitely established, that its application has a definitely limited field and that it should not entirely replace the classical section.

J. MORRIS SLEMONS, M. D. (Pacific Mutual Building, Los Angeles)—The report of Doctor Vruwink has, for me, more than usual interest because my prejudice against the operation he describes has been great enough thus far to deter me in giving it a trial. Like Vruwink, I have felt that nothing less radical than hyperectomy was desirable in frankly infected cases. And, at the other extreme, a less complicated operation in my experience meets satisfactorily the requirements when Caesarean section is performed on clean cases. This attitude narrows the usefulness of the operation described by Vruwink to cases where there is reason to suspect infection, though positive proof of its existence is wanting. In such cases, naturally, the treatment will vary according to prevailing conditions and I can imagine circumstances that might make preferable the operation in question. Nevertheless, to speak of the procedure as an extraperitoneal operation is misleading. The protection of the peritoneal cavity, to my mind, should be credited to the low incision in the abdominal wall. This site, I believe, is now widely utilized where the so-called classical Caesarean is performed.

After Caesarean section, as after all abdominal operations, the convalescence becomes more comfortable and smooth if not only food, but also water is withheld for forty-eight hours and the administration of the initial cathartic is further delayed until the next day. The benefits of this plan include less nausea, less distension and less pain; probably, this regime also acts favorably toward the limitation of local peritonitis, which active intestinal peristalsis would tend to make general.

The test of labor should not often be required if cases are constantly supervised and studied. The day of "procrastination obstetrics" is passing; we are becoming more and more competent to reach clear-cut decisions before the settlement of the question of the mode of delivery becomes imperative.

The omission of the fetal statistics in Vruwink's paper, I regret, for the welfare of the child is paramount when Caesarean section is performed, and thus becomes a fundamental factor in estimating the satisfactory character of the technique employed.

TREATMENT OF MORBID FEAR

By SAMUEL D. INGHAM, M. D., Los Angeles

It matters little whether the sense of fear excites the physical reactions, or the physical reactions precede the sense of fear. It matters much more that fear inhibits the vegetative activities and tends to rapid physical exhaustion.

Fear, like pain, is a necessary evil, and, generally, serves a useful purpose.

When a danger is unsuccessfully met and misfortune results, caution (or fear) is increased to meet the next similar situation.

It is important to remember the fact that many morbid fears arise from misconceptions, and correcting the misconception may remove the fear.

A morbid fear might be defined as a fear which, considered in its entirety, is useless or unfavorable to the individual manifesting it.

Every physician is dealing constantly with morbid fear reactions manifested by his patients.

There is a close analogy between the mechanism of morbid fears and the state of allergy or tissue sensitization caused by an overdose of foreign proteid.

The first requirement in the treatment of morbid fear is a careful analysis, qualitative and quantitative, of the emotional elements of the individual problem.

The patient should be placed in an environment sufficiently protected to meet his particular needs, avoiding, as far as possible, conditions which react on him as harmful stimuli.

Education of the patient in the principles involved and in the true status of his own problem is often of great value, although it is not possible to put it to practice in all instances.

It is desired to call attention particularly to the principles of sensitization and desensitization. Morbid fear is not cured so long as special protection is necessary and a permanent protected environment is undesirable.

When the patient has sufficient moral and physical stamina, he will attain control of the situation, although the psychic trauma may leave a more or less painful scar.

DISCUSSION by Nathaniel H. Brush, Santa Barbara; Thomas J. Orbison, Los Angeles; Charles G. Stivers, Los Angeles.

THIS paper is presented, not with the thought of contributing a new theory or method, but to appeal for a more careful analysis and evaluation of the fear reactions which are a part of almost every clinical problem, and to make some suggestions for their treatment.

We are not as much concerned with the merits of the James-Lange theory of the emotions as we are with their physiologic aspects. It matters little

whether the sense of fear excites the physical reactions, or the physical reactions precede the sense of fear. It matters much that fear inhibits the vegetative activities and tends to rapid physical exhaustion. The extent to which these reactions affect the general health may be extreme. During the recent war, fatalities from acute fear were not uncommon, and in civil practice they are not unknown. Emotions are not only psychologic processes, but each has its characteristic general physical reaction. Overdetermined, any one may cause trouble.

We hear much regarding the effect of fear, not only as a prolific factor in the production of the neuroses, but as a disturbing process affecting the human race in an entirely unfavorable manner. Fear, like pain, is generally regarded as being undesirable, unwholesome, and altogether unnecessary. Not only is suffering caused by its presence, but it is a humiliation to confess it. In an article recently published in one of the best lay magazines, written by a university teacher in neuro-biology, the destructive effects of fear were emphasized in regard to individual, national, and international relationships. No intimation appeared in that article that the fear instinct might be a benefit to the individual or to the race. It is apparent that this view is entirely too narrow. Fear, like pain, is a necessary evil, and generally serves a useful purpose. It is pain which saves our fingers from destruction, makes possible the early diagnosis of appendicitis, and serves countless times in the life of every individual, saving life and tissue by a timely warning. So with fear: generally discredited and never eulogized, it acts as a tireless sentinel, constantly alert for danger, ready to give the warning signal and mobilize the forces of defense. It is on duty, not only during the waking period, but it serves also during sleep, as exemplified by the anxious mother who wakes instantly at the least sound of distress from her sick child. A recognition of the biologic value of the fear instinct is necessary in a consideration of its harmful tendencies, in order that we may determine at what point the reaction may be considered to be a harmful one.

CONSIDERATION OF THE PSYCHOLOGY OF FEAR

Fear is one of the most primitive instincts, and is manifested by important reactions in both the psychic and the physical field. It is excited by danger, real or fancied, and is often conditioned by a sense of inadequacy. It is concerned not only with immediate dangers, but with those far in the future, and some of the most painful fears are those excited by the dangers beyond the grave.

In every-day life dangers surround us in many forms. When successfully coped with, these dangers give a certain zest or pleasurable excitement to the experiences, and so self-confidence or courage increases. In this normal adjustment, fear in the form of caution maintains an alertness through the senses for the recognition of the signs of danger. When a danger is unsuccessfully met and misfortune results, caution (or fear) is increased to meet the next similar situation. Repeated misfortunes increase the fear reactions which tend to become panicky, but the establishment of successful adjustments at any stage tends to diminish the fear. If the misfortune be

great, or appears to be great in the mind of the one experiencing it, an emotional reaction may result to which we apply the term "morbid fear." It matters not at all whether either the danger or the disaster be real or imagined; so far as the fear reaction is concerned, the mechanism is the same. It is important to remember the fact that many morbid fears arise from misconceptions, and correcting the misconception may remove the fear.

A morbid fear might be defined as a fear which, considered in its entirety, is useless or unfavorable to the individual manifesting it. In applying this definition, it is necessary to evaluate the reaction in the economy of the individual. The warning of a rattlesnake may stimulate an alertness which serves to cope successfully with a real danger. If the same warning should cause an excessive fear reaction, or panic and futile, purposeless activities, the value of the reaction would be a negative quantity.

Every physician is dealing constantly with morbid fear reactions manifested by his patients. It is needless to attempt to classify or to enumerate them. They may occupy any position in the field of consciousness, from the fear which is fully recognized by the individual, to the fear reaction which is traceable to a disastrous experience long forgotten. The latter type is exemplified by the experience of a neurologist who suffered for many years an unaccountable fear of entering cellars, until an incident of his childhood was recalled to his memory. He had once been punished by imprisonment in a cellar closet, and although the fact of the punishment had been forgotten, the terror of the situation resulted in a morbid fear of cellars in general, and of dark ones in particular.

Fear reactions manifest themselves not only in varying degrees in different individuals, but also in varying degrees in the same individual at different times. A successful army is full of courageous soldiers, and a defeated one is full of neurotics. An individual enjoys motoring and the thrills of high speed and hair-breadth escapes until a disastrous crash is experienced. Subsequent motoring is likely to be punctuated by thrills not in the least enjoyable. The symptomatology of the victim of an accident is frequently complicated by exaggerated fear reactions based upon the same mechanism. A recent observation is illustrative: Three months previously the patient, a healthy young man of 22, entered a crushing-mill drum to make some repairs. While he was in it the power was turned on and he was tumbled about in the drum with loose pieces of metal for about one minute, the drum making twenty revolutions. He did not lose consciousness while in the drum, but was unconscious a short time after having been taken out. Although badly shaken up and covered with bruises, there were no broken bones or evidences of serious physical injuries. A severe neurosis, however, did develop, from which it will probably require several more months for him to recover. Besides the subjective symptoms and the many doubts and worries of the patient, there are apparent the pallor of the face and its drawn lines, sweaty hands, the excitable heart action, and the condition of undernourishment, which have developed during the course of the illness. It is probable

in this case that the fear reaction has been the most potent pathologic factor.

Favorable experiences, many times repeated at frequent intervals, tend to diminish excessive fear reactions. This rule is of fundamental importance in the treatment of the fear neuroses.

There is a close analogy between the mechanism of morbid fears and the state of allergy or tissue sensitization caused by an overdose of foreign proteid. Disaster or panic is followed by an increased sensitization to fear more or less of a specific type. This sensitization normally diminishes with frequent successful (non-harmful) experiences. Proteid poisoning is followed by tissue sensitization, also more or less specific, and which may be diminished by frequent, non-harmful doses of the proteid which caused the condition. Sensitization and desensitization are as real in the field of the emotions as they are in the tissues, and would seem to follow the same laws. It seems probable that a violent fear reaction must produce a definite physical change in the neurons and establish an easy channel for the flow of similar subsequent reactions which are quicker than thought in their occurrence.

The treatment of morbid fear reactions is too large a subject to cover in detail, but emphasis may be laid upon certain fundamental principles.

The first requirement in the treatment of morbid fear is a careful analysis, qualitative and quantitative, of the emotional elements of the individual problem. All sources of information should be followed to obtain complete history. The source of fears can generally be determined by careful effort, and they are mysterious only because they are unexplained.

The patient should be placed in an environment sufficiently protected to meet his particular needs, avoiding as far as possible conditions which react on him as harmful stimuli. In the beginning this protection should be as complete as possible, but it is not desirable that he should remain indefinitely so protected.

Education of the patient in the principles involved and in the true status of his own problem is often of great value, although it is not possible to put it to practice in all instances. Where fears are based upon misapprehension through ignorance, as they so frequently are, a true understanding is the best cure. A knowledge of the mechanism of fear reaction does not necessarily eliminate fear. This is one of the many instances in which intelligence does not control the emotions; but the emotions can be trained and habits established by intellectual controls, and in this connection emphasis may be placed upon moral courage and fighting spirit. Suggestion is useful in helping to establish the confidence of the patient, especially in calling his attention to encouraging and hopeful aspects of his situation. Exaggerated statements used in suggestion are bound to be harmful, and care should be taken to avoid purchasing hope for the present which is certain to be heavily discounted in the future.

It is easier to have courage when the physical vigor is high, hence attention to the general physical health of the patient is of utmost importance. The administration of sedative drugs to meet special

requirements serves a very useful purpose. Emergencies may be met and sleep regulated by comparatively harmless medication as well as by hydrotherapy, massage, and other common remedial measures.

It is desired to call attention particularly to the principles of sensitization and desensitization. Morbid fear is not cured, so long as special protection is necessary and a permanent protected environment is undesirable. Gradual desensitization may be accomplished by frequent experiences, in which the patient approaches a little at a time the object of his fear. It is the physician's function to set the scenery as well as possible that this may be accomplished.

When the patient has sufficient moral and physical stamina he will attain control of the situation, although the psychic trauma may leave a more or less painful scar.

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DISCUSSION

NATHANIEL H. BRUSH, M. D. (Santa Barbara)—Many years ago a well known neuro-psychiatrist said, "If you could eliminate alcohol, syphilis and fear from the human race, there would not be very much work for the psychiatrists to do." The passage of the Eighteenth Amendment has been a step towards the elimination of one of this triad, but the enforcement of the Eighteenth Amendment is still a long way from being perfect.

Syphilis can be controlled by education, treatment and prophylaxis. But until we can change entirely the minds and morals of men, syphilis will always be with us.

Fear comes to us through inheritance. Our instinct of fear can be traced back through the centuries and is our inheritance from ancestors who flourished in the neolithic ages. Fear can be considered one of the main driving forces that innervate our lives; that is fear of sudden death, escape from accident, etc., but the morbid fears that Doctor Ingham has spoken of can be considered as part of many of the well-known neuroses.

Cannon and other workers have given us an understanding of the physiology of fear, or rather what effect fear has upon the normal physiological processes. The previous speakers, during the afternoon, have dwelt upon this topic and its importance in the understanding of fear processes and conditions of fear.

Ingham has very cleverly likened the development of a morbid fear to the sensitization that the body undergoes upon contact with foreign protein substances, and the consequent reaction—allergy—to the formation of the fear.

The removal of the foreign protein or desensitization can be accomplished in the same way in the cases of morbid fears by opportunities in which the individual can meet and understand the nature of the causative factors of his fear.

In the treatment of patients in whom morbid fears are the predominating note it is quite necessary to have a complete and accurate knowledge of all the factors and circumstances that have played a part in the formation of the fear. All of these circumstances can then be linked up and the completed picture or chain of events can then be shown to the patient to help him to a better understanding of his condition and the causes of it.

As Ingham has said, "Favorable experiences, many times repeated at frequent intervals, tend to diminish excessive fear reactions." The importance of this cannot be too strongly emphasized. Again we can have recourse to the analogy of protein reactions.

THOMAS J. ORBISON, M. D. (2007 Wilshire Boulevard, Los Angeles)—I consider Doctor Ingham's paper a valuable contribution to the subject of the physiological effect of fear. Unfortunately, the "psychology of fear" has not yet been written. When it is, it will be one of the bases upon which the satisfactory administering of a large bulk of psycho-neurotics will be founded.

The one thing I wish to emphasize is that fear is one

of the three or four true emotions—if one hold with the dicta of Watson and other psychologists of his school. Also, it must be kept in mind that an emotion is the *consciousness* of a hereditary reflex (not necessarily the exhibition of it in terms of behavior). The afferent pathways are through the sense organs generally (during consciousness), although the origin may be a psycho-organic one. In either case the idea is the main element and the stimuli from it are supposed to be sent through the vegetative nervous system to the glands of internal secretion so that their response may prepare the individual to meet what may be necessary when he has become aware of whatever hereditary reflex that has taken place—be it fear, love, anger or whatever it may be.

Our treatment of the fear element is our psycho-neurotics, in order to be wise and according to scientific principles, must take these primary facts into serious consideration.

The results of our treatment, by whatever method carried out, will depend, to a large extent, upon how able we are to make use of them.

CHARLES G. STIVERS, M. D. (1115 Arapahoe Street, Los Angeles)—I would say a few words about fears and their removal from the minds of many of our speech-defect patients. Every person who tries to express himself, either in words or gestures or any other acts and makes a failure of it or even a poor showing, thereby starts in himself a fear that he may fail again if and when he tries again. All of the speech-defect persons have this fear to a striking degree. The stammerer fears that he will be ridiculous, and the aphasic that he will be thought feeble-minded or that he is talking "baby-talk." The removal of these fears must be undertaken by patient analysis of the cause of the fear, and showing the patient that there is no basis for the fear. It is a well-known fact that so-called morbid fears have no rational basis for their existence or, at most, very little basis. I "drag the fears out into the open" and turn the light of reason and common sense on them and they will disappear. The subsequent treatment consists in substituting a good habit of expression for the former bad one by drills, talks, repetition, etc., going from easy things to more difficult ones.

DOCTOR INGHAM (closing)—*Psychology*, except for the homemade or instinctive variety, has not yet come to be established on a sound, scientific and practical basis, as applied to the practice of medicine. Everyone takes a try at it, and in the public mind a fanciful theory is particularly attractive.

The advance of modern medicine has been almost exclusively along the line of physical science. It would seem that a study of psychology, and particularly of the emotions from the biologic and scientific standpoint, offers the best prospect of real progress in this field. Fears, exaltations, instincts, habits, ideals, endocrines, and physiologic reactions are only items in the field. We need not only some simple practical working formulae for the physician to use, but a conception of the factors present, each in relation to the other.

October 27, 1925.

Dear Editor—I presume it is too late to have inserted in the next issue of CALIFORNIA AND WESTERN MEDICINE a notice that Dr. Putti, the Lane lecturer, has consented to give a clinic on Thursday, November 12, 1925, at 11:30 a. m., at Lane Hall, during the course of Lane Medical Lectures. Very truly yours,

W. OPIULS, *Dean*.

[We were very glad to have this space open in which to insert the above interesting notice.—EDITOR.]

"California's experience has been that, once in possession of a drugless license, a surprising number pose as doctors of medicine, surreptitiously violating that provision of our medical act which prohibits a drugless practitioner the use of drugs. Laws governing evidence are so adroitly drawn that it is difficult to obtain 'admissible' evidence which will 'pass muster' in a court of law, hence prosecutions have been few."—*Charles B. Pinkham in Federation Bulletin, Aug., 1925.*

MUCOCELE OF THE FRONTAL SINUS CAUSED BY AN OSTEOMA

REPORT OF A CASE

By J. A. BACHER, M. D.

Report of a case.

Discussed by Harold A. Fletcher, San Francisco; Francis L. Rogers, Long Beach.

OSTEOMA of the frontal sinus is not rare; nor is mucocele of the frontal sinus. But osteoma as a cause of mucocele is. Howarth, in recording a case, has not been able to collect as many as twenty cases. I operated on such a case in 1921, and wish to record it on account of its rarity. My own case is as follows:

Male, 25. Salesman. Headache, six years.

P. H.—Impairment nasal breathing, years, relieved by swimming in salt water. Not frequent acute rhinitis. No excess post-nasal discharge. Not frequent sore throats. Never any discharge from or pain in ears. Six years ago, struck on left orbital region by baseball.

P. I.—*Left* frontal headache for about an hour daily for past six years, usually at midday, increasing in frequency and intensity. No relation to work or use of eyes. Often coincident with nasal obstruction, flushed face. Left eye becomes red during attacks.

P. E.—There were no external deformities or swellings to indicate the presence of a tumor. Nose: External deformity, nasal bones to right, tip to left. Septum markedly deflected to right, turbinates engorged, no pus seen, poor space. Septum irregular on left, no pus seen, good space. Throat: Tonsils moderate size, wide crypts, purulent debris in crypts. Nasopharynx: Clear. Ears: Both membranae tympani retracted, slightly fibrous. Washed both antra with trocar through inferior meatal wall, and fluid returned clear. X-ray of sinuses: "In the *right* frontal sinus, an opacity definitely interpreted as due to an osteoma."

Operation—Brow not shaved. Killian incision. Right frontal sinus entered externally, keeping away from site of osteoma. Upon penetration of outer table, greenish-blue thick membrane as of mucocele presented, filling sinus. Membrane incised and thick, yellow fluid evacuated. Culture made which showed "a scanty growth of streptococcus." Heavy lining of sinus removed, and tumor revealed, seeming to present on outer table at superior junction of inner and outer table. Bone of outer table removed up to attachment. Probe reveals that it is a sessile tumor with attachment superiorly, anteriorly, posteriorly, and internally, as if crowded up into the supero-internal angle of sinus. Very eburnated and regular in shape. Unable to pry it off. With chisel removed it from its attachment, which was most firm posteriorly. Removal revealed a depression of inner table caused by tumor, partly in right sinus and partly in left, as there was no septum between the sinuses. No dehiscence in this depression, but bone felt very thin. Probe passed freely through ostium frontale, into nose. *Frontal ostium and ethmoid cells not curetted.* Wound closed tightly with six silkworm sutures. No drain. Benzoin dressing. Convalescence: On account of swelling at outer angle of incision, it was opened and small drain used for four days. Closed. Absolutely free from headaches for over three years now since operation.

Microscopical Examination by Dr. F. E. Blaisdell—"Osseous tissue, in which the trabeculae are very irregular, most widely separated in the central area, becoming thicker and more compact peripherally beneath the periosteum, here the marrow spaces are reduced more or less to a minimum size. There is no distinct cortical layer, other than that formed by the compact and very irregular trabeculae, which even here exhibit variation in thickness, for in places the wider marrow spaces attain the surface beneath the periosteum. No true cortex (compacta) is recognizable. The surface is invested by a thin fibrous periosteum. The marrow spaces are filled by a fibrous marrow. At one point of the surface the osseous

tissue projects, and here shows a distinct lamellated structure. This is evidently the remains of the pedicle by which the growth was attached to the wall of the sinus.

Microscopical Details—The trabeculae stain irregularly, part of them take the eosin and are apparently osteoid in character; elsewhere the hematoxylin staining predominates and varies in intensity, delimiting irregular and more strongly calcified areas. Lacunae are everywhere present and empty, except in and about the pedicle, where each contains a bone cell and lamellization is distinct and quite normal. Careful examination under high, dry magnification shows the presence of an imperfect canalicular system. Trabecular lamellae are entirely indistinct, imperfectly and vaguely indicated, or distinct; the latter observed chiefly in the osteoid or eosin-staining trabeculae. In the superficial and condensed area an occasional Haversian canal seems to be present, surrounded by the concentrically arranged lamellae with intervening lacunae. Bone cells are only observed in the lacunae of the pedicle. There is distinct evidence of destructive and constructive changes having taken place during the growth of the tumor, for in places the deeply stained calcified trabeculae end abruptly against very irregular edges of the osteoid areas. The irregular edges of the osteoid tissue indicate the past activity of osteoclasts.

In the series of sections studied the marrow is fibrous throughout. Differential staining shows the presence of collagenous fibrils and bundles. Marrow cells are entirely absent, unless a few scattered and poorly stained cells



Figure I. Two days after operation

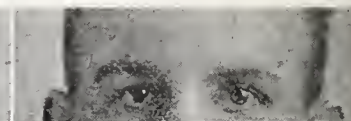


Figure II. Six months after operation

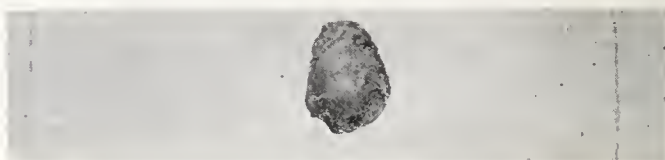


Figure III. Osteoma, natural size

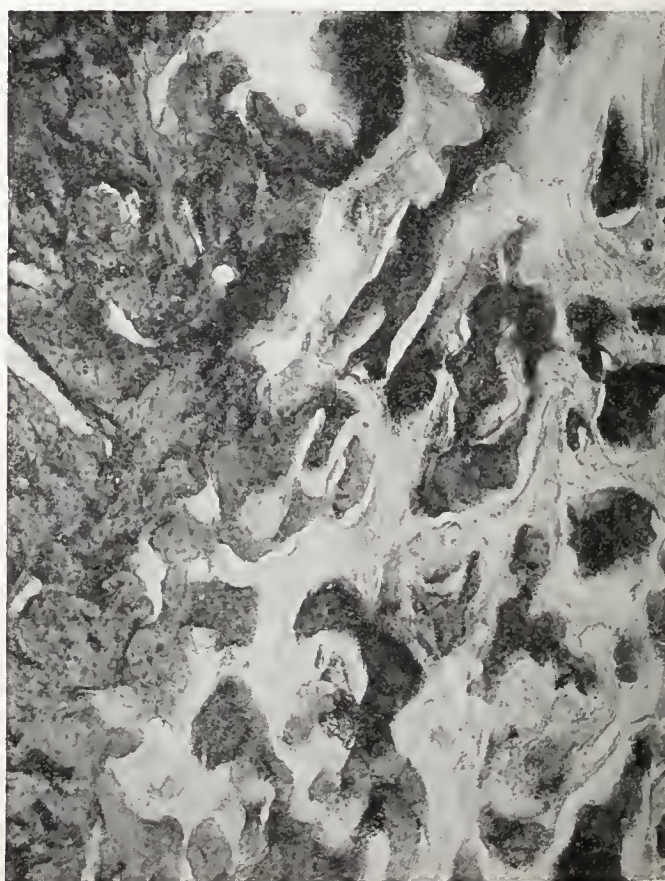


Figure IV. Photomicrograph. Zeiss: Oc. 4; obj. 1 inch (B. & L.)

be such. Osteoblasts and osteoclasts are absent. Blood-vessels have not been recognized. Diagnosis: Osteoma (osteoma spongiosum)."

DISCUSSION

HAROLD A. FLETCHER, M. D. (Butler Building, San Francisco)—Either mucocoele or osteoma of the sinuses is always interesting. Those of the frontal and ethmoid sinuses, because of their complicating features, are most interesting, while mucocoele of the frontal sinus, with osteoma as the etiologic factor in its production, is most interesting and most rare. It is even more rare than the author has quoted, as my interpretation of Howarth's series is, that, of his twenty cases of mucocoele, only one had osteoma as the etiologic cause.

Osteoma of the anterior ethmoids or of the region of the floor or duct of the frontal sinus would, in its very nature, by its slow but steady increase in size and pressure, most surely cause absorption of the frail bony partitions here, and soon occlude the frontal duct and cause a mucocoele.

Clinically the differential diagnosis between osteoma and mucocoele is difficult, except by the careful study with the x-ray. The x-ray, of course, clinches the diagnosis. Where both are present, as in this case, the diagnosis would be osteoma, from the x-ray findings. Mucocoele apparently was not diagnosed until operation.

It is a pleasure to have a careful and complete pathological report with such a case as this. Too often the diagnosis of osteoma or some such tumor is made at operation from the gross specimen, and no study made of the pathology. A review of the literature would reveal many such cases, and only a very occasional study of the microscopical picture, with a view ever present of determining the cause of this new growth, as well as other types. Eckert mentions this in his study of osteoma of the nasal fossa. His pathological reports agree with the pathological report of Dr. Bacher's case.

FRANCIS L. ROGERS, M. D. (Markwell Building, Long Beach, Calif.)—Such contributions as this from Doctor Bacher are, I believe, valuable because both osteoma and mucocoele of the sinuses are undoubtedly less rare than our past and present literature would lead us to believe.

Whether the tumor is a mucous polypus, a retention cyst, or bony growth in the frontal sinuses, there is the symptom of more or less constant pain, headache. The numerous cases of frontal headache met with which do not yield to refractive corrections or general treatment and give no adequate nasal symptoms should suggest to us all to routinely secure x-ray and other modern diagnostic measures in our search for intrasinus tumors. In mucocoele of the polypoid type it is my impression the fluid contents are usually sterile, unless the tumor sac has been ruptured, while the retention cyst type are apt to contain infective organisms of the staphylococcal or streptococcal types with some previous drainage to the nose or elsewhere. Early recognition of these conditions is quite important because of the fact that pressure from the mucocoele may cause extensive absorption of its adjacent normal bony structures.

A case in point was recently seen by me here in a woman, age 56, whose primary complaint was a badly swollen left eye. There was no history of injury, but extensive ecchymosis of eyelids and marked exophthalmos, and a very profuse muco-purulent discharge. The discharge was found to contain both strep and staphylococci, but no gonococci, as was first suspected. A deep central corneal ulcer was present, and perforation to the anterior chamber and infection had already taken place, rendering the eye hopelessly lost. A distinct fluctuating tumor in the ethmoid region of the orbit was readily made out, which, on pressure, provoked added discharge of a heavy, pale yellow muco-purulent character from under the upper eyelid. The throat and nasal passages appeared free from disease or bony deformity, and there was no history obtainable of rhinitis or other disease from patient or relatives. She was removed to the hospital, where x-ray plates were taken, indicating a complete filling of the left frontal sinus with a fluid deposit. The eye was enucleated and a digital examination of the orbit revealed the fact that almost the entire fronto-orbital wall had been dissected out, not by necrosis, but

evidently by the absorption, due to intra-frontal pressure from a soft fluctuating tumor. A later operation confirmed the fact that the frontal sinus was filled with a large mucocoele. The mental state of this patient was that of a moderately advanced case of senile dementia, which was suspected might be due to pressure from extension of the mucocoele into the cranial cavity. But this was not confirmed at the frontal sinus operation, and the report from the laboratory of a 4 plus Wassermann indicated that the mucocoele had probably little or nothing to do with the mental condition. This patient made a slow but uneventful recovery, and is able to wear an artificial eye. Under suitable medication her mental condition has also improved somewhat.

DOCTOR BACHER (closing)—As to the frequency of such cases, Howarth's words are: "Osteoma, however, as a cause of mucocoele is rather rare. Cases have been described by Luc, Laurens, Axenfeld, and others, but I have not been able to collect as many as twenty."

BLOOD TRANSFUSION

By GEORGE H. JUILLY, M. D., *San Francisco*
(*From the French Hospital*)

Long before Harvey's discovery of the circulation of blood, physicians had tried to rejuvenate old men by introducing into their veins the blood of young and vigorous individuals.

Blood transfusion is especially effective in patients who have become acutely anemic, as the result of a large and sudden loss of blood—hemorrhage from childbirth, gastric ulcer, intestinal, kidney and bladder hemorrhage, epistaxis, internal hemorrhage.

The only blood which needs to be considered is human blood, properly typed and carefully examined.

There is no question that the whole blood transfusion is superior to the citrated blood method.

DISCUSSION by R. F. Grant, Alson R. Kilgore, A. N. Fregeau, W. J. Hawkins, E. S. Kilgore, J. K. Plincz, H. Marcus, *San Francisco*.

BLOOD, as a therapeutic agent, has been used from the remotest antiquity. Men have not been slow to discover that when a wounded man lost too much blood he would die. Consequently, they reasoned out that blood was not only necessary to life, but that life itself—or the soul—was more or less concentrated in that blood. This fact explains why in all mythologies—those of the North especially—the drinking of blood was considered beneficial, just as eating the heart of ferocious animals and of man at times was thought to impart the strength and the courage of the animal from which it had been removed. This is still a common belief among the savages of Central Africa and the Bushmen of Central Australia.

But as the embalming of the dead in Egypt and the killing of various animals on the altars of Gaul, Greece and Rome had given men a certain understanding of anatomy and physiology, they began to search for a means of transfusing pure blood into the veins of the patient, rather than making him drink it, which showed no apparent benefit.

Of course, they found no way of accomplishing this, until Harvey discovered the circulation of the blood in the middle of the seventeenth century.

Yet, the actual drinking of blood for the cure of disease has not died down; and I remember very well when anemic patients and the consumptive were directed to the slaughterhouse for the purpose of drinking fresh, warm blood.

But formerly blood was thought of not only as

a marvelous therapeutic agent in the cure of disease; it was also thought to have great power to rejuvenate the old. This is another example of a human desire, hoary with age, which has at different times given us the good fairies changing old men into young princes; which has given us Faust selling his soul to the devil; Ponce de Leon looking for the Fountain of Youth, and has lately enticed some of our old, astute and successful business men to submit to an intimate contact with the all-magical monkey gland.

Long before Harvey's discovery of the circulation of blood, physicians had tried to rejuvenate old men by introducing into their veins the blood of young and vigorous individuals. The Latin poet, Ovid, in his *Metamorphoses*, has Medee address herself to the sons of King Pelops, whom she wanted to rejuvenate. "Draw your swords, let that old man's blood run out: I will replace it in his veins by a young blood."

Later on, toward the end of the fifteenth century (in 1492) Sismondi says that the Pope Innocent VIII, being very ill, an attempt was made by his Jewish physician to inject into his veins the blood of three young men. All the young men and the Pope himself died.

Libavius, in 1615, says: "Let there be present a robust, healthy youth, full of lively blood. Let there come one exhausted in strength, weak, enervated, scarcely breathing. Let the master of the art have silver tubes that can be adapted one to the other; let him open an artery of the healthy one, insert the tube and secure it. Next let him incise the artery of the patient and put into it the feminine tube. Now let him adapt these two tubes to each other and the arterial blood of the healthy one, warm and full of spirit, will leap into the sick one, and immediately will bring to him the fountains of life and will drive away all languor."

After Harvey's discovery, blood transfusion became a regular procedure. In 1666, Lower gave the process in detail. In 1667, J. B. Dennis of Montpellier, physician to King Louis XIV of France, is said to have successfully transfused into a patient nine ounces (250 cc.) of arterial blood taken from a lamb. This apparent success had an unfortunate sequel. Many doctors tried this operation for the cure of the most varied diseases, with dire results, as was to be expected (only 87 out of 785 being successful). The authorities became alarmed, and in 1668 the Chatelet rendered a decree forbidding anyone to try blood transfusions, without securing the approval of the Faculty of Medicine.

This operation, therefore, fell into disuse and was not revived until the nineteenth century. Blundell, in England, spoke highly of it. Blasius (1863) reported 116 cases in the previous forty years, with fifty-six successful results (in two cases serum from animals was used). Enthusiasm was again aroused, but died down after Landois showed that heterogenous blood could not be used because of red cell destruction, and Blasius' defibrinated blood was found dangerous because its fibrin ferment caused coagulation.¹

¹ After G. Witrowski. *Le corps humain*, third edition, 1884.

In 1875, normal salt solution was discovered, and blood transfusion fell into disuse again; although it was revived five years later by W. S. Halsted, who used it on several patients suffering from carbon monoxide poisoning.

In 1880, Voisin used sheep's blood, defibrinated by whipping, to transfuse insane people who refused all nourishment.

Other fluids than blood have been used, milk being one of them, but normal salt solution has been the most extensively used of all for that purpose. But while this process furnishes the necessary bulk to the arterial and venous systems, yet it dilutes the blood corpuscles to such an extent that the urgently necessary function of carrying oxygen and carbon dioxide is much perturbed.

It was readily seen that, while salt solution was a good and rapid stimulant, its action was ephemeral and that it could not compare with blood transfusion for permanent and curative effects.

Through the work of Crile and Carrel in this country, blood transfusion has been revived and made safe. However, their methods of directly connecting the circulatory system of the donor with that of the patient have fallen into disuse, mainly from the fact that the exact amount of blood passing from the donor to the patient could not be ascertained, even within wide limits.

For that purpose Crile used to join the radial artery of the donor to the median-basilic vein of the patient by means of a little tube of german silver. Carrel used to anastomose both vessels directly by suture with fine vaselined silk. Brewer used pieces of well-paraffined glass tubing for the same purpose. Levin, in 1909, described a very ingenious forceps with two small conical extremities (one holding the vein, the other the artery) so that when the forceps was closed both vessels were in intimate contact, much the same as two pieces of intestines are held together in a Murphy button.

Today these methods have become obsolete. We want to know the exact amount of blood we give the patient. To accomplish this result, it is necessary to receive the donor's blood in a graduated vessel and transfer it into the patient's circulatory system.

Blood transfusion is especially effective in patients who have become acutely anemic as the result of a large and sudden loss of blood (hemorrhage from childbirth, gastric ulcer, intestinal, kidney and bladder hemorrhage, epistaxis, internal hemorrhage).

It is not quite as effective, although having considerable value in repeated small hemorrhages from whatever source.

It is much less effective in primary anemia (pernicious) or in secondary anemias, due to disease (tuberculosis, cancer, sepsis, etc.).

In order for the patient to get the full value of the transfusion, it is necessary that the source of bleeding be arrested, otherwise the transfusion seems to increase the hemorrhage, and in a short while the patient is no better off than he was before.

The only blood which needs to be considered is human blood, properly typed and carefully examined.

SELECTION OF THE DONOR

The donor should be a strong healthy adult. His blood should have been carefully tested for syphilis, while he or she should be free from all tuberculous or malarial taint.

Yet, a very small quantity of blood from such a healthy individual may kill the patient. This is due to certain qualities of his blood corpuscles, which may be agglutinated by the patient's serum, or else his serum may agglutinate the patient's corpuscles. This, of course, results in speedy death. Hence, the absolute necessity of typing the blood of all donors and recipients before making any transfusion.

The blood of individuals has been divided into four groups ²—groups 1, 2, 3, 4.

The following table shows this grouping, as devised by Moss:

Sera of recipient			
Group 1 10% (— means agglutination.)	Group 2 — 40%	Group 3 — 7%	Group 4 — 43%
Corpuscles of donors			
Group 1 — + + +	Group 2 — — + +	Group 3 — + — +	Group 4 — — — —
(— means no agglutination.)			

Group 1 is the universal recipient. Any donor is good.

Group 2, recipient, can be transfused only by blood of Groups 2 and 4.

Group 3, recipient, can be transfused only by blood of Groups 3 and 4.

Group 4, recipient, can be transfused only by blood from Group 4.

It is to be noted that *Donor Group 4 is the universal donor*, as his corpuscles are not agglutinated by any serum.

It is not my intention to describe here the technique of such grouping; this may be found in any modern book on laboratory technique.

It is to be noted, however, that such grouping and blood testing takes time, whereas a blood transfusion generally partakes of an emergency character.

It is, therefore, customary in large hospitals to have a list of a certain number of professional donors who have been properly typed and who can be reached and made ready with a minimum of delay.

If no such donor is at hand and you are in a great hurry, almost anyone can serve as a donor (barring the syphilitic, the tuberculous, and the malarial). Agglutinating accidents are, fortunately, rare, being less than 2 per cent. If you have a little time it is always wise to follow the Jeambrau and Giraud's technique.

First. Take 2 cc. of blood *from the patient* and collect it in a sterile dry test tube. Let it stand four or five minutes. The serum floats over the clot.

Second. With a *well-citrated* Luer syringe aspirate about 1 cc. of said serum, and deposit a few drops of it on two dry glass slides.

Third. Get a few drops of blood *from the*

donor's ear and, bringing the slides next to his ear, quickly mix one drop of blood each in the drops of serum laid on the glass slides.

4. If the drop takes a uniform reddish color and dries with the center a little darker than the periphery, there is *no agglutination* and the *donor can serve*.

Fifth. If the drop of serum remains clear while little colored masses float in it, *there is agglutination*, and the *donor* is unfit.

This agglutination, or the lack of it, can be still better determined by looking at the drop on the slide through the low power of a microscope.

TECHNIQUE OF BLOOD TRANSFUSION

Numerous methods have been devised to obviate the clotting of the blood while it is transferred from one individual to another. I will describe only two methods, which are very simple and give equally good results.

There is no question that the whole blood transfusion is superior to the citrated blood method, but it is also a little more difficult, and beginners will do well to practice the latter method a few times before attempting the former.

CITRATED BLOOD METHOD

This method is based upon the fact that sodium citrate, added to the blood in suitable proportions, will prevent the latter from clotting for a very long time.

One should have ready the following paraphernalia:

First. A six-ounce bottle full of sterile 2 per cent solution of sodium citrate.

Second. Two tourniquets and clamps (or Kellys).

Third. Two sterile graduates of 500 cc. with some glass rods.

Fourth. One sterile glass funnel, with two feet of rubber tubing and a stop-clamp on it.

Fifth. A good size trocar; one transfusion needle (which will fit on the rubber tubing).

Sixth. Two sets (one for each patient) containing a scalpel, two thumb forceps, some fine Kellys, scissors, some fine curved needles with Dermal and needle holder, some pieces of fine catgut, etc. All properly sterilized and dry.

A few Luer syringes; some sterile salt solution and sterile towels should be near at hand.

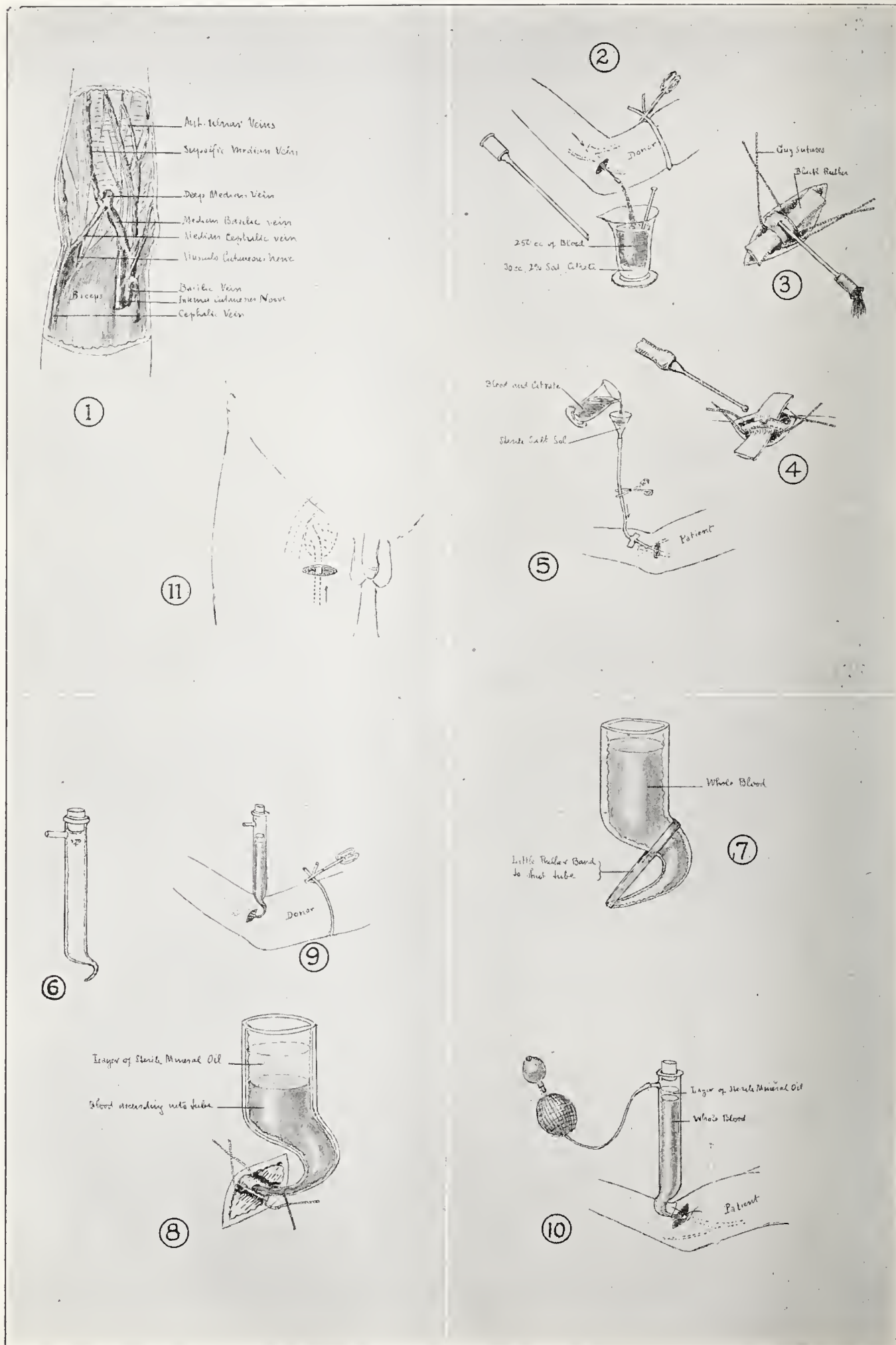
Have patient and donor brought into the operating room, laid upon two tables, properly draped; the arms of both patients opposite each other, each arm resting on a small table at a short distance from each other. The arms showing the largest veins should have been selected (Figure 1).

The surgeon and a good assistant (two good assistants are still better) with one or two nurses should pass through the process of sterilization, as for a major surgical operation.

When everything is ready a 3 per cent tincture of iodine solution is painted on the arms of both donor and patient, the hands and shoulder being covered with sterile towels.

You place the tourniquet on the donor's arm. Do not tighten it enough to stop the arterial circulation. Freeze the fold of the elbow with ethyl

² Victor D. Lespinasse. Blood transfusion. Surgical Clinics of Chicago, February 1919, page 37.



chloride spray (or inject 0.5 per cent solution of novocaine) and make a transverse one centimeter incision over the median cephalic vein (Figure 2). Remove from the vein all adventitious tissue. Place a little flat piece of black rubber tubing under the vein; the contrast between the black and pink vein makes the latter stand out better (Figure 3).

Do not start to draw the blood yet—until you have made sure of finding a proper vein in the patient, and that such vein is patent.

Then repeat the same process on the patient's arm, to save time. When the patient's vein has been exposed, pass two catgut strands around the vein, but do not tie them. To make sure that the patient's vein is patent, you may now inject a few centimeters of salt solution with a Luer syringe and a small hypo needle. If the solution runs freely, everything is ready for the transfusion.

Have a graduate ready; put 30 cc. citrate solution (enough for 250 cc. of blood) in it with a glass rod. Bring the graduate near the donor's arm, steady the vein and plunge the trocar into it, the point toward the donor's hand. The blood flows into the graduate. Have the donor close and relax his fist all the time. The muscular contractions help the blood to flow. Have the assistants refrain from talking. This may cause the donor to faint. The assistant or a nurse stirs the blood and solution together with the glass rod until you have collected 250 cc. of blood.

This blood being properly citrated will not coagulate. If you wish to transfuse 250 cc. of blood only, your assistant will tie this donor's vein with a catgut ligature above and below the opening, and suture the skin wound. If you want to transfuse more blood, he will use the second graduate and repeat the same process while you transfuse the blood into the patient.

To transfuse the patient, fit up the funnel to the rubber tubing, at the other end of which is fitted the canula. Fill up said funnel with warm salt solution, which you allow to run through the canula in order to force out all air bubbles from the tubing. When you have done this, put the stopper on the tubing.

Steadying the patient's vein with the two strands of catgut, make a nick into the vein with a pair of fine scissors; insert the canula into the vein, the tip toward the patient's shoulder (Figure 5). Tie the vein over the tip of the canula with the upper catgut; while the lower catgut closes the lumen of the vein below. Remove the stopper and allow the salt solution to run into the patient's vein. Now pour your citrated blood into the funnel—either 250 or 500 cc, as desired. The operation should take about twenty minutes. When completed, another ligature is passed on the vein above the canula, tied, and the vein cut below, thus releasing the canula. The little skin wound is closed with two dermal sutures.

The effect of a transfusion in a patient who has suffered from a large hemorrhage is immediate and astonishing. The lips become red, the face is flushed, the patient experiences a feeling of glow all over and an indescribable sensation of well-being.

However, some patients show some reaction dur-

ing the first twelve hours—transient dyspnoea, headache, cyanosis, and nervousness. While some of these symptoms may be due to a proteid intoxication, they are often due to a defect in technique—poor asepsis, entrance of air into the veins, and, especially, too large a quantity of citrate being used.

In reference to the last mentioned mistake, it is easy to figure out how too much citrate may be injected. It happens occasionally that you cannot get 250 cc. of blood from the donor. He may faint during the process; this stops all bleeding. Suppose that you get only 100 cc. of blood. You do not want to lose it, and you transfuse it into the patient's vein. But at the same time you inject 30 cc. of citrate contained in the graduate, or nearly three times as much as would be necessary to prevent coagulation of 100 cc. of blood. This extra citrate is going to affect the patient's blood and disturb its proper function—hence some of the untoward symptoms recorded—until nature gets rid of the drug through the kidneys. The latter are more or less irritated, as evidenced by reddish urine, with albuminuria, rare hyaline casts, edema of face and hands, and headache. This, fortunately, passes off in a day or so.

If one should be unfortunate enough to use a donor's blood, causing agglutination (through a mistake in the laboratory test) your patient is doomed. He is immediately taken with intense dyspnoea, deep cyanosis with arrest of respiration, then of the heart beat, speedily followed by death.

You may try artificial respiration with the pulmotor, external heat, injection of adrenalin (1 cc. at a dose), dilation of the anal sphincter, etc.

To prevent such a tragedy, however rare, it is best, in starting the transfusion, to stop it after a few cc. of blood have been allowed to enter the patient's circulation, and wait a few minutes.

If any of these symptoms manifest themselves, stop immediately and apply some of the remedies described above. If nothing happens, proceed with the transfusion.

WHOLE BLOOD TRANSFUSION

In this case no citrate is used. Other means are taken to prevent the donor's blood from coming in contact with the air. Speed in all the steps of the operation is also a great factor in its success, consequently this method should not be attempted until the surgeon and his assistants have mastered all the little details of a citrate transfusion.

The paraphernalia needed are much the same as those required in a citrate transfusion, except that the graduates are replaced by special glass cylinders. These have been carefully coated beforehand by allowing paraffine to melt in the cylinder heated in a dry oven, thereby covering the walls with a fine film. This operation should be done carefully, so that no bare glass wall will be present. Care should also be taken to see that the beak of the cylinder is not obstructed by the paraffine. Two of these 250 cc. cylinders are made ready for an ordinary transfusion (Figure 6).

Also have ready a thermo-cautery bulb with its rubber tubing and some sterile Russian oil—the

same kind that is used for the relief of chronic constipation.

It is my custom to put about 10 cc. of this Russian oil in each glass cylinder before starting the transfusion. Its use will be explained a little later on.

When everything is ready, the vein of the donor and the vein of the patient are exposed. Two strands of the fine catgut are passed around each vein, and a piece of black rubber placed under it for better contrast.

The distal catgut ligature on the vein of the patient is now tied, the vein half severed above said ligature (Figure 4), and the edge of the cut vein grasped by two fine Allison forceps. To prevent bleeding from the vein the assistant pulls upon the upper catgut strand against the edge of the skin. Now return to the donor. The same procedure is followed with his vein, which is half-severed. The upper part of the vein is held by two fine Allison forceps. Now, with your left index finger upon the beak of the cylinder (to prevent the escape of the mineral oil) or a rubber band (Figure 7) bring it close to the vein, remove your finger, and quickly plunge the conical tip of the cylinder into the vein. The blood will immediately begin to flow into the cylinder, the mineral oil floating on top of it, thus preventing any contact with the air contained in the cylinder. The donor activates this bleeding by rhythmically closing and opening his fist (Figures 8 and 9).

When the cylinder is filled remove it and quickly place your index finger upon the tip, to prevent any loss of blood. Your assistants shut off the flow from the vein by pulling upon the guy ligature, or else fill up the second cylinder while you are injecting the first one.

Bringing your cylinder full of blood to the patient, you remove your finger from the beak while you quickly introduce it into the patient's vein. The blood may flow of its own accord. If it does not, adapt the cautery bulb to the glass extension and have a nurse blow once or twice. This starts the blood going nicely. Do not allow it to transfuse too fast (Figure 10).

Repeat with the second tube if you wish to transfuse 500 cc. When all is finished, tie the proximal ligatures around the vein of patient and donor and close skin wounds with a couple of dermal sutures.

This I have found to be the best procedure. The fewer needles, tubing, syringes, etc., that you use the less chances you have of clotting the blood, which is the condition *sine qua non* of a successful issue.

NOTES ON TRANSFUSION

While the bend of the elbow is generally chosen to isolate a vein for a transfusion, there are cases when some other part of the body must be chosen for the same purpose.

Some individuals, even adults, seem to have very small veins. This is often the case in women, especially those who show a tendency to obesity. Looking for a vein in these donors is often quite an undertaking, and, when found, the vein is so small that it cannot be used.

Again, in some patients who have been rendered

very anemic by hemorrhage—just the type who need a transfusion—the peripheral veins seem to be flattened, and although their size has not had time to diminish, to find these veins is not always easy.

Again, in infants and children the arm veins are so small that they cannot be used in a transfusion.

In babies the anterior fontanelle can be used very nicely. The blood is generally taken from the mother (20 cc.) by means of a warm Luer syringe, well lubricated with sterile mineral oil or with citrate solution.

In older children the fontanelle is closed and the arm veins are too small. Recourse must be had to the external jugular vein, or to the internal saphenous vein (Figure 11).

The internal saphenous vein lends itself very nicely to a transfusion in adults when the arm veins cannot be used.

Ligating, cutting and otherwise destroying the median cephalic or median basilic veins is generally of little import to transient donors. But the same cannot be said of professional donors.

Some of these seem to make a living by selling their blood. One of them is recorded who was used nearly 150 times in the space of two years among the Chicago hospitals. In these people, preserving their arm veins is absolutely essential.

Instead of cutting the vein clear through, as is done with a transient donor, puncturing it with the trocar to collect the blood is all that is necessary in the citrate method.

In the whole blood method the vein is simply cut half-through with a delicate pair of scissors (Figure 4) to allow the introduction of the beak of the glass transfusion tube.

Tying the vein above and below the perforation with a fine catgut ligature stops all bleeding. When the catgut is absorbed, nature reopens the lumen of the vein in a short time.

In selecting your vein from a donor, be very careful not to plunge your trocar near a vein anastomosis, or else you will be troubled by constant oozing during the operation.

Sometimes blood may be secured from the patient himself. I mean that in certain cases of internal hemorrhage the blood found in the abdomen may be collected, received in graduates, properly citrated, and reinjected into the patient's circulation.

133 Geary Street.

DISCUSSION

DR. R. F. GRANT—I once watched a blood transfusion in which the patient died in two minutes after 100 cc. of blood had been transfused. I believe that not only should the donor of a proper group be selected, but that proper matching should be done just before the transfusion.

ALSON KILGORE—While the Mors grouping of human blood is fairly accurate, some groups seem to have subdivisions which, if not detected in time, will cause dangerous symptoms of agglutination.

A. N. FREGEAU—Could not some other form of anaphylaxis cause the dangerous symptoms complained of besides agglutination? Could not the anaphylaxis of certain proteids contained in the donor's serum account for some severe reaction observed at times, even with proper group and matching?

W. J. HAWKINS—The fact emphasized by Dr. Juilly of stopping the source of the hemorrhage before expecting

good to follow a blood transfusion is well illustrated in the case of fibroids of the uterus. If the hysterectomy immediately follows the transfusion, good will have been accomplished. But if the transfusion is not followed by curative measures, bleeding from the fibroids will be increased, and in a day or two the patient will be no better off than before.

E. S. KILGORE—This is what I have observed in certain cases of hemorrhage from a perforated ulcer of the stomach. The transfusion seems not only to start the hemorrhage anew, but, to my mind, the patient will die as a result of this procedure.

I would like to ask Dr. Juilly if in all cases of internal hemorrhage the extravasated blood could not be used for transfusion into the veins of the patient?

J. K. PLINCZ—Has Dr. Juilly ever used the De Lee transfusion apparatus? It seems so simple, that it should be a real improvement over the described methods.

H. MARCUS—What precaution should be taken in transfusing an infant through the fontanelle?

G. H. JUILLY (to close)—Agglutination during a transfusion is such a tragedy. We are so helpless when it occurs that an extraordinary degree of precaution should be observed in all cases. Not only should donors and patients be properly typed by well-trained pathologists, but the matching of the two bloods should be insisted upon at all times, just before the transfusion. It only takes a few minutes, and it often saves a life.

That certain proteids contained in the donor's serum should influence the patient receiving it seems very plausible. However, I do not think that such anaphylaxis should be sufficient to cause death—merely reactions more or less severe—but invariably ending in cure.

In regard to using extravasated blood found in the abdomen in a case of concealed hemorrhage, the only blood to be considered is one coming from uncontaminated organs (tear of the liver or spleen, slipping of a ligature after a clean abdominal operation, etc.). As regards the blood found in the abdomen after a tear of the stomach or bowels, I would certainly not use it, as the peritoneum is already potentially infected and using this blood would certainly increase the danger to the patient. I would also not use the blood found after a ruptured extra-uterine pregnancy, or a rupture of the uterus during labor.

I have not used the De Lee apparatus as such, although I have used similar contrivances of my own invention. But while I would succeed in one case I would utterly fail in the next from some unexpected clotting in the syringe, in the tubing, or needles. I understand that in some clinics they use the multiple syringe method with success, filling up in rotation a certain number of 10 or 20 cc. Luer syringes and transferring them quickly to the patient. This requires a number of well-trained assistants that one cannot always have. I have had no experience with this method.

To transfuse blood into an infant's fontanelle is quite easy. The blood is generally taken from the mother or the father. A syringe full of blood—about 10 cc. in a warm, well-citrated syringe—is injected into the anterior fontanelle, properly disinfected with tincture of iodine. The needle used has a short bevel beak. There is a little stopper on the needle, about one centimeter from the point, to allow the needle to plunge into the superior longitudinal sinus, but preventing the needle from entering the brain tissue.

"To you affectionate children will look for the welfare of their parents; to you the anxious parent will turn for the rescue of his child; and on you the fond husband will depend for all that is dear to him in the hour of danger; to you, perhaps, may be confided the lives of numerous men led to the field of battles, or marched through unwholesome countries; to you the health and efficiency of crews destined to long and perilous navigation may be entrusted; on you the public eye is to be bent in days of plague and pestilence, for who shall now say that from such visitations even our happy climate may be free. And under all these circumstances you must be ready to give an account of what has been done, not only to those who are eagerly collected around you, but to a much more troublesome enquirer within."

Clinical Notes and Case Reports

OSTEO-ARTHRITIS OF MARIE

REPORT OF AN UNUSUAL CASE

By A. E. BANKS, M. D., *San Diego*

The case report following is submitted as an example of failure to appreciate true values in history and physical findings, whereby pathogenesis was improperly interpreted and ante-mortem diagnosis prevented. Needless to say chagrin was my constant companion during months of attendance.

Patient, a man of 43, first seen twelve years ago in good health. Has resided in Panama for ten years, from which place he came direct to San Diego, arriving February 26, 1924.

History February 27, 1924—Up to one year ago in good health. Immediately following dinner twelve months ago, "knees gave way, due to pain in joints, and fell down." Symptoms disappeared, but were repeated in three days, since when he has suffered recurrent pain—in knees and ankles principally—though there has been pain in other joints at times. Pain is lightning-like. During the initial symptoms the general health seemed good.

In April, 1924, having become much worse, he consulted Herrick at the Herrick Clinic, Panama. Also seen by Briscoe, James, and Reeder. Reeder performed tonsillectomy. Later the patient consulted Connor at the Ancon Hospital. Their diagnosis was infectious polyarthritis.

An intermittent diarrhea has been persistent since the beginning of the other symptoms. The affected joints, principally the knees and ankles, have been constantly swollen for months. Redness has not been noted. Pain ameliorated during increased swelling. Clubbed-fingers has been noted for most of the time included in this illness (hypertrophic pulmonary osteo-arthritis), though definite time of first appearance not obtainable.

For two years patient has run a bathing establishment at Panama, during which time he wore a bathing-suit more or less constantly.

Status Praesens—He has practically constant pain in most of the joints, but particularly in the knees, with acute exacerbations. Has been taking codein $\frac{1}{2}$ grain with phenacetin 5 grains prn. for a long period, and has lost fourteen pounds during the past year.

Examination—Patient emaciated, facies anxious. Gait hesitant, and evidencing severe pain on joint motion. Fingers of both hands clubbed. Blue line on gum margins. Lips slightly cyanotic. Left knee shows large amount of fluid, slightly crepitant in motion. Right knee has fluid, but less in amount. Tibial ridges roughened and exquisitely tender, as is practically the whole shaft—both sides. Epitrochlears and other superficial lymphatics enlarged, but not tender. Muscular atrophy of the quadriceps group, reflexes hard to elicit, due to tenderness, but probably exaggerated. Chest and abdomen negative. Head, eyes, throat, ears and nose negative; also urogenital system. X-ray (Weiskotten) of affected joints negative for bone changes.

Laboratory Reports by H. A. Thompson—Blood: Reds, 5,126,000; whites, 19,400; polys, 86 per cent. Wassermann blood, negative; spinal fluid, negative; urine and stools, negative; joint fluid, negative; blood cultures, negative.

Mouth showed evidences of severe infection and one abscessed root. (All mouth pathology eradicated by Dr. Care over period of weeks.)

Temperature varies between normal and 102.4 over a period of three weeks; at times (as March 4) running subnormal. Repeated stool cultures finally gave a staph. strep. mixture, from which Dr. Thompson made an autogenous vaccine. It was given with no apparent results.

There being no improvement, in spite of effective treatment of the only discovered source of focal infection (mouth), he was sensitized to horse serum and later

given large dose. Results were encouraging. Swelling subsided in joints and never recurred to a marked extent. Pain, however, recurred the same as originally.

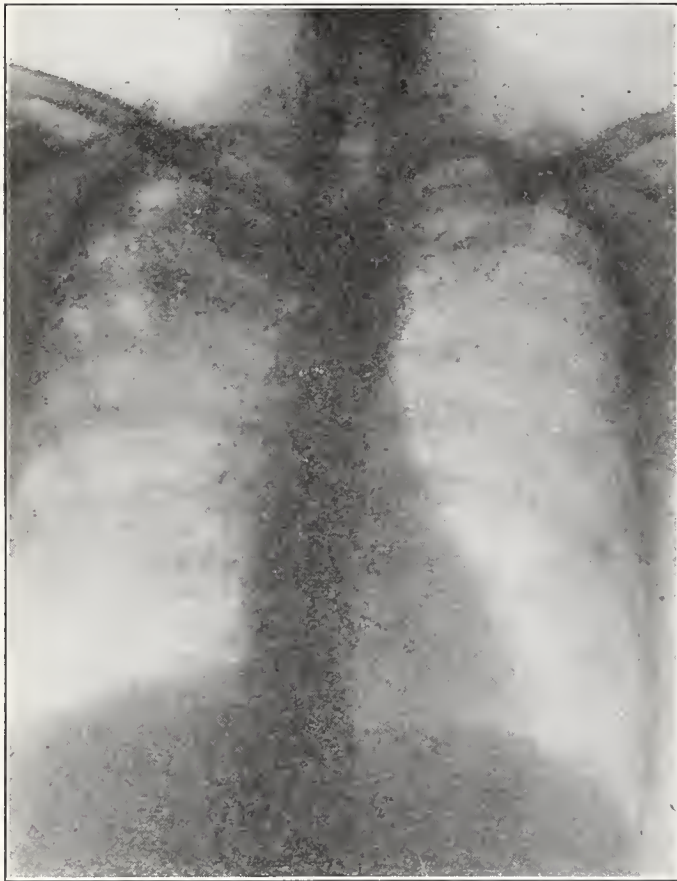
On the theory that negative Wassermann might be unreliable, salvarsan was exhibited freely. No results.

Consultation with Redelings and Frank Carter did not develop new findings.

On June 14, wife found him unable to move his right arm, unable to speak, and with mental confusion. Fifteen minutes later I saw him with Emil Black, and while complaining of numbness and tingling in right upper extremity, motor function was perfect. Speech was slightly impaired. No facial flattening. Speech later cleared up.

Two small ecchymosed spots on margins of tongue indicated that there had been some spasm prior to discovery of condition by his wife.

On June 15, he was referred to Herbert C. Moffitt at



San Francisco who had him under observation for one week, and reported no new findings.

All consultants agreed to some infectious agency as the most likely cause for his joint symptoms. To quote from Moffitt's report-letter: "The distinct clubbing of the fingers, the occasional temperature and the leucocytosis would, however, make some type of infection most probable, as would the course of the disease." On the theory that meningococcic infection might be the ultimate cause, he recommended emetin, which was administered.

Thereafter we exhibited purely as an experiment and because of flat failure to obtain definite evidence of the true cause, both mercurochrome and gentian violet. Results, nil, except to the feelings of the writer.

The aphasia attack was repeated several times, each one, however, being milder than the first. In September he complained of visual difficulty. Hosmer reported eye-grounds normal. Following consultation with Stealey, roentgenogram was made of thorax which at this time evidenced percussion flatness over right upper lobe. Lyell Kinney reported as follows: "There is an oval tumor 5.0 by 6.0 cms. in diameter lying approximately in the center of the upper right lobe, apparently embracing the distribution of the upper right bronchus. The tumor is apparently completely surrounded by healthy lung. It moves with respiration, and it apparently does not encroach upon the mediastinum. The probabilities as to diagnosis are first, chronic abscess; second, a cyst; third, a metastatic tumor."

I did an exploratory puncture and obtained caseous material from the tumor, which was interpreted by the laboratory as being probably an old tuberculosis.

Removal of the lung tumor was considered. The patient refused. Later, events proved this was a happy decision.

Shortly after this visual acuity diminished rapidly, and within a few weeks blindness was complete.

The patient died March 25, 1925.

Necropsy by H. A. Thompson—Subject greatly emaciated. No evident pathology except in upper lobe of right lung and left cerebral hemisphere immediately posterior to fissure of Rolando, where tumors were present, that in the lung being about size of lemon, the cerebral about size of walnut. The center of lung tumor was broken down. The brain tumor did not impinge on the cortex. Sections showed the tissue of both tumors to be carcinoma.

The conditions thought of in attempts to arrive at a diagnosis were particularly echinococcus cyst, meningococcus infection (latent), tubercular focus, peri-arteritis nodosa, syphilis, lung abscess, and some undetermined tropical infection.

The x-ray of chest was interpreted by Kinney, Ruggles, Moffitt, and myself as indicating non-malignancy. To quote again from a letter from Moffitt, in discussion of x-ray films which Kinney had taken to San Francisco to exhibit to our consultants: "As both you and I have thought right along, the course of the disease and the leucocytosis speak pretty strongly for an infection rather than malignant disease, and for a pyogenic rather than a tubercular infection."

Conclusion—Osteo-arthritis dependent on malignancy, not infection, is something to be kept in mind.

Note—All of which demonstrates again the wisdom of Hippocrates when he aphorized to the effect that "Experience is fallacious and judgment difficult."—EDITOR.

The Use of Alcohol in Medical Practice—It is the opinion of Roger I. Lee, Boston (*Journal A. M. A.*), that alcohol is of no benefit as a stimulant in the acute infections. It is possible that alcohol may have some indirect beneficial effect on the metabolism, particularly with regard to fluids; but that does not seem to have been demonstrated clinically as yet. It is only in very exceptional cases that alcohol has any direct value as a food. Alcohol is beneficial in a wide variety of conditions on account of its pharmacologic effect in the production of euphoria. Its benefit is probably never directly life-saving. In order to produce this effect, small doses of alcohol are probably sufficient. Lee says that alcohol should not be employed as a routine and should be employed only in individual cases in which the indications for its use are clear. When the purpose of the administration of the drug is kept in mind, there would be no more objection to the use of alcohol than to the use of opium or its derivatives, but the difficulties in the formation of habit are easily avoided when the treatment is individualized and the drug is administered on clear indications. There seems to be some evidence that in occasional cases the administration of alcohol to the state of mild but obvious intoxication may be beneficial. However, the ordinary indication for the use of alcohol is the creation of mild euphoria. The occasional cardiac patient with a large heart that no longer responds satisfactorily to digitalis and that hovers between compensation and decompensation with a variable amount of dyspnea often finds more comfort from alcohol judiciously given in moderate doses than from opiates, which are better reserved for a future period. In the sometimes inevitable discomforts of old age, as well as in the more sharply definite ailments of arteriosclerosis, alcohol occupies a high place in Lee's regard. Of course, alcohol does not in the slightest remedy the underlying condition. Its uses is entirely directed against the symptoms of the sensation of ill-being. It may even be true that alcohol, even in small doses, may somewhat accelerate a progressive condition. However, if alcohol will enable the patient to eat more and to sleep better, not to mention to give freedom from bodily miseries, it would seem likely that the progressing process in such cases is generally not accelerated by the use of alcohol.

EDITORIALS

M. O. R. C.

Members of County and State Medical Societies who are in acceptable health, and who do not fully inform themselves of the opportunities connected with the formation of the Medical Officers' Reserve Corps, are not only neglecting civic responsibilities and privileges *but intelligent self-interest as well*. The chances are that lack of information fully explains why only 490 of the 1600 medical officers wanted from California; 7 of the 75 wanted from Nevada, and 73 of the 85 wanted from Utah have been commissioned at this writing.

If our members could all have the enlightenment this editor recently obtained from two conferences with Colonel Edward L. Munson, Surgeon Ninth Corps Area, including our Western States, published more fully on page 1424 of this issue, that distinguished doctor would have more enquiries and applications for commissions within one week than he would know what to do with. This M. O. R. C. that so few of us know about is something quite distinctly worth while for every able-bodied doctor, whether considered from the angle of public service or self-interest. It is a *permanent* organization. A permanent mobilizing of the medical forces of our country to meet any and all classes of possible emergencies. The duties are less than nominal, and the opportunities and privileges are appealing. When the quota is filled, it is filled. And, in case of need, those holding commissions in the Medical Officers Reserve Corps will be the first assigned to active duty *at the rank they then hold*. Others, of course, *will be drafted and take what is left*. State and County Medical Associations have endorsed this movement and are sponsoring it. Every member should at least investigate this opportunity for public service *and personal protection*. Address the Surgeon Ninth Corps Area, Presidio, San Francisco, California.

ABSORPTION OF DRUGS FROM THE NASAL AND ORAL MUCOSAE

The absorption of volatile agents from the nasal and oral mucosae is well known, but it is frequently denied for or unsuspected with the non-volatile. It is a common laboratory experiment to demonstrate the toxic and fatal effects of nicotine by placing a drop of the alkaloid on the gums of an animal. The effects of tobacco-chewing in the novice or of chewing a cigar stump are too well known to require description. Occasionally, the physician is disturbed by the sudden or gradual development of alarming symptoms, and even collapse and death, from the local application of cocaine and other anesthetics in these regions. This means that probably the cocaine has been absorbed and caused systemic

poisoning. Anaphylactic sensitization from the nose and absorption of caffeine from cigarettes have also been reported. Nitroglycerine is commonly administered by application to the tongue. Its absorption by this method and by gastric administration was discussed in these columns some time ago. A knowledge of the scope and quantity of nasal and oral absorption of non-volatile drugs is desirable, for it might be of toxicologic and therapeutic importance. This has recently been obtained for certain hypnotic and coal tar derivatives by Planelles of the Munich Pharmacological Institute.

Planelles first demonstrated it in vitro experiments that smoke collected from cigarettes impregnated with antipyrin, barbitol, salicylic acid, and acetylsalicylic acid, invariably contained all the drugs, including unchanged acetylsalicylic acid. He then smoked such cigarettes himself, allowing the smoke to come in contact with the oral and nasal mucosae and avoiding swallowing and deep inhalation (alveolar absorption) as much as possible. At the same time the urinary excretion of the drugs was studied. Under these conditions, Planelles demonstrated qualitatively the presence of antipyrin, barbitol, salicylate and acetylsalicylic acid, as salicylate, in the urine. A quantitative study of barbitol excretion showed that about 20 per cent of a 0.3 gm. quantity of barbitol placed into and smoked as a cigarette appeared in the urine. Smoking a 0.5 gm. quantity of barbitol caused the appearance of the drug in the urine at the end of 10 minutes, while after swallowing the same quantity, the time of appearance was 20 minutes. After smoking, the drug disappeared from the urine at the end of 30 minutes, and at the end of 60 minutes when it was swallowed. According to Planelles, the dermal absorption of barbitol is about 20 per cent. If this is true, certainly the nasal and oral surfaces compare favorably with the skin, and from Planelles' results the absorption would be faster and completed sooner from the nose and mouth than from the gastro-intestinal tract. Confirmation of Planelles' results is desirable, but it is suggestive that prompter hypnotic effects of barbitol might be secured by simply holding the drug in the mouth instead of swallowing it, for the onset of the drug's action is notoriously slow, whatever the cause.

In any case, the results of Planelles, and from what has been said, leave no doubt that a variety of volatile and non-volatile agents, including protein among the latter, can be absorbed from the oral and nasal mucosae. It is well to bear this in mind at least in connection with the possible toxicity of local anesthetics, especially with cocaine which is notorious for its irregular absorption. Then there are certain antiseptics (toxic dyes and other kinds) which are being used in the nose and mouth, let alone systemic disturbances and possible toxicity, especially in children, from the indiscriminate use of drugged lozenges, nasal sprays, and a variety of other preparations of the patent medicine type used by the laity.

Planelles, J.: Arch. exp. Path. Pharm., 1924, 104:272.
"Resorption dampfförmiger Medikamente durch die Nasen—Rachenschleimhaut."

UTAH HOLDS A GREAT MEDICAL CONVENTION

Doctor Walter C. Alvarez of San Francisco has just returned from the annual meeting of the Utah Medical Association, which lasted for a whole week, and writes us as follows:

Just a note to congratulate you on a fine number of CALIFORNIA AND WESTERN MEDICINE, and on your success in getting so many good things boiled down and put into such a small space.

"I have just gotten back from the meeting in Salt Lake City which was a great success, and I think followed out an excellent idea. For the first time in my life I saw about one hundred doctors attend meetings faithfully from 8 a. m. to 9:30 p. m., and from Monday morning to Saturday noon. I wondered if perhaps there was a little Scotch blood in some of them to help out because they had each paid \$10 for the course. Perhaps the best part of the scheme was that they had men from other states, all teachers of medicine and surgery, and distance always lends enchantment. They were wise, however, in asking these men to give practical talks on common, everyday subjects. It was so interesting that I attended from early morning till late evening. Perhaps some time a meeting like that would go well in California. Credit must be given to Kahn, Critchlow, and Rich, who are splendid fellows and who worked the thing up and prepared for it a year ago."

The minutes of the House of Delegates and proceedings in general of this intelligently conducted and highly successful medical meeting will be found elsewhere in this issue of CALIFORNIA AND WESTERN MEDICINE. They are worthy of the careful perusal of every physician interested in the welfare of his profession, and particularly in the advancement of the cause of better health for everybody. The days of the stereotyped soporific conventional meeting of medical organizations are over, at least in centers where physicians assume their duties and play their parts in organizations, as they do in personal affairs.

The time is here when the physician who wants to get his message, whether written or spoken, over must deliver it in an attractive and appealing form. An increasing number of individuals in our profession, as well as outstanding organizations of physicians, are moving ahead with rapid strides, not so much because of their superior intelligence, but because they pay the same careful attention to their literary efforts that they do to their technique in the operating room.

If Utah, with its 354 physicians, can make the remarkable showing that they undoubtedly did make at their recent session, the California Medical Association with its more than 4000 members ought to make its annual meetings a source of profit and pleasure, not only to physicians, but to every citizen of this state.

MEDICAL AND SURGICAL "CONVERSAZIONI"

This innovation, introduced in the September issue of CALIFORNIA AND WESTERN MEDICINE, has produced such an extensive and agreeably surprising reaction that the department will be continued. This is a sort of open forum, as it were, to discuss pertinent problems of "*Bedside Medicine for Bedside Doctors*." (What would you think of that for a title instead of "Conversazioni"?)

We desire to give the widest opportunity to our

readers to discuss various subjects. The following six subjects are now being prepared for discussion. If you are interested in supplying us with a discussion of not over five hundred words on any of these subjects, please notify the editor.

1. A Brief of the Evidence that Justifies a Diagnosis of Infantile Paralysis.
2. What are the Essential Indications for Caesarean Section?
3. Under What Conditions, if Any, Is Appendicectomy Justifiable?
4. Do We Need More Than One Class of Nurses? If So, What Shall Distinguish Them—In Education, Duties, and Responsibilities?
5. Should Drug Addiction be a Reportable Disease.
6. What Constitutes the Minimum Evidence Warranting a Positive Diagnosis of Diabetes Mellitus?

The Control of Rickets—That animals can be protected against rickets by the use of cod-liver oil and ultra-violet light is an established fact. It has also been clearly shown that cod-liver oil and sunlight exert a great influence in the cure of rickets. Whether these measures are sufficient to prevent rickets in infants in a community has been made a problem of investigation in New Haven. Martha M. Eliot, New Haven, Conn. (Journal A. M. A.), describes the plan of the study and offers a preliminary discussion of the results. The demonstration was started in October, 1923, for a three-year period by the United States Children's Bureau in conjunction with the pediatric department of the Yale School of Medicine and with the active co-operation of the local health organizations. A district of the city was selected having a population of approximately 13,500, one-third of which were negroes, and two-thirds a mixed population composed of Italians, Irish, Polish, and Americans. The office of the demonstration is known in New Haven as the "Children's Bureau." The staff consists of three physicians, three public health nurses, two social investigators, a roentgen ray technician, and a secretary. The main problem of the investigation was to show whether rickets could be prevented in a community by the intensive use of cod-liver oil and sunlight. The infants born within the selected district during the first two years of the study are examined and started on cod-liver oil and sun baths, if possible, before the end of the first month of life. They are brought to the Children's Bureau once a month for physical and roentgen-ray examinations in order that rickets may be discovered as early as possible, and intensive treatment instituted if necessary. The nurses visit the homes frequently to see whether the instructions are being carried out. These investigations have shown that a slight degree of early rickets is well nigh universal in our climate and in our state of society. The very intimate association of rickets with growth, its early appearance regardless of season, and its universality raise the question whether this slight degree of rickets must not be considered normal. That rickets is intimately associated with growth is well known, and that it should appear at the time when most active growth is taking place, namely, the first four months of life, is not extraordinary. The rate of growth of the infant influences the early development of the disease. Large, rapidly growing breast-fed infants and very fat infants uniformly show definite evidence of rickets. It is an uncommon thing to find a healthy, vigorous breast-fed infant who does not show rickets by roentgen-ray examination. Premature babies, who grow exceedingly rapid, are notoriously rachitic. Malnourished infants frequently show small, slender bones with little or no rachitic change. If any two groups of infants show the need of early anti-rachitic treatment more than others, they are the large, rapidly growing breast-fed infants and premature babies.

There is too much birth control and not enough control of them after they are born.—San Francisco Chronicle.

- The MONTH with the EDITOR -

Notes, reflections, extracts from correspondence, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

"THE SURGEONS AND PHYSICIANS OF THE WORLD know practically nothing about how to make an old man young," said Doctor Emmett Rixford upon his return recently from Europe. He endorsed the statement of a colleague who said, in effect, that "It takes more than three kinds of monkeys to make a young man out of an oldster." The three who are usually active in the effort—for a price—are, the patient who is operated on, the surgeon who operates, and the monkey that is the victim.

Goats might well be substituted for monkeys, and the statement would still be true. But goat glands are cheaper and profits greater. The sale of goats' testicles is said to be lucrative business for slaughterhouses.

"BY THIS YOU MAY KNOW THEM"—"A famous British surgeon visiting this country," says the San Francisco Examiner editorially, "was asked if he had brought over any new secrets of his art."

"He said, 'Our profession is international. When we find a new way to conquer the ailments of mankind they are immediately communicated to the whole world.'"

"So it is in all science. Those who are trying to make things better for the whole human race have no secrets from each other. *By this you may know them.*"

We do not know who this British surgeon referred to was, but it wasn't Hadden nor those of his ilk who frequently occupy "news" space.

WE ARE INDEBTED TO DOCTOR WILLARD J. STONE of Pasadena for a copy of the outstandingly able Baccalaureate Address delivered by Rev. Lloyd C. Douglas at the University of Michigan commencement exercises. Extracts from this address are used elsewhere in this issue.

"OVER ONE HUNDRED MILLION PEOPLE in the United States escaped being run over by automobiles last year, several of them having also escaped the year before."—Life.

California, Nevada, and Utah Doctors Publish Elsewhere:

[Note—Members of the California, Nevada, and Utah Medical Associations are invited to supply the editor with reprints or marked copies of magazines containing their articles or very brief abstracts. All that we receive will be noted regularly in this space.—Editor.]

—FRANK HINMAN OF SAN FRANCISCO AND ALEXANDER B. HELPER OF SEATTLE (Archives of Surgery, October, 1925) discuss "Experimental Hydronephrosis."

—LEONARD W. ELY OF SAN FRANCISCO (Archives of Surgery, October, 1925) reports a case of Sprengel's deformity.

—M. S. WOOLF, SAN FRANCISCO (Archives of Dermatology and Syphilology, October, 1925) writes on "Leukonychia Striata."

—EDWARD N. TWITCHELL, SAN FRANCISCO (Pacific Coast Journal of Nursing, October, 1925) takes "Psychiatric Training in Nursing Curricula" as his subject. Twitchell proposes to use bedside teaching for nurses.

—WALTER C. ALVAREZ, SAN FRANCISCO, discusses "Digestibility versus Roughage and Vitamins" in "Baking Technology" of September 15. The magazine is the "house organ" of the American Institute of Baking:

"There is little need for worrying at any time about the vitamins in the diet of an average middle-class American," believes Alvarez. "He will probably get all that he needs even on a smooth diet; and so far as I know, there is as yet no evidence that a superfluity of vitamins makes a man any more healthy than he is when he has just enough for his needs."

—In another article (Journal A. M. A., October 3, 1925) Alvarez writes on "Reverse Peristalsis in the Bowel, a Precursor of Vomiting."

—HAROLD K. FABER OF SAN FRANCISCO (American Journal of Diseases of Children) discusses "Variability in Weight for Height in Children of School Age." His most important conclusion is that:

"Variability in weight for height, in the directions of both underweight and overweight, increases with age in both sexes. These differences and variations in variability are too great to be disregarded in favor of a single standard of variation, such as is now in general use."

—J. W. ROBERTSON, V. H. PODSTAT, C. W. MACK, AND JEWEL FAY have issued an instructive pamphlet on "Occupational Therapy," as practiced at Livermore Sanitarium. The excellent, ethical, and all inclusive scientific treatment and care of the mentally ill as it is being carried out at Livermore Sanitarium is doing much to popularize institutions for this big service, as has long since been done for hospitals for the care of physical ills.

The Book Analysis Service of CALIFORNIA AND WESTERN MEDICINE is being made more valuable because several doctors are *voluntarily* sending in reviews of books that come to their notice.

More doctors—and others also—rely upon this service than book publishers realize. Our correspondence upon this subject is illuminating and encouraging.

Careful, fair reviews of books, solely in the interests of our readers, are welcome from any doctor or other reader. Obviously, such effort is a work of love, because only the editor and his councilors may know who writes a review.

Any review that is published represents the magazine, and not the opinion of any one person.

More and more correspondence about books is invited.

A "NEW" HEALTH SLOGAN—If it were not for the fine dust which we breathe and the stagnant water which we drink, Adam's sons would live for ten centuries.—Mohammed, in the Koran.

DOCTOR HAROLD W. WRIGHT, formerly of San Francisco, is now consulting neuro-psychiatrist to the Department of Welfare of Pennsylvania. Doctor Wright feels that the experience he is gaining in initiating traveling diagnostic clinics will be of use in our effort to provide better health for all people.

According to the Public Press:

—The following doctors were to be tried before the Board of Medical Examiners for the alleged offenses set opposite their names:

"Dr. Herbert E. Bogue, Los Angeles, charged with violation of the narcotic laws; Dr. Rebecca E. Dorsey, Los Angeles, 'goat gland specialist,' charged with illegal advertising; Dr. Edward O. Hanlon, Los Angeles, narcotic charge; Dr. Toshio Ichioka, Los Angeles, illegal advertising; Dr. Franklin E. Kerr, Orange County, convicted of sending poison candy through the mails to his wife, and Dr. Robert Renwick, Los Angeles, aiding and abetting an unlicensed practitioner."

An interesting group of alleged offenses, particularly the charge that a "goat gland specialist" can be guilty of illegal advertising. What on earth could she say in her advertisements that is not frequently featured as "news"? The legal fences around "doctors" are so low and ramshackle that our board will have to keep very busy keeping poachers out. However, do the best you can, fellows, we are with you.

—A "nutrition expert," in speeding along the "royal road to health," has discovered the "wiggles" is a terrible children's disease, and that it is caused by too much tea or coffee.

This "expert," according to newspaper display, "warns"

the school children that "the wiggles will get you if you don't watch out."

Now that is "health education" as she is!!!

⁶⁶THE practitioners of the highly profitable pseudoscience of 'Fakopsychanalysis,' predicts the San Francisco Chronicle editorially, "are folding their tents and seeking new fields where one may get a fat living without working for it. 'To Let' signs are adorning the doors of offices where personality doctors formerly diagnosed the mysterious causes of laziness, incapacity, and general discontent.

"These cure-all quacks are on their way, making room for the next strange madness that lays hold upon idle minds always ready to be exploited by fakers."

G. B. S., the well-known British satirist who apparently gets enjoyment out of "stirring the animals," is again after the medicos. He prods rather ruthlessly and often stupidly, but after all he does good. He is getting well along in years, and it is safe to prophesy that he will call for one of the members of that "self-disgraced trade union, the British Medical Council," as he calls it, at no far distant date.

Some of the little G. B. S. imitators in our country unfortunately are much younger.

"CHIROTHESIAN FOUND NOT GUILTY—M. T. Larkin, Los Angeles, who was arrested on a charge of practicing medicine without a license, was found not guilty after a three-day jury trial. Albert Carter, special agent for the State Board of Medical Examiners, cites this case as an example of the handicap of prosecuting cases with inexperienced prosecutors. The evidence showed that Larkin treated paralysis, tumors, rheumatism, and kidney disease. Larkin contended he had the right to do such things in accordance with the tenets of the Chirothesian Church, of which he is a member."

Thus we have another of the 57 varieties. Soon they will be wanting their own board to license and control themselves.

When they do they may profit by the experiences of the chiro, and not make their law so tight that they cannot get in themselves.

Judge—Do you wish to marry again if you receive a divorce?

Rastus—Ah should say not! Ah withdraws from circulation.

DOCTOR MARIANA BERTOLA, President Federated Women's Clubs of California, was recently the guest of honor at a luncheon, with the San Francisco Clubs as hostesses. It was a remarkable testimonial of the esteem and affection in which Doctor Bertola is held by the great organization she is to head for the next two years.

The scene was an impressive one to those accustomed to observe humanity in mass movements. The some four hundred women who attended the luncheon were from all of Northern and Central California, and they were in earnest—justly so—in the beautiful tributes they paid to the guest of honor. The "lone man" guest was the most impressed person present—impressed with the immense power for good inherent in these serious-minded members of our families who are rapidly forming themselves into all that their name—Federation—implies; impressed with the facility and aptness with which the numerous speakers delivered their telling messages, and with the lively discriminating interest with which these messages were received.

The permanent message the "lone man" guest carried away with him was that mothers have moved their conference tables from individual meditation over the kitchen table to the forum tables of vast conference halls.

Another permanent impression was that these mothers, wives, and sisters loved their president, Mariana Bertola, another evidence of wisdom that will be seconded and applauded by every physician in California.

With Medical Editors:

—Long Island Medical Journal plans to run a series of articles written in "textbook style." The editor says:

"While textbook articles in medical journals are ap-

proved by most doctors, yet some medical leaders do not favor them because doctors can find the information in textbooks. Our reply is that an author of a textbook is seldom willing to state a simple, positive line of treatment which a family doctor can recommend to his patient, and yet that same specialist is perfectly willing to outline a dogmatic line of treatment to a doctor with whom he converses in a friendly way."

—The editor of the Boston Medical and Surgical Journal, June, compliments BETTER HEALTH magazine, by reproducing one of its editorials.

—In a lengthy editorial on "The Evolution of the Doctor" (Journal of the Kansas Medical Society) it is stated that:

"For the greater part of a century the family doctor has been passing, not through a process of decadence, but a process of evolution—a process of evolution dependent upon conditions over which he had little if any control, and with which the medical profession as a whole had nothing to do."

—"The general practitioner, in the old sense, is indeed gone, but not so the trusted friend and family adviser," states the editor of the Rhode Island Medical Journal. "He still exists, usually in the person of a medical man, sometimes a surgeon and sometimes a rather questionable combination of the two, but still he remains the father confessor in matters of health, the clearing house for family illness."

—"IF CRIME CONTINUES UNCHECKED AND UNPUNISHED, with murder excusable on the specious pleas of 'glands' and 'insanity,' the country cannot survive. Never was there more pathetic demonstration of 'A little learning is a dangerous thing' than the fashion in which justice is prostituted to meet the demand of sentimentalists and the hawking of learned phrases in the mouths of comparatively ignorant laymen."—Editorial Illinois Medical Journal.

—"A VERY LARGE PERCENTAGE of the regular medical profession is both progressive and ethical, but there is an element within our profession that represents quackery and dishonesty which little effort on the part of the profession has been put forth to abolish. *Some of the quackery and deception practiced by supposedly reputable members of the medical profession is of that refined and polished type that is hard to detect by the average observer.* Some of it is blatant and crooked, with no attempt to gloss it over, and our profession suffers by harboring within its ranks these men who disgrace us."—Editorial Journal Indiana Medical Association.

STATISTICS may demonstrate that ox-carts were safer than motor-cars are; but we are through with ox-carts, and are not going back to them, though the casualties on our streets are multiplied by ten—which Heaven forbid!—Rev. Lloyd C. Douglas, Michigan Alumnus.

Fake Oil Stock Promoters and fly-by-night salesmen of other classes have found such "good pickings" among physicians that a growing group of "twilight zoners" of our own profession have entered the skin-game field with a variety of schemes calculated to separate credulous doctors from their hard-earned savings.

Some of these medical sharpers have jail records, and almost without exception their records as physicians and citizens are shady or dirty.

Like others of their ilk they have caught on to the fact that a paper organization with a high-sounding name is an asset. An attractive policy expressed in ambiguous platitudes also helps.

Several letters inquiring about some of these "movements" have been received from members recently. One of the most active who is sending out most alluring letters has a "newspaper morgue" record that would make a billy goat whose "glands" had been used by rejuvenators blush for shame.

"ANHEDONIA" is "coming in" fast. The word is not particularly new, but its definition, once limited to "absence of pleasure from the performance of acts which would ordinarily be pleasurable," has expanded to include "Americanitis," neurasthenia, and many more allied conditions.

We now have books on the "subject," one of which, by

Abraham Myerson, is more than passably interesting and will be found useful reading by physicians.

SOMEONE MUST HAVE PAWNED OFF A PHONY mailing list on a hernia cure "specialist" recently. Many people who never had a rupture or who have long since been cured by operation, are being deluged and importuned by one of those "wise birds" of New York who can fit your truss by mail, to buy his truss and be cured.

This "doctor" proposes to extend thousands of lives by fitting a truss by mail for a fee. Not only that, but—for a fee—he will also supply by mail an ointment that will make the tissues so strong that the next rupture must perforce break through elsewhere.

There is significance in the fact that non-medical people send "literature" of this quality to a medical editor and invite comment.

Doctor Murdered When Answering a Fake Call! Baby of Murdered Nurse Discovered!—Headlines like these are becoming all too frequent. It has been exceptional when the doctor and his "black bag" and nurses in uniform were interfered with in their errands of mercy. Is this form of murder and gangster a new product? Is the time coming when these servants of suffering humanity must add an automatic to their equipment?

THE FAMILY DOCTOR AIN'T WHAT HE USED TO BE, according to Bill Bailly (San Francisco Bulletin). Of course not, Bill, and neither are journalists, farmers, lawyers, laborers, any others who make a living—we hope—out of *service*. Bill's chief complaint is that during the old days "a fellow could get sick any time, day or night, and old Doctor Jones would come, but now can a person become ill any time he feels like it? One should say not?"

One of our readers suggests that we ask Bill to try to get a plumber, electrician, or any other kind of skilled worker any time he thinks he needs him, and he will find that they, too, take certain times for recreation and sleep.

TAKING FOR HIS TEXT the "me too" statements by Doctor Copeland (Collier's) about the alleged disappearance of the family doctor, the editor of the San Francisco Chronicle says, among other things:

"We may gain in health, but we shall lose a great deal in sentiment when the old family doctor passes completely out of the scheme of things and a younger, brisker practitioner of preventive medicine has taken his place."

Don't worry, brother editor, the family doctor is not going. He may change as those of other vocations change, but he will still correlate new facts and apply them as of yore. He will become more able scientifically without losing his pristine art. He will pick out the rare kernels in the vast chaff of the "new psychology" and serve them clean at the bedside and elsewhere without blowing the smut and chaff all over the home. He will do all of these things and others, *but he is not going*. Quite the contrary. There are more family doctors now than ever before—well over 100,000 of them in our country. There are worthy specialists, too. Many of them, and they—at least those worth while—sustain the hand of the new family physician—personal health counselor, as President Vincent of the Rockefeller Foundation calls him—rather than detract from his sphere.

There is nothing, except the wish that is father to the thought, to indicate that the personal health physician is disappearing.

From Our Correspondents:

—DUDLEY SMITH, M. D. (Oakland and San Francisco)—Regarding "Medical and Surgical Conversaciones," I believe these discussions will be very popular and very valuable, and that you are wise to continue to devote space to them.

—WILLA A. CAMERON, M. D. (Keswick, Iowa)—Yes, indeed, I should like more "Conversaciones" of the type found in the September issue of CALIFORNIA AND WESTERN MEDICINE.

—EDWARD C. HALLEY, M. D. (Fresno)—We feel that

CALIFORNIA AND WESTERN MEDICINE has hit upon something very practical in "Conversaciones," instituted in the September issue. It is comforting indeed to learn that the well-known contributors to the initial article, when asked for a definite and concise opinion, expressed themselves so in harmony regarding gall-bladder surgery. We did not surmise that there was such general agreement in dealing with gall-bladder pathology.

I shall be willing to take any part in the discussion that you may deem me qualified to handle.

—C. B. ALEXANDER, M. D. (Alhambra, Calif.)—I enjoyed reading the "Conversaciones" by invited authors very much. It certainly is a new and direct way of getting the meat in the coconut. Here is hoping you continue it. Would enjoy joining in "Conversaciones" on Surgery at any time.

YOU can make more money being a quack, a petti-fogger, a spiritualistic medium, a phrenologist, a palmist, an itinerant tent-evangelist, a patent-medicine peddler, or a plain second-story man, than in any honest, self-respecting vocation.—Rev. Lloyd C. Douglas, Michigan Alumnus.

Treatment of Bronchial Asthma—This paper by Albert H. Rowe, Oakland, Calif. (Journal A. M. A., June 20, 1925), is based on 234 cases of bronchial asthma in which the patients have co-operated satisfactorily in their treatment. The occurrence of allergy in antecedents has been carefully noted, 56.4 per cent of the patients showing a positive family history. Angioneurotic edema occurred only twice. Ninety-one per cent of the patients gave one or more positive skin reactions. Rowe feels that this high percentage of positive reactions is due to the use of a large number of food, animal emanations and pollen proteins, to the use of orris root in routine testing, and to the use of many miscellaneous proteins in the unusual case. Retesting on several occasions when the asthma remained uncontrolled has revealed many reactions that would have been missed. In this series no positive reactions to bacteria have been recorded. Of the 234 patients, 63.4 per cent had complete or nearly complete relief from treatment; 26.9 per cent had marked relief; 5.5 per cent had slight relief, and 4.2 per cent had no relief, the patient himself or some member of the family being in each instance the judge of the result obtained. Results were satisfactory in approximately 90.3 per cent. The treatment has been guided by the skin reactions. For the control of food sensitization, total exclusion of the offending substance is necessary. Wheat, in Rowe's experience, most frequently gives important food reactions. Many delayed reactions to wheat have also revealed a true sensitization. Eggs, milk, and the cereals other than wheat follow in order of importance. Pollen reactions have occurred in 39.7 per cent of the cases, and nearly all have required pollen desensitization. Positive reactions to one or more animal emanation proteins have occurred in 58.5 per cent. Feather proteins have reacted in 16 per cent of the cases. These proteins have also given many delayed reactions, and successful treatment based on these reactions has often corroborated the indicated sensitization. Orris root gave positive reactions in 10 per cent of the cases. In this series, 169 operations had been performed on 110 patients, with only slight relief of the asthma in a few cases. Rowe's experience is that uncontrolled cases are rarely helped by climatic changes. Epinephrin should be used to control spasmodic attacks, but it is often useless in severe cases. Two or three grain doses of chloral hydrate combined with four or five minimum doses of tincture of hyoscyamus has helped to tide over the patients while the diagnosis is being made and treatment instituted. Iodids in large doses give many asthmatic patients some relief. The burning of niter and stramonium leaves is indicated when it gives relief. Quartz light with vaccine therapy has been found very valuable when bronchitis complicates asthma. Morphin should rarely, if ever, be used even in the most severe attacks, because of its demoralizing effect on the patient. Calcium chlorid and peptone intravenously have been of no value in the control of Rowe's cases of severe asthma.

Medical Economics and Public Health

Gorgas Memorial Institute—Doctor Franklin Martin, chairman of the Gorgas Memorial Board, in a recent letter informs us that the criticism noted on page 1185 of the September issue of CALIFORNIA AND WESTERN MEDICINE regarding the appropriation of the term "Better Health" by the Gorgas Memorial had received the attention of the institute and would hereafter be discontinued.

This evidence of fair dealing is creditable to the Gorgas Memorial people, and pleasing to the physicians of California.

Doctor Martin says, in the closing paragraph of his letter, that "the object of the Memorial is to cultivate co-operation, not only between the medical profession and the laity, but to co-operate with all agencies working for health betterment. I hope the various organizations working toward that end in California will recognize this attitude on our part and pull with us."

"If more Physicians Took the Trouble to Make Thorough Examinations of Their Patients, never failing to examine the chest after the clothing had been completely removed from the upper part of the body and using auscultation, percussion and palpation, which are fundamental to physical diagnosis, there would be fewer failures and many more persons satisfied with the care of their physicians."

"If medicine is to be partitioned off into a series of specialties and cults practiced by men who have learned only one organ of the body or only one system of diagnosing and of treating disease, medicine as a science is bound to fail. No part of the human body can be detached and treated as separate from the organism as a whole."

"Physicians have watched the inroads made on the practice of medicine as a single science. They have noted the attempts of optometrists to parcel off the eye as their particular field; of cosmeticians to assume the right to treat disorders of the skin and to request legislatures to grant them power to remove moles, warts, tumors, and other excrescences; of chiropodists to assign to themselves the complete care of the feet; of chiropractors and osteopaths to make the field of manual manipulation their exclusive purview; and of some of the specialists within the ranks of medicine itself to assign all important functions to the teeth, to the lungs, or to other organs of the body. The time has come to call a halt on geographic warfare within the human body, and to look on it as a 'united states' that will be at least as firmly consolidated as the forty-eight individual constituents of our government."—Morris Fishbein (Journal A. M. A.).

The Loss of Doctor Harry E. Alderson's Services on the Board of Medical Examiners of California, after fourteen years of splendid service, is a loss to the cause of better health for all of our citizens. Anyone at all familiar with the trials and responsibilities of this board and with Doctor Alderson's uncompromising stand in the interests of public welfare will regret the conditions, whatever they may be, which influenced the governor to drop him from the board and substitute a doctor of much less experience in this particular type of work, whatever other accomplishments he may have.

Governor Richardson of California has "drafted" Doctor A. W. Morton to serve on his board charged with the duty of enforcing medical licensure and the enforcement of medical practice laws. *Doctor Morton is a member of the San Francisco County Medical Society.*

We Have Received From Some Unknown a marked copy of an interesting editorial apparently from *Medical Economics* which says, among other interesting things, that:

"Physicians will do well to hearken to the radio, as it broadcasts much medical information and some misinformation to the invisible millions.

"An irregular practitioner," continues the editor, "can go on the air, with a bald advertisement at so many dollars a minute, as was shown in a recent case in court. Healing cults, fantastic practors, faith curists, and all manner of persons who deny the basic truths of science, can have their voice. More than a hundred years have passed since Jenner, and yet there are faddists who are attacking vaccination and airing their views to the wide, wide ether. The publication of such matter as this, whether in the press or on the metered waves, is contrary to an enlightened public policy."

The chief trouble about radio or any other kind of advertising is that some people can't distinguish between promoting a cause and advertising an individual. The County Medical Society broadcasting would lend dignity and value to any health message not possible to obtain when broadcasted by any doctor, however well press agented.

According to the Public Press—The Berkeley Chiropractic College and its president, Percy Purviance, has brought suit to prevent the California Board of Chiropractor Examiners from conducting an examination of the "college."

"Such an investigation, Purviance alleges, would be a violation of the school's rights, if for no other reason than that *no member of the board of examiners was a licensed chiropractor for three years prior to his appointment to the board, as required by law.*"

An interesting point, and judged by previous history of the chiropractic law, one likely to win in the courts. Members of a former chiropractic board were ousted by the courts on the ground that they had not been "legally practicing chiropractic for three years" at the time of their appointment, as required by law. It begins to look as if the chiro had made their law so tight that they cannot get in themselves.

But they are "making hay," as shown by a report that they had recently licensed over 1500 of themselves. Once in, no matter how, there they are. Hurry up, boys, and get in before the illegality of your board is rediscovered.

Our Officials Tell Us that it cost the taxpayers of California from \$237.63 to \$290.32 per patient for care in our state hospitals last year. Assuming that the "shut-ins" had even decent care, these figures are really funny.

But look at this! Presumably, by the same sort of book-keeping, it cost from \$253.71 to \$280.77 per capita to maintain our prisoners. Does this help explain the popularity of prisons?

But look a little further. According to the official figures, it cost \$711.56 to keep a girl in the California Correctional School for girls; \$374.68 per head at the Correctional School of Industry, and \$643.03 per head at the Whittier Reform School.

At the Industrial Home for the Blind the cost was \$394.28, and \$492.02 per inhabitant at the Veterans' Home.

Interesting figures, aren't they?

Why is it cheaper to serve the mentally—and often physically also—ill citizens in "hospitals" than it is to serve criminals and the theoretically reformable in prisons and reformatories?

"Father, forgive them, they know not what they do."

Thank God for Ministers like Lloyd C. Douglas, who, in delivering the Baccalaureate Address at Michigan recently, said among many other important things that:

"When the honest scientist is haled into the witness-box by the irascible majority and is obliged to answer certain queries which it has conceived in stupidity and brought forth in impertinence, and candidly replies, 'We do not know,' the public shouts: 'Aha! Just as we thought! You do not know. Very well. We will go to somebody who does know,' and scurries away to the chiropractor (until very recently the driver of a jitney-bus); and the man with the Abrams machine (who has just retired from the tonsorial profession) and the owner of a neurocalomotor, who, by an examination of a lock of hair, a drop of blood and a certified check, can diagnose any ill to which mortal flesh is prone; and draw from a slot in the device a prescription that will guarantee a lasting cure by Thursday, at the latest. In every

department of life, small men willing to make capital of the public's psychoses; and unsuccessful men, who have tired of being honest at the prevailing price of that commodity, are arrogating to themselves large leadership. They speak with conviction. They never doubt, or wait, or hesitate, or ask the patient to come back next day for a decision. They put their dogmas down on the table with a bang and a growl. The public has been beaddled, mentally, just long enough to like that school of thought."

"No Smallpox was Reported in Rhode Island in 1923, nor during the last half of 1922. During the same period it was prevalent in the neighboring state of Connecticut. Rhode Island is free from this serious and disgusting malady because of the almost universal practice of vaccination in their public schools."

The Processes of Human Selection, according to Warren S. Thompson of Miami University, in a paper read before a meeting of the American Sociological Society and published in a recent issue of the Monthly Labor Review, are probably somewhat less rigorous than they were two thousand years ago because of modern medicine and charity, but if the lower classes, and particularly the defective, benefit most from modern charity, the upper classes benefit most from modern medicine, and probably the unfit thus kept alive do not materially change the relative proportions surviving in these different classes. It is the differential birth rate which changes these proportions, as anyone can readily see who studies mortality and morbidity tables.

Dr. Poo-Poo-Sin, as we will call him, is a Chinese herbalist who advertises extensively in certain newspapers. When the matter of advertising an unlicensed person to engage in illegitimate business was called to the attention of the newspapers by the Board of Medical Examiners, one of the excuses given by one of the papers (and it has also been given in Courts) was that "Dr. Poo-Poo-Sin" was patented or copyrighted by the United States Government, and therefore the illegal practitioner had a legal right to live up to his patented prerogatives. ? ! + —.

Mr. A. B. Bianchi, attorney for the Board of Medical Examiners, has now rendered a decision that ought to effectively settle this stupid claim. He ruled that Section 17 of the Medical Practice Act, as far as applicable for the purposes hereof, is in part as follows:

"Any person . . . who shall in any sign or in an advertisement use the word 'doctor,' the letters or prefix 'Dr.,' the letters 'M. D.,' or any other term or letters indicating or implying that he is a doctor, physician, surgeon or practitioner under the terms of this or any other act, or that he is entitled to practice hereunder or under any other law without having at the time of so doing a valid, unrevoked certificate as provided in this Act, shall be guilty of a misdemeanor and upon conviction thereof shall be punished as designated in this Act."

"The public at large has long associated the use of the word 'doctor,' and the symbols 'Dr.' and 'M. D.' with the practice of medicine. The purpose and object of the statute is to protect that public. In several of the states, the Medical Practice Acts have defined the use of those terms as constituting *ipso facto* the practice of medicine. To protect the public, therefore, it has been deemed advisable to restrain the use of this title and prefix and to compel all those entitled to prefix, or append such letters and titles, to be properly qualified and registered under the law.

"In California the use of the title 'doctor,' or the prefix 'Dr.' or the affix 'M. D.' by one unqualified under the Medical Practice Act has been made a crime. I know of no law which will act as a screen or defense, or which can be used as a screen or defense, for the violation of such a statute, passed for the public safety. If it were possible to hide behind the copyrighting of the word 'doctor,' the prefix 'Dr.' or the affix 'M. D.' in connection with any name, this statute could be violated by everyone in California, thus rendering it entirely nugatory.

"You will remember that in the case of Berry v. Alderson, the defendant sought to hide behind the incorporated name of 'K. C. Bloodless Surgeons,' and neither the Ap-

pellate nor the Supreme Court gave any attention to the contention that the defendant was entitled to use this fictitious name, and it was not held necessary in that case that the evidence show any fraud actually perpetrated on the public.

"I, therefore, advise that the use by anyone in any sign or advertisement of the word 'doctor,' the prefix 'Dr.' or the affix 'M. D.' is a violation of Section 17 of the Medical Practice Act, unless at the time of so doing he is entitled to practice under and by virtue of some provision of the Medical Practice Act or other statutes in *pari materia*, such as the Chiropractic or Osteopathic Acts of 1922."

"It Is a Serious Condition," concludes the Boston Medical and Surgical Journal, editorially (August 27, 1925), "when the state and nation takes upon itself the long-established prerogatives of the individual unless the individual fails to meet the requirements of society. We can understand the necessity of state or county hospitals in communities too poor or otherwise unable to provide them, but we believe that the creation of hospitals should be determined by definite indications rather than general principles."

Special Agent Henderson Reports to the Board of Medical Examiners that in the case of the People v. Fong Wan, Chinese herbalist of Oakland, said individual was "found not guilty by a jury in Department No. 2 of the Police Court of the City of Oakland." This, in spite of the fact that the People produced six witnesses who testified positively as to the pulse diagnosis and treatment given by the defendant on or about the date mentioned in the complaint."

Henderson reports that when Fong Wan was tried in the Oakland Police Court on January 29, 1925, he took the stand, testifying that he was a merchant, engaged in business at 576 Tenth street, selling rice, tea and herbs, etc., and denied that he had felt the pulse of the four witnesses who had testified to that effect.

In commenting upon this report, Doctor Pinkham, Secretary of the Board of Medical Examiners, considers it "added evidence of the difficulties they have in endeavoring to convict Chinese herbalists of violation of the Medical Practice Act."

Keep it up. You can at least make fakirs more careful in the language they employ, and now and then one may be proved so obviously guilty that some of our police courts will scold him.

Sutter Hospital—We welcome to our ethical advertising space in this issue the Sutter Hospital of Sacramento. This hospital is one of the splendid new modern health agencies of California, operated and directed by members of the California Medical Association, and is entitled to the consideration of physicians in its own territory and to the consideration of physicians who are referring patients from distant points.

The advertising pages of CALIFORNIA AND WESTERN MEDICINE are becoming more and more occupied with the announcements of creditable medical agencies of one sort or another, and no other kind can buy space in any of its issues. Physicians and other readers of this magazine may rely with confidence upon the reliability of service and information they will receive by application to this or any other hospital whose announcements are carried within our covers.

"The Physician Has Something to Sell," says William C. Woodward (Federation Bulletin), "when he offers his services to the community. The medical practice law ordains that what he offers for sale shall not be below a given standard, under penalty of fine and imprisonment. If I employ a physician and he does not give service of that quality, he offends not only against my private rights, but also against my rights as a member of the community. For any offense against my private rights, I am entitled to redress by civil suit, and the courts are open to me. For any offense against my rights as a member of the community, I am entitled to demand of the duly constituted law enforcement agencies of the

state that punishment be meted out against the criminal."

"The vendor of food offers the community food; the physician offers service. The vendor of food must offer food of a given quality; the physician must offer service of a given quality. Either may be penalized in case of default. Both are required to deal fairly and honestly with those who seek service or goods. Look at our medical practice law from that standpoint and you get a true understanding of its place among the laws of the community."

A Visiting Dietetic Service—We do not need more doctors as much as we need better articulated and more completely rounded contacts between the doctor and his patients. The pharmacist serves both the doctor and his patient in one important phase of health; the nurse, the physiotherapist, and the laboratory worker are equally effective in other phases of successfully co-ordinated health efforts.

Now come Miss Evaline Kerr and Miss Beth Dysart, pioneering in the exceedingly important field of dietetics. The growing importance of intelligent food service in health betterment is widely recognized. Such service is now justly looked upon as being as important as any of the other special services in all worthwhile hospitals and other health-serving institutions. But it is only now that we have the initial effort to extend this skilled technical help to patients in their homes. Visiting dietitians, working with and under the instructions of the doctor, are every bit as important a feature of successful medicine today as are nursing, pharmacy, physiotherapy, or any other of our health agencies and services. Nor is this all. It is no more possible or desirable for a doctor to know or remember all the technical points in the selection, preparation and serving of the most important of all his remedies—food—than it is incumbent upon him to know the technical problems of nursing. There are too many people practicing medicine under the guise of dietetics, and too few dietitians who are assisting doctors.

We feel that Miss Kerr and Miss Dysart are pioneering in a highly commendable venture, and we wish them success in the interests of better medicine and better health, more economically served for everyone. Their card will be found in our advertising pages.

Scientific Ethical Physiotherapy is still making progress in California. We welcome to our paid space, beginning with this issue, the physiotherapy laboratory of Lois M. Kendall, B. A., and George S. FitzJohn. Scientific technical physiotherapy is practiced in this laboratory by people thoroughly qualified and experienced, only under prescription of doctors of medicine. Their laboratory is located in the new Medico-Dental building.

Lippman and Sugarman Laboratory—We are glad to welcome to our advertising pages the Lippman and Sugarman Laboratory, as an ethical, essential agency in the progress of scientific medicine.

Doctor Lippman and Mr. Sugarman merit the approbation of physicians for their fine ethical stand in declining to carry their card in an official ethical medical journal until one of their members, Doctor Lippman, had secured his M. D. degree and license to practice medicine in California, even though they were not making diagnoses or otherwise practicing medicine. Thus, we see a splendid example of the influences of the moral code that governs physicians as it applies to right-thinking men even before they are fully qualified to assume responsibilities in the practice of medicine.

Examination for Public Health Nursing Certificate—The next examination for this highly prized certificate will be held at San Francisco and Los Angeles on Saturday, December 12, 1925.

Applications to take this examination must be filed with the State Board of Health not later than November 20. Blanks may be obtained from the offices of the board at Sacramento, San Francisco, or Los Angeles.

Under the legal requirements established by the Board of Health, eligible applicants for the examination shall be:

1. Registered nurse under the laws of California.
2. Shall have completed a public health nursing course

of from four to eight months in a school approved by the California State Board of Health, or

3. Shall have completed at least a semester (four months) of post-graduate work in social service, including theory and practical work, or

4. Shall present evidence of having engaged in general public health nursing for at least two years in connection with a public health organization approved by the California State Board of Health. (See paragraph 7.)

5. All applications for examination as public health nurse shall be filed in the office of the California State Board of Health, State building, San Francisco, and shall be passed on by a committee of the board.

6. Upon examination, credit of 5 per cent will be given to applicants who have completed a four months' course in public health nursing, and 10 per cent to applicants who have completed an eight-months' course in public health nursing.

7. On and after June, 1926, presentation of evidence of having attended a summer course of at least six weeks at the University of California at Berkeley or Los Angeles, or a course of equal standard at any other university, shall be required in addition to two years' practical experience.

8. All applications shall have attached to them an affidavit sworn to before a notary public, as to qualifications outlined in paragraphs 2, 3, 4, and 7.

William McFee, writing in *The Nation's Business*, says: "I can produce a business man who knows exactly what he is talking about, who will show that, of every dollar given to a certain organization, the ultimate beneficiary receives something less than 15 cents, the other 85 going in 'overhead,' stationery, salary of staff, purchase of mailing lists, and an elaborate propaganda that swamps the ordinary citizen until he becomes callous and drops the whole mess in the waste-paper basket."

In commenting upon the statement editorially, *The Dearborn Independent* believes that:

"There needs to come a wholesale exposure of all sorts of professionalism in every kind of so-called 'welfare' work—industrial, educational, and religious."

The Card of E. S. Pomeroy, M. D., Urologist, Salt Lake City, Utah, will be found in this and subsequent issues of CALIFORNIA AND WESTERN MEDICINE. Doctor Pomeroy is the first member outside of California to place his name in a dignified manner before his colleagues who receive CALIFORNIA AND WESTERN MEDICINE monthly.

More members of other state medical associations seem to appreciate the value of these cards in their official publications, as judged by the space they occupy, than do many of the members of California, Utah, and Nevada. Some of the other official medical journals contain as many as twelve or fourteen pages of these cards.

"There Never was a Time Until Now," concludes the *Journal Indiana Medical Association*, "when the medical profession, as a profession, stood in greater danger of losing its economic and social standing, and the time is ripe for active and drastic action that will tend toward self-preservation. . . . We may be accused of being alarmists, but we venture to say that within the next five or ten years medical men, individually and collectively, will be fighting for their very existence unless they adopt some means for self-preservation."

"Dr. Leonard L. Landis of New York, who styles himself the 'chairman of the American Association of Independent Physicians,' is trying to point the way to success in the practice of medicine through the medium of a book he is trying to sell. We hope," says the *Journal Indiana Medical Association*, "that no members of our association will bite at the bait thrown out. According to the *Journal of the American Medical Association* of June 13, 1925, Landis is the individual who did conduct a medical institute in New York City under the title of 'House of Health,' and New York papers at different times have recorded the arrest of Landis, both by federal and local authorities, in connection with unsavory medical activities. A renegade physician like Landis deserves

no recognition of any kind whatsoever from reputable medical men."

These quotations should prove sufficiently enlightening to the several Western physicians who have written CALIFORNIA AND WESTERN MEDICINE inquiring about Landis.

We Get an Interesting Insight into human nature as it is and always has been, in the remarkable "news value" attached to a charitable contribution "*to be used without red tape.*"

A Mr. Conners recently gave a million dollars to be used for any worthy purpose *wherever and whenever* it was needed and *without* red tape. Old-fashioned charity, as the Master defined and sanctified it, is not so common nowadays. Red tape—government or organization—is the prominent feature. Led by visionaries, we are trying to convert charity into "Big Business. We are debasing the sanctified purposes and methods of charity, and we are certain to fail. Already the handwriting on the wall is clear in some centers, and it is safe to prophesy that the Big Business, wholesale, impersonal method of giving will pass as people become disillusioned.

Material assistance is the least helpful phase of true charity, and when handled as Big Business is handling it "charity" tends to debase character and encourage thriftlessness.

Every Doctor Interested in Medical Economics should read (Illinois Medical Journal, September) the address given by President J. H. Mitchell before the annual meeting of the Chicago Dermatological Society. And don't overlook the discussion.

"Health Institutes of Dubious Reputation are having tough-going since the A. M. A. took a crack at them at the Atlantic City session. The public might as well know that practicing medicine by proxy through intermediaries, by mail, or under the auspices of lay organizations, is not very trustworthy and usually is dangerous. —Journal Indiana Medical Association.

"Water, Water Everywhere—"—There appears in this issue of CALIFORNIA AND WESTERN MEDICINE a new advertisement of drinking waters. This advertisement will continue to run for a number of months—we hope indefinitely—and the advertisers have chosen to utilize extracts from the highest scientific authorities, including the A. M. A., as the basis for their claims of the advantages of drinking "pure water."

No individual physician, no organization, no public body has greater responsibilities nor greater opportunities for error than is inherent in the promotion of drinking water, one of the fundamental essentials of human life. CALIFORNIA AND WESTERN MEDICINE could have the majority of its available advertising pages filled with highly paid propaganda for this and that water, alleged to accomplish this and that medical and health purpose. Ninety-five per cent of the claims of these waters, as is well known to physicians everywhere, are based upon ignorance or cupidity. Certain "mineral waters" contain well-known chemicals that have certain uses in the treatment of certain conditions. There is no more reason why these remedies should be prescribed indiscriminately for everybody than there is why the salts and other substances they contain should be universally prescribed from drugstore bottles because they happen to be indicated, in the opinion of competent physicians, for the ailments of certain individual patients.

In a word, wholesale prescribing of mineral waters—if in fact they *are* mineral waters—through advertisements in the secular press, merits exactly the same condemnation that is handed out to the patent medicine interests who propagandize very often the very same salts put up in bottles and sold over the drug counter.

CALIFORNIA AND WESTERN MEDICINE refuses to accept advertisements from "mineral water" companies making inordinate therapeutic claims in their copy to be published with us or in any other copy distributed by them in any manner whatsoever. Under that rigid rule we have, out of the hosts of applications, accepted within the last four

years only the advertisements of Puritas Water Service, Calso Water Company, Shasta Water Company, and Bartlett Springs Company.

This matter is being treated editorially at this time purposely with the hope that we may secure comments and reactions favorable or unfavorable to our policy from physicians or other persons who are as keenly interested as we are in the promotion of all that is good and in the condemnation of all that is bad, whether it be water or other substances—this purely in the interests of the personal and public health welfare of our citizens.

Treatment of Pertussis by Roentgen Ray—This paper, by Lawrence W. Smith, Henry I. Bowditch, Ralph D. Leonard, Paul W. Emerson, Edwin T. Wyman, Elmer W. Barron, Hyman Green, Elliott Hubbard and Max Tennis, Boston (Journal A. M. A.), represents an attempt to summarize the outstanding clinical and laboratory findings in 850 cases of pertussis treated by the roentgen ray. Of the 850 cases, 750, or 88.2 per cent., occurred under 7 years of age, and 260, or 30.5 per cent. of this group, were in infants under 2 years of age. Seventy-two cases occurred in infants under 6 months of age, with ten definite cases in infants under 2 months of age. This fact seems of considerable significance from the point of view of developing preventive measures, as the greatest mortality is well recognized to be in the younger age group. It is also interesting to note that while whooping cough ordinarily confers a permanent immunity like scarlet fever, typhoid and other infectious diseases, a second infection may occur, and three such cases were found among adults in this series, in which there was a very definite previous history of whooping cough in childhood, with the second infection usually contracted from a child in the family. The most important bit of knowledge derived from this study is that the infectious period of whooping cough is in the catarrhal stage and that it diminishes very rapidly after the actual paroxysmal period begins. The treatment of these cases has fallen into two main groups. First, the series treated by roentgen ray alone, and second, a group given combined vaccine and roentgen-ray therapy. There is a small series of controls which have not received treatment. The effects of the roentgen-ray treatment have confirmed in general the earlier results. Roughly, 80 per cent. of the cases have shown a definite diminution in the number and severity of the paroxysms in a time interval ranging from a few hours to a week or ten days. In some of these cases the clinical benefit has been extraordinary. This is particularly true of the group of infants with convulsions, as noted previously. In general, it is safe to conclude that the younger patients in the early paroxysmal stage show the most striking benefit. The next group in which the results are most striking is that in which the paroxysms have persisted for a considerable period of time. In this respect the treatment is not specific. It is interesting, however, that in this series of cases the best results were obtained in the post-pertussis type of persistent bronchial irritation. This benefit is shared about equally by the various age groups, although it is perhaps true that the younger patients do a little better. It does not seem necessary at this time to go further into statistical detail. In the second group, who have received both roentgen ray and vaccine, the percentage of patients benefiting seems to be practically the same, but the degree of benefit seems to be more marked, and the duration of the paroxysmal stage seems to be reduced more by this combined method of treatment than by roentgen ray alone. In both groups the treatment results, by the end of the second week almost invariably, and in many instances by the end of the first week, in a definite reduction of the size of the hilum lymph nodes and of the peribronchial thickening. This seems to parallel quite closely the clinical course of the disease, and it has been interesting to see how closely the roentgenologic interpretation of the chest films coincides with the history and physical findings of these cases. Certainly more than 80 per cent. of the roentgen-ray readings check almost exactly the clinical condition of the cases. These observations suggest that, by early diagnosis, adequate quarantine for the actual infective period can be required, with a concomitant decrease in morbidity and mortality.

California Medical Association

EDWARD N. EWER, M. D., Oakland.....President
 W. T. McARTHUR, M. D.....President-Elect
 EMMA W. POPE, M. D., San Francisco.....
Secretary and Associate Editor for California

ONE HUNDRED AND FIFTY-SIXTH MEETING OF THE COUNCIL OF THE CALIFORNIA MEDICAL ASSOCIATION.

Held in Conference Room No. 3 at the Biltmore, Los Angeles, California, Saturday, September 26, 1925, at 10 a. m.

Present—Doctors Parkinson, Kiger, De Lappe, Beattie, Smith, McLeod, Peers, Kress, Shoemaker, Gibbons, Curtiss, Ewer, McArthur, Pope, and General Counsel Peart.

Absent—Doctors Kinney, Edwards, Coffey, Bine, and Catton.

Invited—Doctor MacGowan.

Minutes of the Council—On motion of Gibbons, seconded by De Lappe, it was

RESOLVED, That the minutes of the 152nd, 153rd, 154th, 155th, and 156th meetings of the Council, as mailed to each member thereof, be approved.

Minutes of the Eighty-third Meeting of the Executive Committee—The secretary read the minutes of the eighty-third meeting of the Executive Committee, held Thursday, June 18, 1925.

Action by the Council—On motion of De Lappe, seconded by Gibbons, it was

RESOLVED, That the minutes of the eighty-third meeting of the Executive Committee be approved as read.

Minutes of the Eighty-fourth Meeting of the Executive Committee—The secretary read the minutes of the eighty-fourth meeting of the Executive Committee, held Tuesday, June 30, 1925.

Action by the Council—On motion of McArthur, seconded by Ewer, it was

RESOLVED, That the minutes of the eighty-fourth meeting of the Executive Committee be approved as read.

Minutes of the Eighty-fifth Meeting of the Executive Committee—The secretary read the minutes of the eighty-fifth meeting of the Executive Committee, held Thursday, August 6, 1925.

Action by the Council—On motion of Ewer, seconded by Kiger, it was

RESOLVED, That the minutes of the eighty-fifth meeting of the Executive Committee be approved as revised.

Financial Statements—Financial statements for June, July, and August, 1925, were approved as submitted, as follows:

June, 1925

Total receipts for June.....	\$ 4,036.65
Total expenses for June.....	5,610.10

Loss for June.....	\$ 1,573.45
Net Gain for five months.....	24,079.34

Total net gain for 1925.....	\$22,505.79
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Cash on hand—Bank, January 1, 1925	\$18,790.11
Cash on hand—Revolving Fund	200.00
Cash on hand—Petty cash	50.00
	19,040.11

Total cash on hand June 30, 1925.....	\$41,545.90
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July, 1925

Total receipts for July.....	\$ 4,828.30
Total expenses for July.....	4,758.49

Gain for July	\$ 69.81
Gain for six months.....	22,505.79

Total net gain for 1925.....	\$22,575.60
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Cash on hand—Bank, January 1, 1925	\$18,790.11
Cash on hand—Revolving Fund	200.00
Cash on hand—Petty cash	50.00
	19,040.11

Total cash on hand July 31, 1925.....	\$41,615.71
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August, 1925

Total receipts for August.....	\$ 3,188.32
Total expenses for August (includes loan to I. D. F.).....	6,311.14

Loss for August.....	\$ 3,122.82
Gain for seven months.....	22,575.60

Total net gain for 1925.....	\$19,452.78
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Cash on hand—Bank, January 1, 1925	\$18,790.11
Cash on hand—Revolving Fund	200.00
Cash on hand—Petty cash	50.00
Cash on hand—Salary Fund.....	1,516.67
	\$20,556.78

Total cash on hand, August 31, 1925.....	\$40,009.56
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Date of 1926 State Meeting—The secretary stated that the date of the 1926 meeting of the American Medical Association had been fixed as of April 19 to 23, to be held in Dallas, Texas. The Executive Committee recommended that the California Medical Association hold their meeting the week following, from April 26 to May 1, inclusive; the first two days to be called the pre-convention period, the last four the convention proper; and that speakers from the American Medical Association be invited to conduct pre-convention clinics on the mornings of April 26 and 27. The question of paying the expenses of the invited speakers was discussed.

Action by the Council—On motion of De Lappe, seconded by Dudley Smith, it was

RESOLVED, That the date of the 1926 meeting be fixed as of April 26 to May 1.

On motion of Kress, seconded by Smith, it was

RESOLVED, That the Program Committee be authorized to select the speakers for the pre-convention period, and that the expenses of such speakers be defrayed by the society, viz., hotel expenses and railroad fare, and expenses from Dallas to Oakland and return.

Amendments to the By-Laws—The secretary presented the proposed amendments to the By-Laws, Chapter III and Chapter VI. After discussion the Chair appointed the General Counsel and Doctor Kress a committee of two to consider the advisability of the changes and to report at a later meeting.

Amendments to Constitution of California Association of Medical Social Workers—The secretary reported that if the proposed change raised the standards of social workers Doctor Musgrave favored it, and stated that Mr. Sullivan requested further time for consideration and investigation. It was the sense of the Council that action be deferred pending Celestine J. Sullivan's report.

Signature on Vouchers—The secretary spoke of the advisability of authorizing a third person to sign vouchers for the association, and recommended that in the absence or illness of either member of the Auditing Committee, the president or the president-elect be authorized to sign vouchers.

Action by the Council—On motion of Kiger, seconded by Gibbons, it was

RESOLVED, That the president or president-elect be authorized to sign vouchers in the absence or illness of either member of the Auditing Committee.

Health Insurance for California Medical Association Employees—The question of health insurance for California Medical Association employees was discussed. The secretary submitted reports from various companies. After discussion it was decided that the Order of Railway Employees offered the most favorable opportunities.

Action by the Council—On motion of Peers, seconded by Shoemaker, it was

RESOLVED, That the office staff of the California Medical Association be insured for health and accident in the Order of Railway Employees, and that these policies be written to cover all assistants to the secretary and editor, and that the entire premium be paid by the California Medical Association.

Redistribution of Councilor Districts—The secretary reported that councilor action controlled redistribution of councilor districts and requested action on the change of Kern County from the second to the fourth district, and of Orange County from the first to the second district.

Action by the Council—On motion of McArthur, seconded by Kiger, it was

RESOLVED, That the Council approve the change of Kern County from the second to the fourth district, and Orange County from the first to the second district.

State Program—The secretary submitted the plan approved by the Executive Committee for state program and suggested that the Oakland Committee on Arrangements have charge of the pre-convention clinics, and reported that the Committee on Arrangements requested permission to have smokers on Wednesday and Friday evenings.

Action by the Council—On motion of Kiger, seconded by Kress, it was

RESOLVED, That the program as submitted be adopted; that the Program Committee have charge of the convention clinics, but may co-operate with the Arrangements Committee, and that smokers be deferred until the close of the House of Delegates meetings.

Physicians Income Tax Deductions—Granville MacGowan presented correspondence had with W. C. Woodward, Secretary Bureau of Legal Medicine and Legislation of the American Medical Association, and Senator Shortridge, and submitted the following resolution:

WHEREAS, The California Medical Association believes that the amendment about to be made to the Income Tax law should, in fairness and justice, include the specific allowance as deductions from taxable income, of the expenses of professional men while engaged in post-graduate work and study; now, therefore, be it

RESOLVED, That Honorable Hiram W. Johnson and Honorable S. M. Shortridge, Senators from California, and the Representatives from California, be respectfully requested to use their best efforts to embody such amendment in the revision of said law in the coming session of Congress; and be it further

RESOLVED, That a copy of this resolution, together with copy of the proposed amendment to the Income Tax law be furnished to each of said Senators and the Representatives from California.

It was the sense of the Council that the report of the chairman be accepted with approbation and warm commendation.

Adjournment—There being no further business, the Council adjourned to meet in the same room at 2 p. m.

Held in Conference Room No. 3 of the Biltmore, Los Angeles, California, Saturday, September 26, 1925, at 2 p. m.

Present—Doctors Parkinson, Kiger, De Lappe, Beattie, Smith, McLeod, Peers, Kress, Shoemaker, Gibbons, Curtiss, Ewer, McArthur, Pope, and General Counsel Peart.

Absent—Doctors Kinney, Edwards, Coffey, Bine, Catton.

Hospital Bond—Report by secretary. Letter from Rene Bine submitted. It was the sense of the Council that the secretary be instructed to write the insurance company and ask their representative to get in touch with the General Counsel, as complaints from several hospitals have been received.

Membership Directory—The secretary advised that if telephone numbers were included the cost of the membership directory would be approximately \$2000. Advisability of including telephone numbers was discussed.

Action by the Council—On motion of Kress, seconded by De Lappe, it was

RESOLVED, That the association hold to the form instituted last year: that the price of the directory be fixed at \$1; and that upon recommendation of the secretary, telephone numbers be omitted.

History of the California Medical Association—Letter from Emmet Rixford, chairman of the committee, was submitted. The secretary advised that Doctor Rixford was unable to submit a progress report, having just returned from Europe. Doctor Rixford requested information as to the field to be covered, and ruling as to where the data collected was to be stored.

Action by the Council—On motion of Kress, seconded by Smith, it was

RESOLVED, That the chairman of the Council should be empowered to enlarge the Committee on Historical Research to such number as will permit of securing suitable material locally; and that the material accumulated be placed in the Lane Medical Library, San Francisco.

Committee on Prenatal Care—The secretary advised

that the report of Reginald Knight Smith, Chairman of the Committee on Prenatal Care, had been received. Discussion was had as to the cost of publication and method of distribution.

Action by the Council—On motion of Kress, seconded by Shoemaker, it was

RESOLVED, That the final report of Reginald Knight Smith be accepted with thanks and referred to the Executive Committee with power to have same printed and distributed.

Clinical Prizes—The secretary informed the Council that Doctor Hewlett had tendered his resignation as chairman of the committee, on account of illness.

Action by the Council—On motion of McArthur, seconded by Shoemaker, it was

RESOLVED, That the resignation of Doctor Hewlett be accepted with regret; and that the question of clinical prizes and rules governing same be referred to the Executive Committee.

Industrial Medicine Practice—The resignation of Doctor Sol Hyman, chairman of the committee, was submitted to the Council.

Action by the Council—On motion of Kress, seconded by Shoemaker, it was

RESOLVED, That the resignation of Sol Hyman, as chairman of the committee, be accepted with regret, and that the best thanks of the Council be given for the generous service rendered.

Application for Associate Membership—Morton R. Gibbons reported that Doctor Leach had joined the Alabama Medical Society, and therefore wished to withdraw his application for membership in the California Medical Association.

Yosemite Hospital—The secretary reported on letters received from various Congressmen, advising that \$35,000 for the building of a hospital at Yosemite has been included in the yearly budget.

Medical Officers' Reserve Corps—Letter from J. Wilson Shields, chairman of the committee, was read by the chairman.

Auditors for 1925—The secretary submitted a report on auditors for 1925. It was the sense of the Council that the secretary be authorized to employ Hugh Ross to audit the books for the association for the current year.

Sciences Allied to Medicine—Letter from Doctor Olin West, Secretary of the American Medical Association, was read by the chairman. No action taken.

Advertising by Journal—The secretary brought up the request of the editor for space in "Western Advertising."

Action by the Council—On motion of De Lappe, seconded by McArthur, it was

RESOLVED, That the editor of the Journal be authorized to advertise CALIFORNIA AND WESTERN MEDICINE in the January, 1926, issue of "Western Advertising."

Request From American Medical Association Legal Department for Opinion of Council on Traffic Laws for Physicians—Letter from William C. Woodward, Secretary Bureau of Legal Medicine and Legislation, American Medical Association, was read by secretary, and the question of various insignias used by physicians discussed.

Action by the Council—On motion of Kress, seconded by Smith, it was

RESOLVED, That the General Counsel be requested to investigate this question and submit to the Council at a subsequent meeting such suggestions as he may deem proper.

Communication from W. C. Woodward to be acknowledged and placed on file.

Model Constitution and By-Laws for State Societies—The secretary presented copy of Model Constitution and By-Laws, furnished the society by Olin West, Secretary of the American Medical Association.

Action by the Council—On motion of Kress, seconded by Kiger, it was

RESOLVED, That the secretary be requested to write to the American Medical Association for sufficient copies, to permit mailing one to each member of the Council; and that, meanwhile, the matter be referred to the General Counsel for investigation.

Appointment of Member on the Scientific Program to Fill the Unexpired Term of Roland Skeel—The

Council was advised of the death of Roland E. Skeel, member of the Committee on Scientific Program, and it was suggested that the secretary of the Section of General Medicine or Surgery succeed him.

Action by the Council—On motion of Shoemaker, seconded by Gibbons, it was

RESOLVED, That J. Marion Read, Secretary of the General Medicine Section, be appointed to fill the unexpired term of Roland E. Skeel on the Scientific Program Committee.

Held in Conference Room No. 3 at the Biltmore, Los Angeles, California, Saturday, September 26, 1925, at 8 p. m.

Present—Doctors Parkinson, Kiger, De Lappe, Smith, Kress, Shoemaker, Gibbons, Ewer, McArthur, Pope, and General Counsel Peart, and members engaged in Industrial Medicine at Los Angeles and vicinity, by invitation. (About twenty-five in all.)

Absent—Doctors Kinney, Edwards, Beattie, Coffey, McLeod, Peers, Bine, Curtiss, and Catton.

Industrial Medicine Practice—The question of Industrial Medicine practice was brought up, and the General Counsel submitted rules governing same. After full discussion, it was the sense of the Council that the General Counsel should prepare revised rules, as discussed in detail at the meeting, copies of which would be sent to the secretaries of the San Francisco and Los Angeles societies, and each member of the committee of fifteen for suggestions, after which they would again be referred back to the Council.

Committee on Publicity—Doctor Kress submitted the following further report for the Committee on Publicity:

"On the subject of securing wider publicity among the laity on matters having to do with the conservation of the public health, it is the sense of this Board of Councilors of the California Medical Association that the public health activities of the League for the Conservation of Public Health have the endorsement of this Council; and that county medical units of this California Medical Association be urged to secure the fullest possible co-operation of their members in the work of the League, and, further, that the Council urges all other public health agencies desiring to carry on work in California having similar objects to those of the League for the Conservation of Public Health to co-operate in fullest harmony and measure with the said League."

It was the sense of the Council that copy of the resolutions of the Council be sent to the Gorgas Memorial, and copy also be sent to Doctor James F. Percy for his information.

Amendments to the By-Laws—The General Counsel submitted the following amendment to Chapter III of the by-laws of the California State Medical Association.

CHAPTER III

No delegate or alternate whose name has not been certified in writing as such by his county unit, through its president or secretary, and filed in the office of the secretary at least seven days prior to the annual meeting shall be entitled to a seat in the House of Delegates; and no delegate absent, without prior notification to his county secretary or secretary of this association, shall be eligible for representation the following year; and it shall be the duty of the secretary to mail a list of all absent delegates to the proper county units.

Action by the Council—On motion of Kress, seconded by Smith, it was

RESOLVED, That the amendments to Chapter III of the by-laws of the California Medical Association be approved as read, and recommended to the House of Delegates for adoption at the next meeting thereof.

Adjournment—There being no further business, the meeting adjourned.

ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer, secretary)—The meeting of the association was held Monday evening, September 21, President Mehrmann in the chair.

Edgar Lorrington Gilcreest, M. D., in his paper, "Luncheon Glimpses of Sir William Osler During the

World War," gave personal reminiscences of this great physician as he saw him during the World War, where he was consultant to one of the hospitals in Southern England in 1915, where Dr. Gilcreest was serving at that time with the American Red Cross. He did not attempt to give a biographical sketch of Osler, but concerned himself chiefly with the personal and human side. He pointed out Osler's bright philosophy, and told many stories which revealed his inimitable charm and magnetism. His influence, he said, affected the destinies of young men who studied under him more than any teacher of his generation. How Osler revolutionized the teaching of medicine on this continent makes one of the most brilliant chapters in medical history, and is in part responsible for the high place which America enjoys today in the scientific world. He related that it was Osler's book, "The Principles and Practice of Medicine," which attracted the attention of Mr. Rockefeller, whose interest in medical research culminated in the establishment of the Rockefeller Foundation, and whose total contributions reached, the week that Osler died, the colossal sum of \$300,000,000. Dr. Gilcreest continued by saying if these millions had not been turned into this channel for the alleviation of human suffering all over the world, inestimable, indeed, would have been the loss to the world. His high place in medical history as a physician is assured, but he should also have, and with an increasing knowledge of his work will have, a high place in the minds of all as a philanthropist.

"Some Causes and the Care of Stammering—A War-time Development" was the subject of Mr. Robert Lloyd's address. He based his conclusions on a lifetime study and practice of the voice, as a public singer, teacher and lecturer. He affirmed that there are fixed laws which govern all uses of the voice, and demonstrated these laws in the course of his address, and stated that once understood and learned, the use of these laws would relieve any case of stammering. He also told of his army experiences as instructor in six different camps, during which time the impressive total of 350,000 men went through his classes.

On September 27 the American Women's Overseas League of San Francisco and the Eastbay regions held exercises at the U. S. Veterans' Hospital at Livermore, dedicating the women's ward. With the opening of this hospital last April, the Veterans' Bureau established a women's unit of twenty-four beds for the treatment of disabled ex-service women. The American Women's Overseas League assumed the responsibility of beautifying this ward. They furnished its large recreation room in a most attractive and artistic manner. Upon completion of this work, dedication exercises were held, to which the friends of the American Women's Overseas League and the public-at-large were invited to see what had been accomplished and to dedicate it to the service of the disabled ex-service women. Miss Marian Crocker, president of the American Women's Overseas League of California, introduced Mrs. E. K. Sturgis, chairman of the Hospital Committee, who made a beautiful and appropriate address before a large audience. One of the ex-service women patients replied by expressing their appreciation for the splendid things the American Women's Overseas League had done for their comfort and happiness. Other speakers on the program were Mr. John Garthwaite, chairman of the day; Congressman Albert E. Carter, Mr. Joseph R. Knowland, and Colonel P. S. Rawls, medical officer in charge of the Veterans' Hospital at Livermore.



CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The regular monthly meeting of the Contra Costa County Medical Society was held Saturday evening, September 26, at the Abbott Emergency Hospital, Richmond.

Walter C. Alvarez, M. D., of San Francisco lectured on the diagnosis in relation to the digestive tract. It was a most valuable lecture; it covered the ground that any general practitioner or specialist, no matter what line he is in, will meet daily. The doctor is an interesting lecturer, and will be welcome in the future to our society.

The next meeting will be held at Walnut Creek, in October. The society have their minds set upon a moving

picture machine, which will be used during the coming winter.

S. N. Weils of Selby was elected a member, and we are sure he will be a valuable acquisition. The following were present:

G. M. Bumgarner, Denninger-Keser, H. L. Carpenter, Hall Vestal, L. St. John Hely, E. R. Guinan, Mrs. Gardell, R. N., Mrs. Purviance, R. N., Richmond; Agnes Driscoll, R. N.; Clara Thompson; C. E. Camp, San Pablo; S. N. Weil, Selby; J. W. Bumgarner, M. D.



SACRAMENTO COUNTY

Sacramento County for Medical Improvement (reported by Bert L. Thomas, secretary)—The largest attended regular meeting of the Sacramento Society for Medical Improvement was held at the Sacramento Hotel on Tuesday, September 15, 1925. Fifty-eight doctors were in attendance. These included Doctors Farmer, Farrell, Scatena, Zimmerman, Thomas, Nahl, Windmuller, Turner, H. Hall, W. E. Briggs, Fay, Cress, Yates, McMullin, W. R. Briggs, Schoff, Loizeaux, Pitts, Foster, Thom, Wells, G. Hall, Azevedo, Schluter, Babcock, Beach, Wahrer, Baird, Scribner, Dillon, C. B. Jones, Lindsay, Snyder, Wilder, Christman, Howard, Hagerty, Lipp, Grazer, Reardan, Klick, Brendell, Krull, Brown, Burden, Burke, Schell, Captain Mix, Drew, and Eber. The minutes of the June meeting were read and approved. No case reports.

The paper of the evening was ably presented by Harold Zimmerman; its title was "The Present Status of X-ray Therapy." Zimmerman reviewed the early history of this particular treatment. He compared the various rays with other forms of energy; pointed out the difference between hard and soft rays, the use of screening, the methods of application, the usual dosages, and described various methods of determining exact dosages in different parts of the body. He carefully grouped type doses into three classes—those that stimulate, those that inhibit, and those that destroy. Under this classification a vast army of pathological lesions were briefly reviewed. In the discussion of the paper, Schoff pointed out that few skin men use screening. They take advantage of the soft ray, as well as the hard ray. He reviewed the present status of the use of the ray in psoriasis, hyperidrosis, ringworm, epilation, and on various types of warts. Thom described the apparatus used, at the present time, at the Sutter Hospital. He mentioned, in addition, that x-ray dosage was now as clearly defined in therapy as any of the more exact drugs that are included in the last edition of the Pharmacopeia. Wahrer inquired about the authenticity of one of the statements made by Zimmerman "that on several occasions it had been noted, after x-ray therapy had been applied to a cancerous tumor, distant tumors had retrogressed without any direct application of the ray." He attributed this to the probable formation of antibodies to attack the cancer at a distance. In closing, Zimmerman regretted the fact that W. A. Briggs, the dean of x-ray therapists in these parts, could not add to the evening's paper. In answer to Wahrer, he stated that the observations quoted above did occasionally occur; the surmise of antibodies is merely theoretical.

Applications of Charles I. Titus, Clyde G. Reynolds, Edward P. Moser, and Hans Frank Schluter were read for the first time.

Communications were introduced from Mrs. Brittain regarding the Exchange; Mrs. Mortell, regarding her collecting system, and from Colonel Edward L. Munson, regarding the organization of a hospital train and medical laboratory, from within the membership of the society.

Brendell moved, and Reardon seconded, that the society go on record for sponsoring the Medico Military Units allocated to this community, and that a questionnaire be prepared by the secretary to inquire about the possibility of supplying the medical personnel required for this service. Motion carried.

The meeting adjourned to the banquet hall, where not the least interesting portion of the evening was spent in listening to W. E. Briggs relate interesting excerpts from his trip around the world. Farmer and McMullin also added complimentary remarks to close the evening.

SAN BERNARDINO COUNTY

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—A meeting was held October 6 at Loma Linda. There were fifty present. The meeting was called to order by the president at 7:30. The minutes of the previous meeting were read and approved. Report of the secretary-treasurer was read and accepted. Dues for the ensuing year were fixed at \$15. The following officers were elected: President, A. N. Donaldson of Loma Linda; First Vice-President, Walter Pritchard of Colton; Second Vice-President, K. L. Dole of Redlands; Secretary-Treasurer, E. J. Eytinge of Redlands.

Delegate for the state convention was elected: A. N. Donaldson.

Alternate for the state convention was elected: E. L. Tisinger.

After a banquet furnished by Loma Linda, the program was as follows:

Address by retiring president. Councilor's report by C. L. Curtiss. Address: "The Practice of Medicine Is a Religion," by Dr. Cornelius Van Zwalenburg.

The meeting adjourned at 10:30.



SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock)—The joint staff meeting of the County General and Mercy Hospitals, held in the auditorium of the former on the evening of September 22, drew a good attendance. Many interesting cases, medical and surgical, were exhibited and discussed by members of the house staff. A. E. Elliott gave an interesting report of the experimental work recently carried on by E. B. Mundkowski and himself in the x-ray laboratories of the County Hospital to determine the efficacy of certain salts, when taken by mouth, in outlining the normal gall-bladder. They are at present limiting their observations to the use of sodium tetraiodophenolphthalein, and while the results reported upon were of extreme interest, still they must be looked upon as but expressing a preliminary report. Dr. Graham's method of outlining the normal gall-bladder has opened up a new avenue of approach to the study of this very important organ.

The president of the society, George B. Worthington, presented some very entertaining reels of moving pictures which he had gathered on his recent journeys to the California State Medical Association meeting at Yosemite Valley and the meeting of the American Medical Association at Atlantic City and some of the Eastern clinical centers. This is expressive of a legitimate hobby for physicians which may be made productive of both education and pleasureable interest to themselves, as well as entertainment to their friends.

A goodly number of our members have expressed themselves as intending to visit the Southern California Medical Association meeting in Los Angeles the first week-end in November.



SAN FRANCISCO COUNTY

The Medical and Surgical Colloquia are again being held on Tuesdays and Fridays at the San Francisco Hospital. At the last Surgical Colloquium, Emmet Rixford occupied the time on "Cholecystectomy," and at the Medical Colloquium on Friday, Harold Hill presented a case of acute hemorrhagic nephritis.

St. Lukes Hospital Report—The August report of St. Luke's Hospital shows 4289 patient days service; 302 operations; 1872 laboratory and 717 radiology services. The hospital served 37,515 meals at a cost of \$7,209.40. One thousand two hundred and one patients had service in the out-patient department. This splendid hospital has instituted an innovation in the form of a printed monthly bulletin, or "house organ," for the information of officers and employes of the hospital.

St. Joseph's Hospital Staff Discusses Gastric Surgery and Diagnosis of Heart Disease—At a recent meeting of the staff of St. Joseph's Hospital, Ernst Gehrels discussed "Progress in Gastric Surgery."

"Splanchnic anesthesia after the method of Braun," said the speaker, "is of great advantage for gastric surgery and is employed as a routine, especially when oper-

ating upon cancer. The danger of fatal pneumonia is largely eliminated by local anesthesia.

For cancer of the stomach the Billroth II-Polya method is employed, using a long loop of jejunum and adding a jejunal anastomosis in order to prevent congestion in the afferent loop (leakage at the blind closure of the duodenum is mostly due to this). The late results after a radical operation for cancer are encouraging, more than 25 per cent of the patients being alive and free from symptoms after five years or more, in the experience of Payr.

"For ulcer of the stomach gastro-enterostomy alone is inadvisable, as there has been recurrence of symptoms in 50 per cent or more of the patients, and there remain late dangers after gastro-enterostomy—bleeding, perforation, cancerous degeneration and peptic jejunal ulcer. The methods used in forty-three resections for ulcer (with three deaths) are transverse resection (17 cases), polya (23), Schnieden's step-shaped resection (1), and Bilroth I-Goepel (2).

"The mortality of resection can be reduced to 5 per cent or less by good technique. Regarding late results, the radical operations do not entirely eliminate recurrence of ulcer, but from 90 to 95 per cent of the patients can be permanently relieved of all symptoms. The operation is indicated only for those patients who have proved to be incurable by medical treatment."

Harry Spiro spoke on "Modern Diagnosis of Heart Lesions," when he said:

"The spirometer is useful to determine vital capacity, and offers an index of improvement. Metabolism outfits determine thyroid disturbances chiefly, which may cause hypertension, myocarditis, endocarditis, and irregularities. The electrocardiograph is costly, but indispensable in the diagnosis of 10 per cent of patients with heart lesion. Aortic lesions, auricular fibrillation and flutter, and the proper treatment with digitalis and quinidine are best controlled by it. Heart-block cannot often be diagnosed without it. Radiology, if intelligently used, is important. Apex murmurs can be differentiated by placing the patient in certain angles, and angina pectoris of the aortic type, amenable to treatment, can be diagnosed from that of myocardial origin."

The program for the next one of these interesting and profitable staff meetings, to be held November 18, includes "Talma Operation for Cirrhosis," by P. Collischonn. "Diagnosis of Unruptured Ectopic Pregnancy," by David Stafford. "Double Unilateral Dermoid," by John Newton. "Notes From Eastern Medical Centers," by T. I. James. "Interesting Pathological Specimens," by W. T. Cummins. "Unusual X-ray Demonstrations," by L. B. Crow.

Sister M. Sylvia, Superior of St. Joseph's Hospital, is to be complimented upon the splendid progressive spirit she is developing in the large staff of her hospital.

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SANTA BARBARA COUNTY

Santa Barbara County Medical Society (Philip C. Means, secretary pro tem)—The first meeting following the summer vacation was held September 14 in the staff room of the Cottage Hospital, Vice-President Henderson presiding.

Minutes read and approved. The application of William McKee Moffat was approved and he was elected to membership. Correspondence was read from the Association for Medical Progress, the state secretary, and Manager Curtis of the hospital. Action was deferred to a later meeting.

The first paper of the program was "Some Phases of the Treatment of Pulmonary Tuberculosis," by Edward W. Hayes, M.D., of Monrovia. It was of unusual interest and was the cause of much discussion, especially the phases of fresh-air baths, heliotherapy, diet, and the changes in our views of these factors.

Marian Williams, M.D., presented the late views and advances in the knowledge of anterior poliomyelitis, and the results of the Vermont survey and investigations, with the views of Lovett on treatment in the various stages. A very interesting and carefully prepared paper at an opportune time.

A regular meeting, according to Alex C. Soper Jr., secretary, was held at the Cottage Hospital Monday,

October 12, the second after the summer vacation. A study of fifty-six babies of the city, as presented by Horace Gray, M.D., under the title of "Observations on the American Legion Baby Show," proved an interesting analysis of a "cross-section" of infancy in the community.

The second paper of the evening, a surgical treatise on cancer of the colon, was not read, due to the temporary illness of its author. Correspondence and routine business occupied the time for a brief meeting.

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SONOMA COUNTY

Sonoma County Medical Society (reported by Guy A. Hunt, secretary)—The Sonoma County Medical Society met in Santa Rosa October 9. Doctor J. W. Seawell of Healdsburg gave a paper on "Urological Diagnosis by the General Practitioner." He also discussed a case of fracture of the sixth and seventh cervical vertebra, and one of collapse of the lung and showed x-ray films of each.

REPORT OF DELEGATES FROM THE C. M. A. TO THE A. M. A.

On account of the late date on which these reports were received by the editor, only abstracts are published:

Victor G. Vecki—Our State Society was entitled to five delegates, but was represented by only four: Albert Soiland, Los Angeles; Robert V. Day, Los Angeles; Lemuel P. Adams, Oakland; and Victor G. Vecki of San Francisco.

Soiland served on the Reference Committee of sections and section work. He displayed great ability and submitted the report of that committee in an excellent manner.

I submitted to the House of Delegates the following resolution:

BE IT RESOLVED, That, in order to protect the best interests of the public, and promote the welfare of the general physician, that

1. Each and every properly elected delegate to the A. M. A. be appointed a committee of one, whose duty it will be to visit, at least once a year, each county unit in his district.

2. That the A. M. A., as a body, will use all its resources in assisting the committees to convey information to the county sections, which will keep them informed of matters which are inimical to the best interests of scientific medicine.

3. That each committee must report, by a signed statement, the result of this visit yearly.

In his enthusiastically received address, President-elect Haggard emphasized most energetically that effective organization is absolutely necessary, and pointed out that the profession has no right to blame Congress or any state legislature unless it has brought the situation to their attention in a timely, intelligent, and effective way. To do this requires effective organization.

When the Board of Trustees reported on my resolution the day after, they said: "On the resolution of Victor G. Vecki, that 'each member of the House of Delegates visit each county in his jurisdiction, and that the board support this to the full extent of its resources,' the board recognizes that the principle underlying the resolution is sound. The board is now doing its utmost, and will continue to do all that it can to extend the visiting of official representatives to constituent parts of the association. In furthering this idea, the board will also make available to each delegate a digest of the proceedings of the annual sessions.

One of the most interesting features of the whole session was a visit from Honorable Hubert Work, the Secretary of the Interior, who was a member of the House of Delegates for eighteen years, its speaker for four years, and finally president of the American Medical Association. He did not forget his former associates, and delivered an address that warmed the heart of everyone present.

Albert Soiland—It has been my pleasure to serve the California Medical Association for five consecutive years as delegate. The 1925 session at Atlantic City was well attended, and the California delegation, consisting of

Vecki, Day, Adams and Soiland, were in evidence throughout the meeting.

Of the California delegates, Vecki easily shines as a leading light. His pointed remarks, tempered with wit and good humor, are always well received by the House.

The resolution on medical ethics, authorized by the California Medical Association, which I introduced before the House, was referred to the Judicial Council. The Council reported back as follows:

"With respect to the resolution offered by Albert Soiland of California, the Judicial Council is of the opinion that the constitution and by-laws of state and county societies provide for penalties to be imposed for violations of the principles of medical ethics, and that this is a matter for determination by those bodies."

This report, upon motion and seconded, was unanimously adopted.

For several years I have served on the Reference Committee on Sections and Section work, and this year during the temporary absence of the chairman, Dr. Abt, the speaker appointed me chairman pro tem., and in this capacity I had the pleasure to report to the House of Delegates that the committee had acted favorably upon a former resolution creating a section on radiology. This was of signal interest to me because I had personally been active in the work which made this section possible. It may be apropos to state that the meeting place assigned for the new section was filled to standing room only for each session—surely a sign that the section was in demand.

The business of the House of Delegates was executed with less friction and with more good feeling than at any former meeting which I have attended.

Lemuel P. Adams—I have only a brief report to submit.

I attended all of the sessions and was an interested spectator, but did not take any active part.

The routine business proceeded in a machine-like manner, and was satisfactory to all. I especially commend the stand taken on the Life Extension problem. Dr. Vecki, I am sure, will incorporate in his report all that would be of interest to our State Society.

H. Lissner—Much to my regret I was unable to go on to the American Medical Association convention last May, and therefore have no report to make. I am under the impression that my alternate, Doctor Stevens, was likewise unable to attend.

Robert V. Day—I haven't any report to make, and consequently it will not be necessary for you to arrange any time for me to speak.

CHANGES IN MEMBERSHIP

New Members—Bard S. Berry, Arthur E. Kaelbar, Robertson Ward, San Francisco; Clyde W. Bice, Frank R. Johnston, Oakland; Burfee Cooper, Hoopa, Humboldt County; Frank K. Haight, Scotia, Humboldt County; Claude E. Norris, Samoa, Humboldt County; George H. Rue, Calistoga; Lewis H. Sanborn, Represa, Sacramento County; John Milton Scanlan, Imola; James W. Sherrill, La Jolla; George S. Weger, San Diego.

Deaths—**Barton, Herbert P.** Died at Los Angeles, October 15, 1925, age 59. Graduate of Jefferson Medical College, Philadelphia, 1890. Licensed in California in 1898. Doctor Barton was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Dresser, Ralph O. Died at San Francisco, September 28, 1925, age 49. Graduate of the University of California Medical School, 1901. Licensed in California the same year. Doctor Dresser was a member of the San Luis Obispo County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Lux, Frederick William. Died at San Francisco, September 20, 1925, age 64. Graduate of the Medical School of Harvard University, Boston, Mass., 1885. Licensed in California the same year. Doctor Lux was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Taylor, Albert Miles. Died at San Francisco, Septem-

ber 18, 1925, age 67. Graduate of the Missouri Medical College, St. Louis. Licensed in California in 1889. Doctor Taylor was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



RONALD E. SKEEL, M. D.

1869-1925

Doctor R. E. Skeel of Los Angeles died September 4, 1925, of thyroid toxemia following a serious influenza in January, 1925, and acute heart exhaustion while in the operating room in June, 1925.

Doctor Skeel will be best remembered in Los Angeles for the work he did in connection with the campaign for hospital betterment of the last few years. Several Los Angeles hospitals owe much of their improved facilities to his knowledge and his vigorous way of demanding and pushing through reforms in method and practice. He had done much along the same line in Cleveland before coming to Los Angeles.

His unselfish uplift interest was further shown by his continued effort and work in behalf of the Permanent Home for the Los Angeles County Medical Association. An article contributed by him in Bulletin No. 4, February 19, 1925, more accurately illustrates his point of view.

Doctor Skeel was born at Fulton, New York, on February 9, 1869. Graduated from medical college at Ann Arbor, Michigan, 1890. Was an intern at Cleveland in 1891 and 1892. Was in practice in Cleveland from 1892 until 1920. Married Alva P. Boepplee in 1893. Has one daughter, Mrs. H. V. Lee of San Diego, Calif. Was given honorary degree of M. A., by University of Michigan in 1915. Also M. S., by Ohio Wesleyan in the same year. Was made dean of Cleveland College of Physicians and Surgeons in 1902, and remained in this position until the merger of this school with Western Reserve University Medical School in 1911. This merger was in large part due to his efforts. He taught both obstetrics and gynecology during his college work. Was president of American Association Obstetricians and Gynecologists in 1921-1922. His work on gynecology and pelvic surgery was published by Blackston's Son & Co. in 1916; also a second edition. Fellow of American College of Surgeons. Member American Medical Association. In 1917 he went to Europe and did volunteer work with both the French and British armies. Transferred to the American Expeditionary Force in 1918, and saw front line and all other kinds of surgical duty until mustered out with rank of major in 1919.

Utah State Medical Association

T. C. GIBSON, M. D., Salt Lake City.....President
 W. R. CALDERWOOD, M. D.....President-Elect
 FRANK B. STEELE, M. D., Salt Lake.....Secretary

Editorials by J. U. GIESY, Associate Editor for Utah

APPRECIATION

The year would scarcely be properly closed were one not to pay some mark of appreciation to the work of those men who have carried it through to such a successful close. Past President Sol G. Kahn's incumbency of the office he has just quitted certainly left little to be desired in the office of president. Deeply interested in the welfare of the association, he was tireless in his efforts to advance the interests of the medical profession in the state. How much he achieved can be seen better now in retrospect than when it was in course of being brought about. Retiring Secretary Rich is a veteran of years in the duties of the office he has now quitted, and no one need ask how well Bill Rich has served. His record stands for itself. For the other officers one and all, we have only words of thanks and words of praise. They have set a record which future officers may well strive to emulate. And this is meant to include the members of various committees who have been consistently steadfast in their work.

MEDICAL OFFICERS' RESERVE

Four medical units of the Reserve have been assigned to Salt Lake. The personnel will be made up from the personnel of the Medical Society—in the main, at least. It has been suggested by the Surgeon-General's office that once a year those members in the Reserve appear at a society meeting in uniform—this night to be known as Military Night. The matter has been referred to the committee, but personally we are for it. The Reserve is the backbone of the possible medical service in time of national emergency. And certainly the profession has every reason to be proud of the record made by the medical officers who forsook their private interests and donned the uniform in the last emergency of that sort.

Service is the real ideal of the doctor, in the army or outside of it. There is a bit of sentiment in a night set apart for those who might in such fashion show just how ready they are to serve.

Utah Notes (reported by J. U. Giesy, associate editor)—Past President Sol G. Kahn will leave next month for New York. The doctor is combining business and pleasure. While in the East he will attend the wedding of a relative, and do post-graduate work.

The Clinical Association of the Holy Cross Hospital held its first meeting of the winter season the evening of September 21. Drs. E. F. Root and W. G. Schulte spoke entertainingly on their experiences in the European clinics which they visited on their recent trip abroad.

J. U. Giesy and wife left October 4 for a trip to Omaha, Chicago, and New York. Dr. Giesy is a delegate to the American Legion National Convention at Omaha, whence he will continue East to attend the Convention of the American College of Radiology as a

speaker, go on to New York, and return the latter part of the month.

Several men of the local medical world are planning to attend the Interstate Post-graduate Assembly of America at St. Paul, October 12 to 16. The program, as furnished, would indicate that this meeting will be worth the while of anyone who is fortunate enough to hear it.

The present associate editor of CALIFORNIA AND WESTERN MEDICINE for Utah has just received orders from President Gibson of the Utah Association to stay on the job.

The secretary announces the appointment by President Gibson of the following Advisory Committee to the State Industrial Commission: Ralph C. Pendleton, Salt Lake; Jack Hosmer, Midvale; L. N. Ossman, Salt Lake.

Doctor C. H. Carroll, 1880-1925—Doctor C. H. Carroll, 44, died September 30 from an infection of the middle ear, following an illness of a week and a half. He was born November 6, 1880, at Orderville, Utah, and was a graduate of Rush Medical College of Chicago in 1920. He was formerly professor of biology at the Brigham Young University, Salt Lake, and at the time of his death was head of the health and zoology departments of that institution.

Dr. Carroll is survived by his widow, Elsie Carroll, dean of girls at the Provo high school; his parents, C. W. Carroll and Amelia Carroll; two brothers, Joe Carroll, professor at Stanford University in California, and William E. Carroll of Urbana, Ill., professor at the Agricultural College there, and a sister, Maurine Carroll of Provo.

The Salt Lake County Medical Society Meeting of September 14, 1925 (reported by M. M. Critchlow, secretary)—The meeting of the Salt Lake County Medical Society was held at the Commercial Club, Salt Lake City, Monday, September 14. President John Z. Brown, forty-one members and two visitors were present.

Applications for membership of Parley White, Silas Smith and Nephi Rees, were read and turned over to the Board of Censors.

The secretary read communications dated July 9 and July 10, 1925, from the office of the surgeon, headquarters Ninth Corps Area, San Francisco. These letters called attention to the fact that four medical units had been assigned to Salt Lake City personnel, of which it would be from members of our society for the most part. It was suggested that the County Medical Society sponsor these units as a form of special favor, and that the personnel should report in uniform at a regular meeting of the society once a year, to be known as Medical Military Night. T. A. Flood moved that the society endorse the records of the surgeon, but that it be referred to a special committee of three for action. Seconded and carried.

The first scientific paper was given by G. H. Pace, entitled "Concepts and Mental Mechanism of Insanity." The early concept of insanity was outlined and the theories of the cause of insanity discussed. The mechanism of insanity was illustrated by a case history, and the mechanism of several psychosis was discussed. This paper was discussed by F. J. Curtis, M. W. Baxter, W. R. Calderwood, and J. R. Llewellyn. In the discussion the necessity for a mental hygiene clinic in this city was stressed.

The second paper was read by L. C. Snow of Park City, entitled "Cerebrospinal Meningitis in Park City." His paper was based on a recent epidemic in spinal meningitis of six months, with six deaths. He reviewed the subject of spinal meningitis and discussed his experiences in the recent epidemic. This very instructive paper was discussed by E. R. Murphy, E. B. Isgreen, and T. A. Flood.

Meeting of September 28, 1925 (reported by Joseph E. Jack, treasurer and acting secretary)—A regular meeting of the Salt Lake County Society was held at the L. D. S. Hospital, Monday, September 28, President John Z. Brown in the chair. There were forty-three members and fourteen visitors present.

A communication from the Associated Retail Credit Men, regarding national "Pay your bills week," was received and read. Also a communication from Joel Rich-

ards, regarding a practice and hospital to be purchased in Pocatello, Idaho.

Application of Francis W. Brown for membership read, and referred to the Board of Censors.

Parley White, Silas Smith, and Nephi Rees were elected members of the society by unanimous vote of members present.

L. A. Stevenson had charge of the clinical meeting.

J. F. Sharp presented a case history and specimen of an interstitial ectopic gestation.

Roy Groesbeck presented a case of icterus, due to carcinoma of gall-bladder and liver.

Earl Skidmore presented a case of fecal fistula, following a ruptured appendix. Fistula had ruptured internally into peritoneal cavity. He also presented a case of abscess in stump of appendix, four years following ruptured appendix.

L. A. Thody showed some interesting x-ray plates.

D. G. Edmunds presented a case of peri-nephritic abscess.

Spencer Wright presented a case of possible hyper-nephroma.

Papers were discussed by A. Lipkis, L. L. Dains, Edmunds, Skidmore, Thody, J. Z. Brown, Young, and Goeltz.

Fred Stauffer reported on the Medical Arts building. Refreshments were served by hospital authorities.

ANNUAL REPORT

Transactions of the House of Delegates—Thirty-First Annual Meeting September 7 to 12, Inclusive, 1925

All meetings held at Stewart building, University of Utah, Salt Lake City, Utah.

SESSION NO. 1

The House of Delegates convened at 12 o'clock noon on Monday, September 7, 1925.

Meeting was called to order by the President, Sol G. Kahn of Salt Lake City; William L. Rich, secretary.

Moved, seconded, and unanimously carried that, inasmuch as the minutes of the 1924 meeting were printed in full in our official organ, CALIFORNIA AND WESTERN MEDICINE, that the reading of them be dispensed with.

Roll call showed thirty-eight delegates present, from Salt Lake, Weber, Boxelder, Uinta.

Moved by E. G. Hughes, seconded by John Z. Brown, that Eugene Worley and H. R. McGee be seated as delegates from Cache County. Unanimously carried.

The president welcomed the delegates, and then announced that the first order of business would be reports of the officers and committees. He then appointed the following Reference Committee: W. R. Calderwood, Salt Lake, chairman; E. P. Hills, Ogden, R. A. Pearce, Brigham City.

REPORT OF THE SECRETARY

As this convention convenes, we must pause for a moment and pay respect to the memory of our departed members during the past year, namely: Doctor Salathiel Ewing, Doctor John F. Critchlow, Doctor Ernest Van Cott, Doctor Patrick S. Keogh, Doctor M. R. Stewart—all of the Salt Lake County Society; Doctor Walter R. Emmett of Weber County, Doctor Herbert S. Pyne of Utah County, and Doctor Frederick Black of Boxelder County. The Committee on Necrology will prepare a suitable report, so that the memory of these departed will be transcribed in our transactions for this session.

As in the past two or three years, you will note that the speakers on our program are from outside the state. In many of our Council and committee meetings we have discussed plans for the annual conventions. It has seemed to us that talent from the outside makes a better meeting than mixing in one or two or three local papers, and it also eliminates little jealousies that are bound to creep in. I am sure the officers of this association will welcome comments from the House of Delegates on this matter.

The officers have visited all of the component county societies in this state during the past year, with the exception of Uinta and Carbon counties. Each society visited arranged for a program by the visitors, which included one scientific paper, a short talk from the president, and a report from the secretary on the last meeting of the secretaries of the National Association, and remarks from

members of the council. This was the usual program at all the meetings. The secretary recommends that these visits be continued and extended. Such visits furnish a good opportunity to get acquainted, as well as a stimulus to the component county society.

The membership this year, compared with last year, is as follows:

Boxelder 9, an increase of 1; Cache Valley 14, a decrease of 3; Carbon County 15, an increase of 3; Salt Lake County 224, an increase of 3; Uinta County 8, an increase of 3; Utah County 35, a decrease of 8; Weber County 41, same as last year. Total membership, 346.

During the past ten years our membership has increased nearly 40 per cent or a little less than one hundred members.

The following shows each year's membership, beginning with the year 1915:

Members—1915, 251; 1916, 248; 1917, 255; 1918, 252; 1919, 248; 1920, 291; 1921, 318; 1922, 316; 1923, 316; 1924, 347; 1925, 346.

I trust that by 1935 we may show a similar or greater increase for ten years.

In passing, I desire to congratulate Utah, and this association in particular, on having the best plan of any state in the Union for handling Industrial Compensation cases. You will have a detailed report from one of the members of the committee at this meeting.

I desire to call the attention of the House of Delegates to the lack of interest manifested by many of our members toward the journal of individual and community health, known as Hygeia. Only seventy-one physicians in this state care enough about the journal to subscribe for it; that is, less than one member in five. We are over 80 per cent delinquent in our educational endeavors to make this journal fight the battles of popular opinion before the great lay organizations. Can we expect to get a square deal before the public or before the legislature or before juries and courts if we neglect this great source of education? One of our members told me of a case in which a school teacher in this city used as her guide in teaching physical education to our children a sensational sex-exciting magazine. Then we wonder why the public flock to cults and faddists, and frequently turn a deaf ear to the physicians when they ask for just and fair treatment. We have an exhibit of Hygeia in the hall adjoining this lecture room where you who are not familiar with this magazine may examine it. I feel safe in saying that every progressive physician who is not a subscriber to Hygeia, who does not keep the current issue on his reception-room table, is failing to do his full duty to his patients and to the profession at large. This journal is published by your permission and at a loss which amounted to \$45,000 in 1924, which loss is paid for indirectly by you. Let us acknowledge our responsibility to the American Medical Association and increase our subscription from 71 to 347 in 1925 and 1926. We should go further and see that school teachers, public and school libraries in this city, at least, have this magazine available.

The subject of tax reduction at Washington is now being considered by President Coolidge and the various committees of our legislative bodies. Last year this and every other State Association protested to their various representatives and senators regarding the injustice of maintaining a \$3 tax on physicians' narcotic licenses and the injustice of not allowing physicians to deduct from their income tax the expense of attending medical conventions, and the expense of tuition, traveling, etc., in connection with post-graduate work.

The chairman of the Finance Committee in the National Congress is Senator Smoot of Utah. Senator King is also a member of this committee. The only state in the Union having two senators on the Finance Committee is Utah, so our responsibility is doubly that of other states. Well, you know what happened last year, when this thing was considered by the Finance Committee. They did not deny the justice of our cause, but only said they needed the money, so we are still paying.

Your present secretary recommends to the incoming president and new secretary that a special committee be appointed to call personally on Senators Smoot and King and discuss these matters and make a report to be filed

and embodied in these transactions, and that a copy be sent to the American Medical Association.

The secretary recommends to this body that the associate editor of CALIFORNIA AND WESTERN MEDICINE for Utah be reimbursed for postage and stationery used during the past year, and a small honorium be tendered him for his very excellent service to our Journal. And, further, inasmuch as the present secretary is going out of office and is not a candidate for re-election, I would recommend that the new secretary's salary be modestly increased and that a small monthly allowance be made to the secretary for stenographic service.

I desire to express my appreciation for the excellent support and advice that the members of this association have given me during the past eight years.

The following officers are to be elected: President-elect for one year; three vice-presidents for one year; secretary for three years; treasurer for one year; councilor for Third District, three-year term; councilor for Second District to fill the vacancy caused by the resignation of R. R. Hampton, which vacancy has been filled for several months by J. C. Landenberger.

All of which is respectfully submitted.

WILLIAM L. RICH, *Secretary*.

Upon motion duly made, seconded and carried, the report of the secretary was handed to the Reference Committee.

REPORT OF THE COUNCIL

As chairman of the Council, I desire to submit the following report concerning our association in general and draw your attention to some points of progress which should add encouragement to every member concerned. Without going into explicit detail which you shall hear from our treasurer, our association is in better financial condition than ever in its history.

There are fewer number of lawsuits pending or threatened against our members than was the case a year ago. This fact can be construed as evidence of the ethical progress we are making as an association and as individual members.

There are no complaints to make against any component society in our association, as there has been no infringement on the by-laws or articles of our constitution, and all business transacted by the various societies concerning their respective members and of new members applying for membership has been taken care of in a regular and orderly manner. The Council has been approached by one desiring membership in one of our local societies since you were last assembled, but this matter came up in an irregular way by the party concerned, and he was advised to make application direct to the society in which he desired membership. This was at a time when the society had discontinued its meetings for the summer, and up to the present, to my knowledge, no application has been filed with the local society concerning this individual's application. Had this matter come up in a regular way before the Council, in all probability this individual's attitude would have had to change materially before favorable action could have been taken.

The reason for this attitude on the part of the chairman of the Council is, that no good purpose can be served toward any individual seeking membership in our association with a wrong mental attitude bordering on slander and directed against our present membership. One of our first duties is protection of those who are with us, and any individual seeking admission by destructive means can serve no good purpose if admitted. We expect that all individuals applying for membership in any local society shall do so according to our by-laws and their applications disposed of promptly.

Since our last meeting R. R. Hampton submitted his resignation to the Council as the councilor member of the Central District on account of illness, which resignation was accepted, and J. C. Landenberger was appointed to fill the vacancy.

A member of the Utah County Society permitted his name to appear in an advertisement of Agmel. When his attention was drawn to the fact that it was unethical, he ordered withdrawal of his name and submitted a written apology for the offense.

Respectfully submitted.

E. G. HUGHES, *Chairman of Council*.

Councilor Hughes' report was handed to the Reference Committee.

REPORT OF COMMITTEE ON EDUCATION AND POST-GRADUATE WORK

FRANK B. STEELE, *Chairman*

(A combination or coalescence of the Committee on Scientific Work and the Committee on Education and Post-Graduate Work.)

Mr. President and Members of the House of Delegates—The work of your Committee on Education and Post-Graduate work has been rendered pleasant and less arduous by the cordial co-operation of the officers, the members of other committees, and members of the society not members of committees.

Our first endeavor was an effort to learn just what the members of the association wanted. To this end we invited suggestions and constructive criticism. Various ideas were presented. The outstanding complaints were from the members of the association living outside of Salt Lake County and from the eye, ear, nose, and throat specialists. The former complained that they could not afford to leave their practices and come to Salt Lake for a week for work which occupied them for only a couple of hours per day. The eye, ear, nose, and throat men complained that nothing in their line had been presented for three years, at either the association meeting or the Clinic Week.

With this information in hand, the president called a meeting of the officers at the Alta Club, to which the Committee on Post-Graduate Work and the Committee on Program were invited. This was in November. The gathering was turned into an experience meeting and general love fest, with the result that we resolved ourselves into a co-operative institution and decided to hold a combination association meeting and post-graduate course, giving an intensive week, covering as nearly as possible the entire field of medicine.

Then followed a long period of correspondence with men of national reputation in their various lines, and by about May 1 we had rounded out the program which, with some refinements, is now being presented to you. This, we believe, to be far and away the most pretentious offering ever attempted in this intermountain section. These men come at no expense to us, other than their entertainment while here, to give us freely of their knowledge and experience. Such a course, under other conditions, would cost much in time and money.

On the part of the committee, it is an experiment. If successful, we hope to see it repeated. If not, some other plan will have to be evolved.

President Kahn—Dr. Steele's report will be received and handed to the Reference Committee, and will then be placed on file and printed with the proceedings.

President Kahn further stated that Dr. McDermid, chairman of the Committee on Health and Public Instruction, was not present and no report had been received from his committee.

President Kahn also announced that the Advisory Committee on Hospitals had not turned in a report, and were not present at the meeting.

COMMITTEE ON INDUSTRIAL MEDICINE

A. A. KERR, *Chairman*

Mr. President and Members of the House of Delegates—I do not wish to make an extensive report. I have been under the weather for some time, as some of you know.

Our Committee on Industrial Medicine met with the Industrial Commission of Utah every week and adjusted claims, and saw patients and doctors. A great variety of cases were discussed. The Industrial Medicine work in Utah has assumed a large aspect and a great many cases are being taken care of by regular physicians, and a great many by corporations (through their doctors). The work at times has been quite heavy, but I think it has been handled quite satisfactorily.

COMMITTEE ON NECROLOGY

W. F. BEER, *Chairman*

Mr. President and Members of the House of Delegates—During the past year death has entered the ranks of our association several times, and has taken from us several of our members:

DOCTOR JOHN F. CRITCHLOW—Born September 24, 1857, at Tonawanda, New York. Died in an accident on July 24, 1924.

Dr. Critchlow came West with his parents in the early

70's. He spent his boyhood days in Eastern Utah. He attended the University at Rochester, New York, where he prepared for the study of medicine. He entered the medical department of the University of Pennsylvania, and was graduated from there in 1892. The next two years he spent in the German Hospital of Philadelphia. He then came West and located in Salt Lake City and practiced his profession here until 1898, when he joined the Utah Battery as a volunteer to go to the Philippines, in the Spanish-American War. Dr. Critchlow enlisted as a private, but rose to the rank of Captain of Battery B of Utah Artillery. On the return of the troop to Utah after the war, he was mustered out and resumed his practice of medicine and surgery.

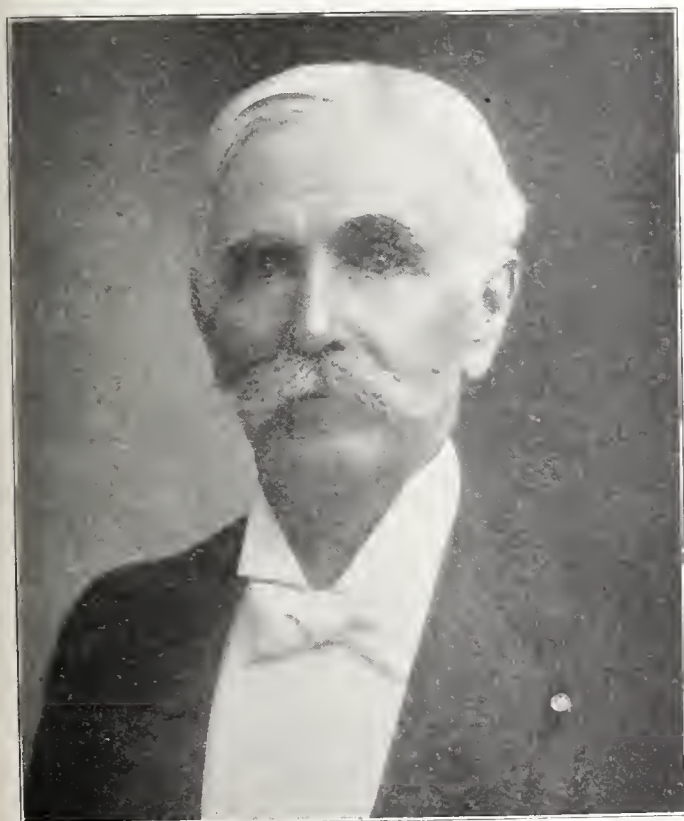
He was elected a member of St. Mark's Hospital staff and served as an active and consulting member up to the time of his death.

Dr. Critchlow rapidly achieved prominence as a surgeon, and gained the respect of all his brother practitioners. His surgical opinion was respected by all who knew him.

At the time of his death he was division surgeon for the Western Pacific Railway; local surgeon for the D. & R. G. W. Railway, and for the Utah Fuel Company.

He was a past president of the Utah State Medical Association and also of the Salt Lake County Medical Society; and a member of the Masonic Order and the American College of Surgeons.

Dr. Critchlow is survived by his wife and two sons



SALATHIEL EWING, M. D.
1834-1925

DR. SALATHIEL EWING—The dean of Medical men of Utah.

Born in Union County, Ohio, on December 24, 1834. Died June 4, 1925.

As a boy he attended school in his home county. He was graduated from Sterling Medical College of Columbus, Ohio, in 1871.

At the outbreak of the Civil War, he became a minute-man, subject to the call of the Governor, David Todd of Ohio. He served under General Lew Wallace. He began the practice of medicine in Ohio.

In 1883 he came to Salt Lake, where he continued to practice his profession up to the time of his death.

Doctor Ewing was an active member of the Utah State and the Salt Lake County Medical Societies. He never was absent when it was possible for him to attend. He was the fourth president of the State Association and a

past president of the County Society; a Fellow of the American Medical Association. Since 1887 he served on the Utah Pension Board of Medical Examiners. He was a member of the Benevolent Protective Order of Elks, and was Exalted Ruler in 1911.

He was an ardent lover of children, horses, and dogs. The tribute that was paid him by one of the members of the profession explains fully the respect which all members of the medical profession who knew him held for him. This tribute is as follows:

"I pay tribute to one of our number who stands out pre-eminent in the medical body as an honest, conscientious, educated medical man—one who has always been a leader in his profession, up to the moment, grasping every true advance, every new thought worth keeping, always ready with helping advice; a safe and wise consultant and an all-around good doctor; a parliamentarian of the first order, and a guiding spirit in all our society deliberations—always able in debate to stoutly defend his position; kindly and courteous to his opponent, but resolute and fearless in standing for the right."

"Dr. Ewing has taken his place at the head of all our societies, and when not holding an office has been one of the strongest floor workers, ready in debate or discussion, and a frequent contributor to scientific literature. He has never missed a state meeting, and has always been at the front in any scientific gathering.

"Loved his profession.—This was a beautiful world to him. He has enjoyed every moment, consequently he has not run counter and has not had the hard buffeting of the reformer or the ascetic. He loved his profession, respected his patient as one needing kindly aid and counsel. He has lived in our community for many years, and has always had the profound respect and love of all the people. He is an example of the Highest type of American manhood in the medical profession."

Dr. Ewing was buried in Mt. Olivet Cemetery on June 7, 1925, under the auspices of the Salt Lake Lodge No. 85, B. P. O. E.

DOCTOR ERNEST VAN COTT—Born December 18, 1875, at Salt Lake City. Died August 27, 1924.

Doctor Van Cott was one of Salt Lake's foremost physicians. He had been associated with the medical department of the O. S. L. Railroad since 1904. He was graduated from Rush Medical College in 1903.

Dr. Van Cott had been on a vacation to Yellowstone National Park, and while on his way home he dropped dead from heart disease.

DOCTOR MURRAY ROCKWELL STEWART—Born in Indiana September 8, 1868. Died February 5, 1925.

When a boy Dr. Stewart came West and worked for the O. S. L. at McCammon, Idaho, and later for the D. and R. G. at Ogden, Utah. While working at Ogden, Utah, he began the study of medicine. He finally entered Rush Medical College of Chicago, Illinois, and was graduated in 1898.

For six years he was City Physician under the American party administration, and for three years served as a member of the State Land Board, under Governor Bamberger.

Dr. Stewart was a member of the Masonic fraternity and belonged to the Apollo Commandery of Chicago, the Weber Lodge No. 6, Masonic Order at Ogden, a member of El Kalah Shrine, Salt Lake. He was a member of the Utah State Medical Association, the Salt Lake County Medical Society, and the Chamber of Commerce. He was elected a member of the City Commission more than three years ago, and was head of the Department of Parks and Public Property.

His parents are both dead and the only surviving relative is his widow.

DOCTOR SEYMOUR B. YOUNG—Born at Kirtland, Lake County, Ohio, on October 3, 1837. Died December 13, 1924.

Graduated from the University of New York in 1874. He practiced his profession here in Salt Lake City continuously since his graduation.

He was among the earliest practitioners of this state, being one of the charter members of the Salt Lake City Medical Society, which was arranged and organized at

the home of Dr. J. M. Benedict. The doctors present at that time were Doctor W. F. Anderson, Dr. Hamilton, Dr. Williamson, Drs. J. M. and Denton Benedict, Dr. Standish, Dr. McClain, Dr. J. S. Richards, Dr. Heber John Richards, and a few others, all of whom have long since died. He was a member of the G. A. R. in 1863-64. He saw service against the Digger Utes in Tooele County and Cedar Mountains in 1866. He was in the expedition to San Pete and Sevier counties in the Black Hawk War. He was a member of John Quincy Knowlton Command, and Junior Vice-Commander of that Post.

Dr. Young was a devout member of the L. D. S. Church, and at one time filled a mission. He was a member of one of the oldest pioneer families.

DOCTOR EDWARD PALMER LECOMPTE—Born in Cambridge, Massachusetts, May, 1846. Died July 26, 1924, in Park City, Utah.

He entered the Army in 1874 as Army Surgeon, and came to Salt Lake to be stationed at Fort Douglas in 1876. Previous to coming here he served with General Custer under the colors until 1882. He went to Park City in 1883.

He was buried in Mt. Olivet Cemetery, Salt Lake City. He is survived by two children, Mrs. W. I. Snyder and Dr. E. D. Le Compte of Salt Lake City.

DOCTOR HERBERT SAMUEL PYNE (Utah County Medical Society)—Born February 12, 1862, at Norfolk County, England. Died at Provo, Utah, September 14, 1924.

In 1873 he came to Utah; in 1886 he engaged in the drug business. He began the study of medicine at the Washington University, graduating in 1908. He lived continuously, after graduation, in Provo, where he practiced his profession. He was a member of the State Medical Association and of the Utah County Medical Society, and a Fellow of the American Medical Association. He was an active member of the L. D. S. Church. He was buried in the city cemetery at Provo.

DOCTOR FREDERICK A. BLACK—Born in 1894. Died at Garland, Utah, on September 15, 1924.

Graduate of the Western Reserve University.

DOCTOR A. W. BURROWS—Born in Manchester, England. Died October 16, 1924.

Graduate of the P. and S., Chicago.

Came to Utah in 1889. Practiced his profession in this city from the time he came here in 1889 until the time of his death.

(See report of Reference Committee.)

DOCTOR P. S. KEOGH (Salt Lake County Society and Utah State Medical Association)—Born in 1850.

Dr. Keogh had been an "age limit" member of our association for several years. He was graduated from Bellevue in 1885, and was licensed to practice in Utah in 1896.

DOCTOR W. R. EMMETT (Weber County Medical Society and Utah State Medical Association)—Born in 1875. Died March 23, 1925.

Was a graduate of Northwestern in 1910, and began his practice in Utah that same year. Dr. Emmett was prominent in the Weber County Society.

Dr. Kahn—Dr. Beer's report will be received and turned over to the Reference Committee.

President Kahn announced that Dr. Landenberger was out of the city and that no report had been received from the Committee on Professional Welfare and Ethics.

CONFERENCE COMMITTEE ON INDUSTRIAL MEDICINE

S. D. CALONGE, *Chairman*

MEDICAL PROBLEMS UNDER INDUSTRIAL COMPENSATION LAWS

With the exception of laws regulating medical practice, no legislative acts have had more direct effect upon the physician than the Workman's Compensation laws in force in the different states and professions of the United States. More responsibility rests upon the physician than upon the employer, employe, or insurance carrier, and greater restrictions are placed upon him than upon all the other three primarily interested parties.

The employer's interest lies in securing proper medi-

cal care for the injured employe and payment of compensation for lost time and bodily injury, together with immunity from damage suits such as were common before this law became effective.

The employe's interest lies in securing proper medical attention and just compensation for his lost time and his injury.

The insurance company's interest lies solely in reducing the cost of such benefits to employer and employe to the lowest possible figure in order that larger profits to their companies may be gained.

Upon the physician rests the greater responsibility of restoring the injured workman to as nearly 100 per cent efficiency as possible in the shortest time and for the minimum fee. He must meet not only the demands of the patient, but of the employer, the insurance company, and the Industrial Commission or Compensation Bureau. He must render this service for a fixed fee without consideration of the financial ability of the insurance company to pay fees which would be obtained in like cases in private practice. This fixed fee is in most states set by legislators or boards who have no knowledge of medical and surgical problems. (In Utah we are more fortunate, as we will later explain.)

Unlike the employer, the physician is not relieved from the worry and annoyance of damage suits, but statistics show that during the past eight years these suits against physicians have increased more than 100 per cent as a direct result of this law. Thus, is the physician penalized for failing to restore to 100 per cent efficiency the workman who may have been injured through gross carelessness on the part of himself or his employer.

In only eight states do physicians receive fees for such services which are equal to fees for private practice. These are mostly Western states. In seventeen states, chiefly New England and Southern states, two to four weeks' care for injured employes is provided with a maximum of \$100 to \$150 for all hospital and medical care.

Dr. B. L. Bryant states that in Maine a few years ago the insurance companies put their cases in the free wards of hospitals, where staff physicians were obligated not to charge for their services.

It took the combined action of physicians, hospital boards, and the Commission to correct this unfair situation.

In Oregon a determined attempt has been made to establish socialistic medicine by a plan under which the Commission could establish hospital and medical contracts and every citizen have such care in illness or accident under state insurance. This was defeated only after a bitter fight, and the question is alive in several states today and it behooves medical men to resist it wherever it is placed before legislatures.

In Washington a medical adviser is appointed to the Commission at a salary of \$5,000 per year. He is, in fact, a medical supervisor of all doctors in the state and arbitrarily says who may or may not treat industrial cases.

You can readily see how much trouble may arise out of such a situation where the advisor may be governed by political powers, as is the case in nearly all appointive positions.

In Pennsylvania a case is now in the Supreme Court, testing a ruling of the chairman of the Compensation Board in 1919, that under the law the hospital should receive its fee for ward cases, but that the physicians of the staff could not make a charge for services to such cases.

In Utah, before co-operation between the Medical Association and the Industrial Commission was established, a radical element advocated that physicians receive \$1 per hour for services in industrial cases and furnish all materials used. This move was blocked by the Commission at that time. The spirit of antagonism between medical men and the Compensation Commissions, which at first seemed general, is giving place to broader views and better understanding of the rights of all concerned, and the tendency is justice toward all.

The greatest danger to the medical men as a whole is the tendency of commissions, employers, and insurance companies to assume the right to dictate to an employe what physician he shall employ instead of giving to every individual the right to choose his own physician, which

was one of the first principles of justice upon which the law was based.

In many states, including ours, welfare associations, established by men of keen business ability who are not physicians, are operating. These associations contract for the care of the sick and injured in mining camps and country communities and hire newly licensed physicians for inadequate salaries to do the work.

Fees of the physician for compensation cases go to the association, and the promoters take the profit from the doctor's work. This is a vicious plan which should be fought wherever found and wiped out in every state.

Among the unsolved problems before commissions and medical advisers, we find:

Traumatic neurosis, which at present is applied by claimants and attorneys to every condition, from tingling sensations to epilepsy and total paralysis. Some definite limitation of these malingerers and ambulance-chasing attorney's "stock claim" must be determined by our profession in order that compensation boards may deal intelligently with this condition.

Another question which has caused much controversy among the eye and ear specialists of our state is the lack of uniform tests or scale upon which partial loss of sight or hearing can be based. Estimates on both sight and hearing defects have varied from 10 per cent to 90 per cent in the same case, and left the Commission entirely at sea in adjusting the claims.

The relation between recent injuries and long-standing pathological conditions in regard to ultimate disability is one of the most difficult problems before medical advisers and industrial commissions.

The question of typhoid fever being a compensable condition when contracted under conditions where employes had but one source of water supply, and this proved to be contaminated, is now before the Utah Commission for their decision. Also the question of accidental lead poisoning is another problem which they are called upon to solve. These particular conditions are of great interest to the medical profession, and will have far-reaching effect upon industrial insurance in the state of Utah, according to the decision rendered in the cases by our present Commission.

The close co-operation between the Industrial Commission and the Medical Association of our state has eliminated most of the objectionable features of which we have spoken, and the head physician of one of the largest insurance companies of the United States who recently investigated the industrial compensation conditions in all states said, after attending a session of the Medical Advisers and Industrial Commission, that Utah has the most satisfactory working plan of any state in the Union. For the benefit of those who may not be acquainted with this plan, I will state that:

The Industrial Commission allows fees which obtain in private practice in Utah, and that the State Medical Association appoints a board of three medical advisers who serve without pay and who meet each week with the Commission, examine all cases in question, and give any needed advice as to the further treatment, disability, fees charged, etc. By this method politics is kept out of the medical part of the Commission's duties.

We believe that each state medical association should have a standing committee to investigate and report on all matters affecting the medical profession which may arise under the administration of Industrial Compensation laws.

The president of our State Association has requested me to urge upon all physicians of Utah the importance of the Medical Advisers' work and remind them that those appointed for this service should give it their earnest attention, as through this committee as a whole the entire profession of the state is constantly represented before the Industrial Commission, and all questions justly and amicably settled. Some doctors appointed have failed to attend meetings. Every doctor appointed on this committee should not fail to attend the meetings with the Commission or notify the chairman of the committee twenty-four hours before, if he cannot. If we lose interest, then all that our profession has gained under this plan will be lost and some less desirable plan will be put in operation.

(Dr. Calonge's report was read before the General Assembly.)

The following resolution was presented by F. H. Raley:

WHEREAS, At the meeting of the House of Delegates last year our president called your attention to the importance of helping to defray the expenses of our delegate to the meeting of the American Medical Association; and

WHEREAS, The following representative states either give their delegates \$100 or more toward defraying their expenses, or pay their railroad fare and Pullman fare over a direct line to the place of meeting and return: Connecticut, South Dakota, Massachusetts, New York, Illinois, Nebraska, North Dakota, Wisconsin, Michigan, Montana, and Tennessee.

BE IT RESOLVED, That we appropriate the railroad and Pullman fare to and from the convention city to help defray the expense of the delegate each year to the annual meeting of the House of Delegates of the American Medical Association.

The president announced that the resolution would have to be handed to the Reference Committee first; then acted upon, and if agreeable would be presented to the House of Delegates for their action at a later meeting.

Meeting adjourned to convene at 5 p. m., or immediately after the afternoon scientific session.

SECOND SESSION—HOUSE OF DELEGATES UTAH STATE MEDICAL ASSOCIATION

The House of Delegates convened at 5 p. m. September 7, 1925, the president, Sol G. Kahn, presiding. Roll call showed thirty-five delegates present.

Doctor Kahn announced that, inasmuch as the legislature did not meet this coming year, the Committee on Public Policy and Legislation had not been active, and Doctor Straup had not sent in any report. This also applied to the sub-committee on Public Policy and Legislation.

REPORT OF THE DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION MEETING

DR. E. M. NEHER, *Delegate*

Report of the proceedings of the Seventy-sixth Annual Session of the House of Delegates of the American Medical Association, held at Atlantic City, May 25 to 29, 1925.

We regret we were unable to attend this meeting in person, and the data for this report has been obtained from the official minutes of the meeting of the House of Delegates.

While the registration was not as large as at the Chicago meeting—less than 5000 this year, as compared with over 8000 a year ago—it was reported as the best in many ways of any of the meetings ever held. Nine physicians were registered from Utah.

The addresses of the Speaker of the House of Delegates, F. C. Warnshuis; of the president, William A. Pusey; and of the president-elect, William D. Haggard, were interesting, as they sounded the "keynote" of the policy of the association.

Speaker Warnshuis advised that the by-laws be amended so that the secretary for the association be elected by the Board of Trustees instead of by the House of Delegates. However, the House of Delegates did not consent to this change. He also advised, whenever possible, resolutions relative to the policy of the association should be submitted to the secretary at least thirty days previous to the time of the meeting of the House of Delegates, in order that a copy of the proposed resolution might be sent to each delegate for his deliberate consideration.

President Pusey gave his valedictory, enumerating some of the pleasant duties of the president, as his reception at many state associations and meetings with the Board of Trustees. He admonished the delegates of their very important position and urged them to do their duty.

President-elect Haggard deplored the long course of study for the medical student, and suggested it might be shortened at least one year in the high school course. He urged the delegates to see that medical practice laws of their states required the same preliminary education of all who treat the sick. Each state association should be alert to any bills introduced in either their state legislature or congress, which are derogatory to the profession. Malpractice suits should be carefully studied, and if found to be fraudulent suits, fought to the end. If fraud can be traced to any member of the bar, report such

fraud to the Bar Association. He also made some pertinent suggestions relative to the Industrial Commissions. Every case coming within their jurisdiction is a medical case, and yet only fifteen of the forty-two states with compensation laws have a physician connected with their administration board. He advises:

1. A medical director attached to each Commission.
2. A consulting staff of specialists on a fee basis.
3. Examining physicians on a fee basis.

Every injured patient should have the right to choose his surgeon, and the denial of this right is non-American.

He took to task the Veterans' Act granting Government hospitalization of all persons who served in any war since 1897, without regard to their disability or financial circumstances. It requires only one more step to include the families, and we have state medicine. If the Government wishes to care for its soldiers, this should be done at home with the family physician attending, among friends, and not shifted away to some distant Government hospital.

The Reference Committee approved the address of the president-elect.

Report of the Secretary—The secretary, Olin West, reported 90,646 members of the American Medical Association, a net gain of 590. Our state has 505 physicians listed in the ninth edition of the directory, with 356 as members of the association.

Report of the Trustees—The report of the trustees showed 85,536 subscribers to the Journal, an increase of 4500 during the year. Utah has 320 subscribers, or about 64 per cent of the registered physicians. The total receipts of the Journal pass the one million dollar mark. The sale of the advertising space, amounting to six hundred thousand, being the largest item.

"Hygeia" is produced at an annual loss of over \$40,000. It is steadily gaining subscribers, having passed the thirty thousand mark. Our state records show 71 physicians and 126 laity subscribers.

The following are some of the resolutions passed by the House of Delegates:

1. Resolution from the Section of Ophthalmology, naming a standard percentage of compensation for all eye injuries and disfigurements of the face.
2. Resolution of physical standards for drivers of motor vehicles. The applicant must have not less than 20/50 in one eye and 20/100 in the other eye, with or without glasses.
3. Resolution approving the report of the Judicial Council, condemning Life Institute and periodic health examinations by commercial organizations. They urge that health examinations be made by the family physician and advise the patient of his physical condition direct. They declared that every member and Fellow of the association should "Live up to the spirit of the Council."
4. A resolution declaring for the abolishment of the tax on physicians under the Harrison Narcotic Act, as was also one favoring the deduction from income tax returns of travel expense incurred in attending meetings of medical societies and post-graduate study.

The following officers were elected for the ensuing year: President-elect, Wendell C. Phillips; vice-president, Phillip Marvel; secretary, Olin West; speaker of the House, Fred Warnshuis.

Joseph Pettit of Oregon was elected to fill the unexpired term of the late trustee, Dr. W. T. Williamson.

Dallas, Texas, was selected as the place of meeting for 1926.

Dr. Neher's report was turned over to the Reference Committee for their action and report.

ARRANGEMENTS COMMITTEE

DR. H. P. KIRTLEY, *Chairman*

Dr. Kirtley reported verbally to the effect that his committee had worked in conjunction with Dr. Steel's Committee on Education and Post-Graduate Work, and Dr. Goeltz's Committee on Scientific Work—all of which committees had combined into one to make the convention a success; that the banquet had been arranged for and would be held at Hotel Utah on the evening of the 8th; that all indications pointed to its success; that the doc-

tors by the end of the week would be able to tell exactly how the Arrangements Committee had functioned. Dr. Kirtley referred to the splendid co-operation of the University of Utah and especially the president, Dr. George Thomas, who had done so much to make the meeting a success.

President Kahn announced that there had been nothing for the Transportation Committee to do in particular, therefore Dr. Benjamin, the chairman, did not feel it necessary to make a report.

Dr. John Z. Brown—In looking over the program, I have been wondering if we could not do away with some of our committees—if we could not do something to reduce the number of committees; arrange the work in some way so there will be less time taken up in the House of Delegates in the reading of the reports. If we could have fewer committees and authorize those committees to call on helpers, I think the work could be minimized.

Secretary Rich—Three or four of the committees were appointed temporarily to help out during the year in which they were appointed; for instance, the sub-committee of Public Policy and Legislation. It was needed at the time it was appointed, and there was plenty of work to be done, but it has not been necessary this year. There are some committees that do not function. The Committee on Hospitals has not done much for two or three years. There are committees that the association asks us to keep and to appoint them for one, two, three, four, and five years. We could do away with three or four committees very well next year.

President Kahn—Which committees, Dr. Brown, do you think could be eliminated?

Dr. Brown—I have not gone over them carefully—merely offered that as a suggestion. When the legislature does not meet, we do not need that committee nor the sub-committee.

President Kahn—Something might come up at some time that would require the attention of a committee that is not particularly active. And in the meantime, they get honorable mention, even though they do not put forth any particular effort.

Has anyone else anything to offer?

Dr. Goeltz, chairman of the Committee on Scientific Work, stated that his committee had worked in conjunction with Dr. Steel's committee, and, therefore, he had nothing to report that was not embodied in Dr. Steel's report.

President Kahn announced that the Medical Department University of Utah Advisory Committee would not report; that the work of this committee had been touched upon by the secretary, and would be included in the president's report.

Dr. Homer Rich of Vernal—We have a physician out in our locality who will be 101 years old this fall. He is, so far as we know, the oldest physician practicing in the United States. I think it would be fitting if any of us reach that age and are still kicking that some little recognition be given us. I should like to see some little mark of recognition given Dr. Harvey Hullinger. He received the Northwest Medicine complimentary for a number of years. He is an honorary member of our society. We have not reported him as a member of the State Association, but we should like some mark of recognition given him on account of his great age and still being in good physical condition.

President Kahn—I suggest, Dr. Rich, that you prepare a resolution to present at the noon meeting of the House of Delegates tomorrow; then we can act upon it.

Dr. John Z. Brown—I move we adjourn. Seconded and carried.

THIRD SESSION OF THE HOUSE OF DELEGATES

Held at 12 o'clock noon, Tuesday, September 8, 1925, at the University of Utah, President Sol G. Kahn presiding.

President Kahn announced that the first order of business was the election of officers, but that several reports that should have been given at previous meeting could now be presented if the House were willing.

Moved by E. C. Hughes that said reports be given. Seconded by T. A. Flood, and unanimously carried.

REPORT OF THE COMMITTEE OF THE
OFFICERS' RESERVE CORPS

Dr. R. J. ALEXANDER, *Chairman*

The committee of the Officers' Reserve Corps, on completing its function under the present administration, has the following report to make:

It is with great satisfaction that we inform the members of the State Association that of all the states in the Ninth Corps Area Utah has the highest percentage of its medical men enrolled in the Medical Reserve Corps. This is 14 per cent. The state that stands next in the list has only 10 per cent of its physicians and surgeons as members of the Reserve. When one considers that the states of Washington, Oregon, California, Nevada, Idaho, and Montana comprise the Ninth Corps Area, as well as our own state, and that the total number of our medical brethren in this state is 505, certainly we can derive great satisfaction and gratification in the showing that we have made as members of the Officers' Reserve.

The above figures are those compiled by Colonel Munson of San Francisco, the surgeon of the Ninth Corps Area.

At the recent encampment of the 104th Division which was held at Camp Lewis from August 2, 1925, to August 16, 1925, the skeleton personnel of the 329th Medical Regiment was ordered out for training. Included in this were Captains A. Blumberg, L. J. Paul, and Charles F. Wilcox Jr., all of this city. They spent a most interesting two weeks on courses that included ambulance and station hospital work, theoretical and practical epidemiology, map-reading, and terrain work, as well as medical administrative work.

In conclusion your committee would like to impress on the members of the medical association that it is the duty of every man to become a member of the Medical Reserve Corps. We feel that at least 50 per cent of our membership should hold a commission in the Reserve. The chairman of your committee possesses all of the application papers necessary and will gladly assist anyone who may so desire to join. The committee would also suggest that during the ensuing year the new committee that is appointed be allowed a small sum for stamps and paper so that every physician and surgeon residing in our state can be communicated with directly and shown the duty and obligation that he owes his flag, as well as the actual good that he will receive through membership in the Reserve.

Dr. Alexander's report was handed to the Reference Committee.

REPORT OF THE TREASURER

T. A. FLOOD, *Treasurer*

Period June 20, 1924, to September 8, 1925

Receipts

Cash in National Copper Bank checking account, June 20, 1924.....	\$3,353.66	
Delinquent dues received from component societies	112.00	
Dues from component county societies for current year, received between June 20, 1924, and September 8, 1925, the following:		
Salt Lake County.....	\$1,106.50	
Cache	70.00	
Carbon	75.00	
Boxelder	45.00	
Uinta	40.00	
Utah	175.00	
Weber	210.00	1,721.50

Total receipts in checking account.....\$5,187.16

Disbursements

California and Western Medicine—		
1925 subscriptions	\$706.00	
1924 subscriptions	688.00	\$1,394.00
A. M. A. Directory.....		12.00
Entertainment of guests at the Logan meeting (1924), including hotel bills, entertainment, etc.		204.85
Operation of movie machine and drayage thereon, Logan meeting		17.20

Stationery and printing, including programs, preliminary notices, etc.	183.75	
Stenographic work, report of Logan meeting, postage, and copying of medical testimony for Welfare Committee	373.23	
Floral bills	64.50	
Salary and expenses—secretary	207.79	
Councilor's expenses—traveling, etc.	125.00	
Total expenditures	2,582.32	

Total in checking account at National Copper Bank\$2,604.84

Savings Account

Amount in National Copper Bank Savings Account, No. 18,973, on June 20, 1924.....	\$1,197.62	
Oct. 1. Interest on savings account	\$ 11.97	
Oct. 1. Interest on savings	24.18	
Nov. 24. From the Committee on Post-Graduate Work, Dr. H. L. Marshall.....	177.56	
Apr. 1-25. Interest on savings account	27.01	
July 21, 1925. Bond coupons	12.75	253.47
Sept. 8, 1925. Amount in savings account		1,451.09
Total in both accounts.....		\$4,055.93

I also carry for the association three \$100 bonds of the second Liberty Loan with coupons attached thereto, from November, 1925, to November 1942.

I hereby certify that I have checked all the records and accounts of the Utah State Medical Association, including the checking and savings account of the Utah State Medical Association for the year June 20, 1924, to and including September 21, 1925, and that the account as stated on the foregoing page is correct. I further certify that I have verified the bank accounts (both savings and checking accounts with the National Copper Bank) and have checked the Liberty bonds mentioned on said report, and find them to be exactly as stated on said report of Dr. T. A. Flood, treasurer.

LEONA D. BILLINGS, *Auditor*.

President Kahn—You have heard these two reports. They will both be turned over to the Reference Committee. However, where the expenditure of money is concerned (as suggested in Dr. Alexander's report), that matter would have to be handled by the Council. It could be referred to them with power to act.

D. L. Barnard moved that the matter of the expenditure referred to in Dr. Alexander's report be referred to the Council with power to act. Seconded and carried unanimously.

REPORT OF THE REFERENCE COMMITTEE

W. R. CALDERWOOD, *Chairman*

Your Reference Committee beg leave to report as follows:

We approve the recommendation of the secretary for the appointment of a committee to confer with Senators Smoot and King, with reference to the Harrison Narcotic Drug Act; also the elimination from the income tax report of the expense incurred in traveling to medical conventions and in pursuing post-graduate work.

We recommend, in connection with the statement made by the secretary, that the salary of the incoming secretary of the Utah State Medical Association be fixed at \$250 and necessary expenses.

We approve the recommendation of the secretary that physicians lend their aid and support to the magazine "Hygeia," not alone that they place it on their office tables, but that they advise their patients of the value of this magazine.

We also approve the recommendation of the secretary

that the Utah associate editor of the California and Western Journal of Medicine be allowed a fee of \$50 and necessary expenses for postage, stationery, and stenographic help.

We compliment the Committee on Education and Post-Graduate Work and those who co-operated with them in formulating our program for this year. We feel that it is a distinct step in advance.

We endorse the resolutions and recommendations offered in the report of the delegate to the A. M. A., and compliment the Council for the splendid condition of co-operation among the members of the component societies.

We compliment Dr. Beer on his report on necrology, and beg to add the names of P. S. Keogh of Salt Lake and W. R. Emmett of Ogden. Dr. Keogh was born in 1850 and had been an "age limit" member of our association for several years. He was graduated from Bellevue in 1885, and was licensed to practice in Utah in 1896. Dr. Emmett died on March 23 of this year. He was born in 1875, and was a graduate of Northwestern in 1910. He began his practice in Utah that same year. He was a member of this association and also of the Weber County Society.

We approve the following resolution offered by Dr. Raley, and suggest its adoption:

WHEREAS, At the meeting of the House of Delegates last year our president called your attention to the importance of helping to defray the expenses of our delegate to the meeting of the American Medical Association; and

WHEREAS, The following representative states either give their delegates \$100 or more toward defraying their expenses, or pay their railroad fare and Pullman fare over a direct line to the place of meeting and return: Connecticut, South Dakota, Massachusetts, New York, Illinois, Nebraska, North Dakota, Wisconsin, Michigan, Montana, Tennessee; be it

RESOLVED, That the Utah State Medical Association appropriate the railroad and Pullman fare to and from the convention city to help defray the expenses of the delegate each year to the annual meeting of the House of Delegates of the American Medical Association.

We also approve the following resolution which was offered by the secretary yesterday and suggest that it also be adopted by this body:

BE IT RESOLVED: By the Thirty-first Annual Session of the House of Delegates of the Utah State Medical Association now in session:

That this association protests and is opposed:

First. To a continuance of the \$3 Harrison Narcotic tax. Prior to the war the tax for a physician's narcotic license was \$1. This tax was increased to \$3, as a war measure. The law was enacted for the protection of the general public, and the cost of administering it should be paid for out of the public fund and not by increasing the physician's tax. We want a return to the normal tax.

Second. Regarding the interpretation by the Tax Commissioner of non-deductible items of expense in computing a physician's income tax:

(a) Such as expense of traveling to and from medical conventions for educational purposes.

(b) Expense incurred in the pursuit of post-graduate study.

Under the last two headings the treasurer's office at Washington has ruled that a physician may not, when computing his income tax, deduct such items from his income tax as noted above. In the general scheme of tax reduction, now under consideration, this association feels the injustice imposed by such interpretation, and is anxious for consideration and relief at this time.

We approve the report of the treasurer, and concur in the report of R. J. Alexander and suggest that the matter of the small appropriation asked for in Dr. Alexander's report be referred to the Council.

T. C. Gibson moved the adoption of the report of the Reference Committee, with the exception of those matters pertaining to the expenditure of money, which matters, under the constitution, have to go to the Council. Seconded by John Z. Brown.

The secretary suggested that Dr. Gibson include in his motion the adoption of the two resolutions contained therein, without rereading the resolutions. Dr. Gibson,

therefore, reworded his resolution accordingly. It was again seconded by Dr. Brown, and unanimously carried.

The president announced that election of officers would be the next order of business.

Roll was called by the secretary, showing the following number of delegates present:

Cache Valley, 2; Salt Lake, 20; Utah, 1; Weber, 4; Uinta, 1; Boxelder, 1; Carbon, 0.

It was moved by D. L. Barnard, seconded, and carried, that F. J. Curtis, an alternate delegate of Salt Lake City, be seated in place of L. N. Ossman, who was not present. Seconded by Dr. Baldwin, and carried, and thereupon Dr. Curtis was seated as a delegate, making thirty delegates in all voting.

The president appointed M. M. Critchlow and G. E. Christensen as the tellers.

Secretary Rich announced that the president-elect, T. C. Gibson, would be the president this coming year. That the following officers were to be elected:

President-elect, first vice-president, second vice-president, third vice-president, secretary (three-year term), treasurer, councilor Third District (three-year term), councilor Second District (two years).

President-elect—John Z. Brown nominated W. R. Calderwood of Salt Lake City. Motion seconded by M. M. Critchlow.

Dr. Baldwin—I move, Mr. Chapman, if there are no other nominations, that the nominations close; that the rules be suspended and that the secretary be instructed to cast the unanimous vote of the House of Delegates for W. R. Calderwood for president-elect for the coming year. Motion seconded by G. F. Roberts, and unanimously carried. Thereupon the secretary cast the unanimous vote of the House for Dr. Calderwood, and the president announced that W. R. Calderwood would be the president-elect for the ensuing year.

First Vice-President—Frank K. Bartlett of Ogden was nominated by E. P. Mills.

Dr. Mills—If there are no more nominations, I move that the nominations close; that the rules be suspended and that the secretary be instructed to cast the entire vote of the House for Frank K. Bartlett of Ogden for first vice-president for the coming year. Motion seconded by E. C. Rich, and unanimously carried. Thereupon Secretary Rich announced that Frank K. Bartlett was the first vice-president for the coming year.

Second Vice-President—Homer Rich of Vernal was nominated by A. A. Kerr. Seconded by E. M. Neher.

Dr. Steele—I move that the nominations close; that the rules be suspended and that the secretary be instructed to cast the vote of the House for Dr. Rich of Vernal as second vice-president of the Utah State Medical Association for the ensuing year. Motion seconded by C. L. Shields, and carried unanimously. The secretary thereupon cast the unanimous vote of the House for Dr. Rich as second vice-president, and the president announced that Dr. Homer Rich would be the second vice-president for the coming year.

Third Vice-President—L. W. Oaks of Provo was nominated by G. E. Christensen. Motion was seconded by Eugene Smith.

Dr. Calderwood moved that the rules be suspended and that the secretary be instructed to cast the vote of the House for L. W. Oaks of Provo as third vice-president. This was done, and the president announced that Dr. Oaks was elected third vice-president of the association for the coming year.

Secretary—S. C. Baldwin nominated F. B. Steele of Salt Lake. Nomination seconded by E. C. Rich. Edward Le Compte nominated Edward D. Le Compte of Salt Lake. Nomination seconded.

Ballot was taken, with the result that Dr. Steele was elected.

Thereupon the president announced that F. B. Steele would serve as secretary of the association for the coming three-year term.

Treasurer—While the ballots on the secretary were being taken and counted, Dr. John Z. Brown moved that the man who did not get the secretaryship—Dr. Steele or Le Compte—be elected as treasurer.

Motion seconded and carried unanimously.

When the result of the ballot for secretary was announced, Dr. Brown again moved that the unanimous

vote of the House of Delegates be cast for Edward D. Le Compte as treasurer of the association; that the rules be suspended.

Seconded by George F. Roberts, and carried unanimously.

Thereupon the secretary cast the vote of the House for Dr. Le Compte as treasurer, and the president announced that Dr. Le Compte would serve as treasurer for the coming year.

Councilor Third District (three-year term)—E. G. Hughes of Provo was nominated by George F. Roberts. Nomination seconded by F. B. Steele, who further moved that the rules be suspended and that the secretary be instructed to cast the vote of the House for E. G. Hughes as councilor of the Third District for three-year term. Motion seconded by F. J. Curtis, and carried unanimously.

Thereupon the secretary cast the vote of the House for Dr. Hughes, and President Kahn announced that Dr. Hughes would again serve as councilor from the Third District for the next three years.

E. G. Hughes announced that a vacancy had occurred in the Council this last year through the resignation of R. R. Hampton, and that J. C. Landenberger had been appointed to take Dr. Hampton's place for the balance of the year. That it would be necessary to elect Dr. Hampton's successor. He moved that J. C. Landenberger be appointed councilor, or elected councilor from the Second District, to fill the vacancy occasioned by the resignation of R. R. Hampton, Dr. Landenberger to serve for the next two years. Motion seconded by D. L. Barnard, and unanimously carried.

G. E. Christensen moved that Dr. Landenberger be elected by acclamation. Seconded and carried.

Whereupon the president announced that Dr. J. C. Landenberger would serve as councilor from the Second District for the ensuing two years.

The secretary then announced that the officers for the coming year were as follows:

President, T. C. Gibson, Salt Lake City; president-elect, W. R. Calderwood, Salt Lake City; first vice-president, Frank K. Bartlett, Ogden; second vice-president, Homer E. Rich, Vernal; third vice-president, L. W. Oaks, Provo; secretary (three-year term), Frank B. Steele, Salt Lake City; treasurer, Edward D. Le Compte, Salt Lake City; councilor First District (unexpired term) one year, W. LeRoy Smith, Brigham City; councilor Second District (two more years to serve), J. C. Landenberger, Salt Lake City; councilor Third District (three-year term), E. G. Hughes, Provo; delegate to A. M. A. (one-year term, unexpired), E. M. Neher, Salt Lake City; alternate delegate to A. M. A. (one-year term, unexpired), A. C. Behle, Salt Lake City.

The president announced that the place of meeting for the 1926 meeting was the next order of business.

F. H. Raley moved that the 1926 meeting be held in Salt Lake City. Seconded by J. P. Kerby, and unanimously carried.

E. G. Hughes—I have been in close touch with the work of this association for the past few years, and also with the work of Dr. Rich, our outgoing secretary. Dr. Rich has served this association as secretary for the past eight years, and this association has very much to commend in him for the untiring efforts that he has put forth in acting as our secretary. I am sure I am expressing the heartiest thanks of the members of this association when I express to Dr. Rich the sincere appreciation of our membership for his splendid work. He has worked faithfully and diligently to carry out the work of the association, has upheld their ideals, and the work accomplished has been all we could expect. I make a motion that we extend to Dr. Rich a vote of thanks for the work that he has done. Motion seconded by Dr. Behle.

President Kahn—Those who have worked with Dr. Rich since he has been our secretary take great pleasure in expressing our grateful appreciation for the efficient manner in which he has handled the work.

G. F. Roberts—I don't think it ever hurts to commend someone who has done the work that Dr. Rich has done for so many years. I make a motion that the Council be empowered to appropriate a sum for buying some slight memento for Dr. Rich, as a present from the Utah State Medical Association in appreciation of his work.

E. G. Hughes—I second the motion.

A. C. Behle—I think a vote of thanks should be tendered the officers of the university for the help they have given to us for this meeting, and I move that the secretary be instructed to express our thanks and appreciation to them in writing. Seconded by A. A. Kerr, and unanimously carried.

E. P. Mills—I move that we extend our thanks and appreciation to our visitors for their great courtesy in coming here and giving of their time and efforts. That the secretary be instructed to convey this to each of our visitors in writing. Seconded by C. L. Shields, and carried unanimously.

Meeting adjourned *sine die*.

WILLIAM L. RICH, *Secretary*.

When Emotionalism Meets Reason—Louis I. Dublin, Ph.D., told the recent International Birth Control Conference that he disagreed with them. Some of his reasons in brief were:

"Because your propaganda until yesterday has been based essentially on an emotional reaction and not on a scientific analysis."

"Large families among poverty stricken, however deplorable, do not justify a nationwide program of broadcasting contraceptive information without reserve."

"Your effort will simply replace an evil of which we are fully aware and which we all deplore with even greater evils lurking less obviously in the background. There is need for caution; for you are playing with fire. Mistakes in population policy are more easily made than rectified."

"The birth control problem is only one aspect of the larger population question, and will never be settled satisfactorily except as the larger issue is solved."

"I cannot consider the underlying causes for the decline in our birth rate except to point to the very obvious influence of the widespread knowledge of contraceptive methods. One would imagine from your literature that such methods were a recent discovery which, if only applied generally, would release a long-suffering world from all its troubles. But, this is clearly a misconception."

"There is evidence on all sides that birth control practices are in vogue to an enormous degree in the United States. Every doctor, every nurse, every druggist, and every social worker, will, I believe, admit as much. In no other way can we explain the falling birth rate of the country in recent years."

"Knowledge of contraceptive methods is more widely practiced here than in any other country of the world, except Germany and Austria, where the aftermath of the war has taken all desire and incentive for living out of the hearts of the masses. Holland, which you consider the exemplar of voluntary parenthood, shows a birth rate of 26 per 1000, as compared with 23 in the United States."

"You have won much sympathy for your program through the assumption that it works in the direction of social and economic improvement of the poor. But obviously economic battles cannot be fought by other than economic weapons."

"You do not solve the worker's problems by encouraging him to lose his greatest and noblest possession, his children. On the contrary, you help to maintain the status quo by accepting present economic maladjustments without a struggle."

"Have you not a moral obligation to assure those whom you wish to help that the procedures you sponsor are at once effective and harmless? The best medical opinion informs me that you are, in fact, not prepared to make any such guarantees." . . . "Such information as is available indicates clearly that there is still a large element of uncertainty in the suggested procedures."

"You have, heretofore, limited yourselves almost entirely to arousing sympathy for those who have suffered from over-large families. Today, you might very well take up the other side of the picture and help arouse public sentiment in favor of fairly good-sized families among the rank and file of normal people."

"What is most vitally needed today is more light on the problem of population and not wider dissemination of questionable contraceptive practices through such agencies as your current publications."

"Your magazines, sold promiscuously on street corners, are especially offensive and alienate the good-will of many thoughtful people."

CORRESPONDENCE

A DAY WITH ROLLIER

Extracts of a Letter Written by Doctor Langley
Porter to His Associate, Doctor Clain
Gelston of San Francisco

I have just spent a day with Rollier at Leysin, writes Porter. It is the biggest and best-run personal medical enterprise I have ever seen. Thirty-two separate clinic buildings, more than one thousand patients. I thought I had seen some bone tuberculosis, but yesterday I saw four times as many patients suffering with Potts as in all my previous experience—high, low, and dorsal. Three hundred odd additional persons with hip, knee, sacro-iliac, hand, foot, jaw, and cranial tuberculosis—all doing well. Every face smiling except newcomers, all in a good sound state of nutrition and with extraordinary muscular development. The interesting thing is that there is no operating, and no plaster is used. Rollier showed me his abandoned operating and plaster rooms, all the more remarkable, since he began as a surgeon with a predilection for plaster, and now he rejects both because plaster and dressings cut light off the parts and because they cause atonicity and atrophy of muscles.

All repositions are made by posture and traction. Sun and food complete the cure.

Potts cases are kept on the face during the day; on the back at night, with mattress pads to protect the gibbus at first; later pressure pads aid reposition. I did not see a single pressure sore or any unhealthy skin. They use skin friction with alcohol. Knee cases are placed with mattress pad so that the knee is higher than the hip, with the thigh in external rotation; the joint only slightly lower than the knee to limit flexion to a very slight angle. Padded to retain position. Mattresses are of hair. Pads are used of increasing hardness: (1) Coarse millet seed; (2) fine millet seed; (3) sand or hard-packed hair.

The traction apparatuses are simple but effective. Weights over pulleys; very light frames to attach to the bed, easily clamped, easily removed. Two struck me as especially ingenious, one for high cervical and dorsal Potts. All the traction is made from the occiput. A celluloid fitted head piece is fastened to a little carriage running on metal rails. The occiput piece is retained by a band around the forehead, and the pull comes on the sliding carriage, which carries the head up as the weight pulls. It is pictured in Rollier's book. Rollier's finger traction splint also is good. It is an aluminum trough that fits the finger, but runs out to two and one-half times the length of the finger, getting progressively narrower, till at the end the two sides almost approximate and form the bearing for a little pulley (not too little) which carries a traction cord attached to an elastic or metal spring, which in turn is anchored to a wrist piece. It would be fine for sprains and fractures of the fingers, and baseball fingers.

The leg tractions also use the principle of the movable carriage on a light track which is made part of the splint. The management of two non-tubercular patients interested me. In one a spastic paralysis (Little's) traction on the legs in the position of abduction was employed *always at night*, which I think is a good idea.

A system of massage and training is in vogue such as we use, except without hot baths. They have a rather good scheme for training patients in walking. The carriage runs on three wheels, the foreward one hinged for steering. It can be pulled by a nurse while the child follows, or, if the child is able, it can do the steering itself. It might be useful after the child had learned to handle itself after practice on the parallel bar and foot-board combination, such as we use. Besides this, the usual sun treatment is used, and seems to help to gain some relaxation.

The other case was a usual lateral curvature in an adolescent. The whole treatment was day rest on the face, with exercises of the side toward the convexity (1)

by raising the head and shoulders, and (2) by pulling a weight with the hand of that side. The weight is hung quite a bit behind and to the side of the shoulder, and it seems to be working a transformation. Another good stunt is the use of laminaria tents to dilate sinuses that drain poorly. Rollier objects to any cutting that can be avoided. Just slips a small tent into the mouth of the sinus and leaves it twenty-four hours, when drainage becomes free.

As to the use of the sun, we have his principles fairly well in practice. He rarely uses more than three or four hours a day. He begins with small exposed areas with short exposures. Never permits visible reddening of the skin. When there is pain on thickening of the joints, he paints the skin over them with 10 per cent alcoholic solution of eosin, which he thinks permits the better penetration of violet and cuts off red, or vice versa (I shall have to look that up). It might be well to try eosin with the quartz lamp for painful joints, or inflammation in serous membranes. Rollier says that one must take the greatest care with dry peritonitis and with intra-abdominal inflammations, to give only minimal exposures of the tender abdomen to the sun.

I was surprised at the casual attitude toward food. He limits milk to 750 cc; limits meat to two or three meals a week, and uses skinless vegetables, butter, and fruit.

Rollier's clinic is as clean as a pin. I never saw such milky linen or so dustless an institution. He scoffs at those who say lungs cannot be treated by the sun, but, as in peritonitis, minimal exposure to the affected part is essential at first.

Doctor J. A. Simpson, San Francisco, so enjoyed the following editorial clipping from the Paris (Missouri) Mercury that he sends it to us for "our amusement." We pass it on to you:

"The other day a stranger, with the best of intentions, walked into this office and, inquiring for the editor, who is of the elect that suffer from hay-fever, urged him in kindly, though somewhat detached and remote manner, to try Christian Science. At the same time he recommended a St. Louis 'practitioner,' who, for a stated price, could free us of the error that we had a nose and having bereft us of that necessary member, without which a smoke is never a smoke, send us home happy. As a rule, people with hay-fever cures excite the homicidal instinct in us instantly, but something in the man's appearance stayed the hand that would slay. He was small, thin, anemic, wore bi-focal glasses, had on arch-support shoes, and was struggling with a new set of false teeth. His eyes were red and his nose swollen. We thanked him, not altogether ungraciously, and as he stepped out into a beautiful September afternoon filled with millions of golden particles of ragweed pollen floating willy nilly here and there, a paroxysm of sneezing ensued. The human brain is a curious thing. We wonder sometimes how many of the people who prattle about 'science' ever really read 'Science and Health' and 'Key to the Scriptures,' understand the senseless jargon in which they are clothed, or know anything of the personal history of the woman, Mary Baker Eddy, who wrote them. As a child she was a cataleptic, subject to fits of hysteria, in which she fell screaming to the floor, and through the fear inspired ruled the household of her father, Mark Baker, a New England farmer. 'Mary Magdalene had seven devils,' he once declared, 'but our Mary has fourteen.' She gave away her own son when he was seven years old and saw him no more until he was 34. All her life she was an intriguer and trouble-maker, and one by one had to leave the homes that had given her domicile, being even denied shelter by her own sister, Mrs. Tilton. She was illiterate, self-centered, but shrewd. 'Science and Health' was filched almost bodily from Quimby, the Portland clockmaker and faith healer, whose pupil she became after an unsuccessful sortie into spiritualism, and to the end she was a victim of the grossest superstition. Her dominating fear was of 'malicious animal magnetism,' and she even refused to let her mail go through the Boston postoffice, declaring it had been 'poisoned' against her. And yet millions follow this, the greatest meglomaniac of all time, and ascribe to her even the attributes of deity. The brain of the race has cracked."



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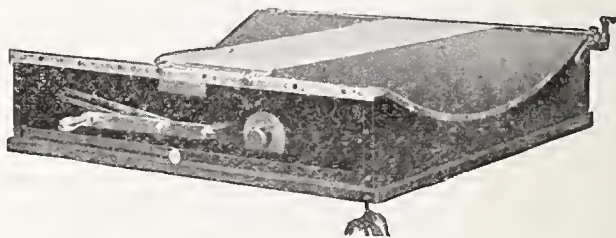
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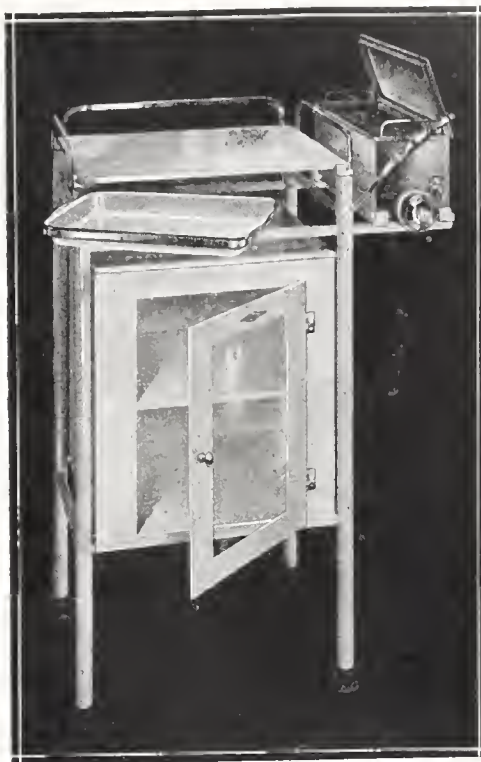
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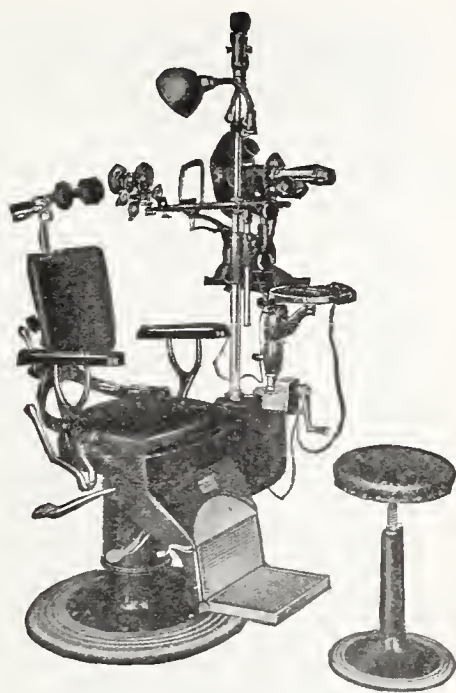
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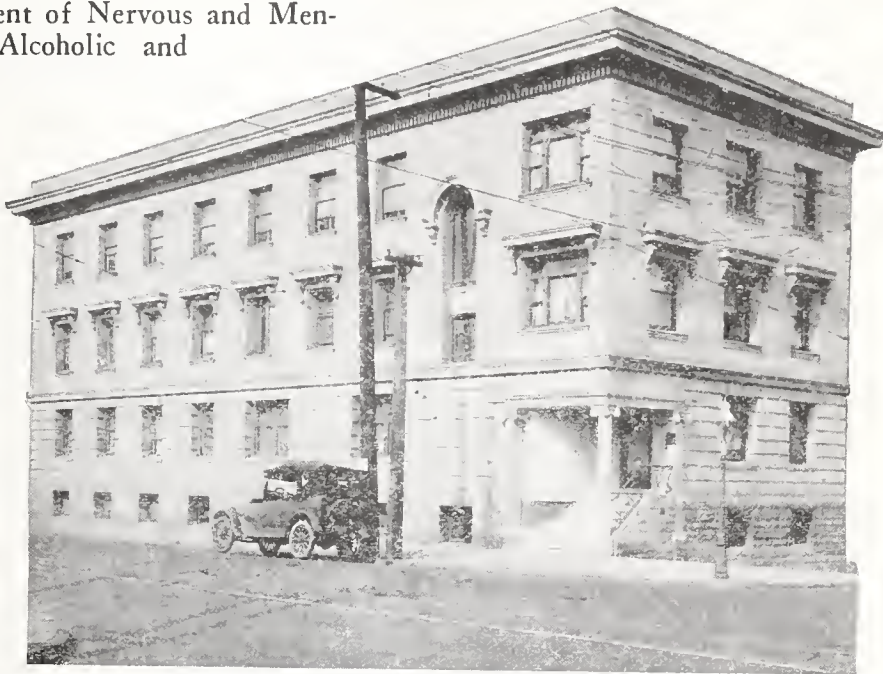
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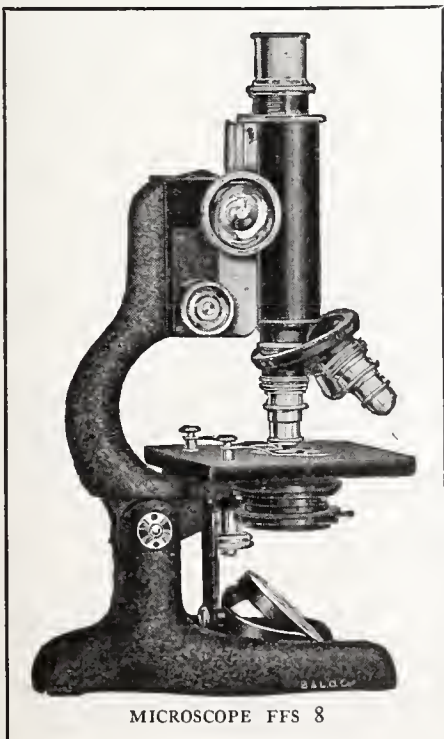
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RACINE, WIS.

California Association of Medical Social Workers (San Francisco section) met at dinner at "Kentucky Tavern" on Friday, September 18. After dinner the meeting under the presidency of Edna J. Shirsper discussed the subject of "Progress and Changes in Local Medical Social Service Departments."

Eleanor Stockton outlined the reorganization of the San Francisco Health Department, which has gone into effect recently, and introduced as new supervisors Helen Johnston, Supervising Nurse Division of Tuberculosis Nursing; Genevieve Dyer, Supervising Nurse New General Nursing District; Marcella Leonard, Director Social Service, San Francisco Hospital; Eva C. Witter, Supervisor of Foster Homes for Children; Olive McGinnis, Supervisor of School Nurses.

Reba Ingals of the State Board of Control outlined the development in the State Bureau of Children's Aid and the State Department of Public Welfare.

Ida Euler, the new Director of Social Service for the Junior League, told of the plans she had in mind for the development of this agency. Miss Euler is working in close co-operation with the St. Luke's Health Center. The social service activities of the Junior League are principally in the Bernal Heights district.

Bess Raplogel presented a detailed account of the medical social service which is being done by the Red Cross.

Nan Burke has been appointed teacher of hygiene in the Girls' High School. She introduced her successor, Kathleen Kietly, as the new director of social service of St. Mary's Hospital.

N. Florence Cummings discussed staff changes at the Stanford clinics, and told of the practical part of the Stanford course in public health nursing. Dr. Adelaide Brown spoke of Stanford teaching facilities.

President Edna Shirsper presented Aileen G. Crowley, registrar, and Virginia Hayes, visiting nurse, as recent acquisitions to her staff at the Children's Hospital.

"Scotty," who edits the "Personal Punches" column in the San Francisco Chronicle, was a guest and gave an amusing impression of medical social service in his own humorous manner.

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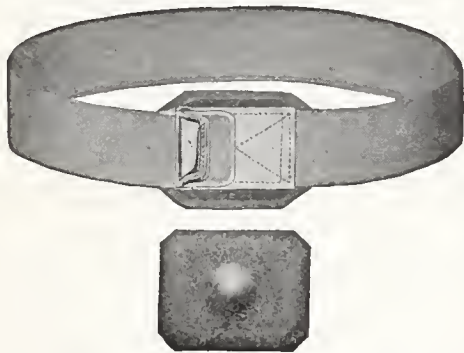
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BOOK REVIEWS

This column is conducted solely in the interests of California and Western Medicine readers. Critical comment, favorable and unfavorable, purely from the standpoint of the interests of the medical reader, will be made about books selected from the larger number acknowledged in the Books Received column. The advertising columns are open to book publishers who wish to make additional statements about their publications.

The Health Care of the Baby. By Louis Fischer. 15th ed. Review copy by courtesy of the publishers. For sale by advertisers in California and Western Medicine.

This little book is to be highly recommended to mothers, nurses and medical students. It also is a handy book for physicians to consult about the exact preparation and make-up of formulas. It contains many specific instructions, tables, charts, and answers well practically all the questions that trouble the anxious mother.

Newer Methods of Ophthalmic Plastic Surgery. By Edmund B. Spaeth. Review copy by courtesy of the publishers, P. Blakiston's Son & Co. For sale by advertisers in this issue. Price, \$5.

The book is the only one in English as far as we know that is devoted entirely to ophthalmic plastic surgery. In the first chapter are given the details of the general surgical technic and, following this, the various plastic operations are dealt with. The individual cases are clearly described and well illustrated by photographs.

In addition to the author's own carefully and conscientiously set down experiences, the book contains extensive and valuable references to the work of other ophthalmic surgeons.

In an ophthalmic surgery intended "to serve the general ophthalmologist in his every-day practice," we feel more space should have been devoted to the various operative complications and their remedies.

The book is indispensable to those doing plastic surgery about the eye.

The Cerebrospinal Fluid in Clinical Diagnosis. By J. Godwin Greenfield and E. Arnold Carmichael. Review copy courtesy of the publishers, Macmillan & Company. For sale by advertisers in California and Western Medicine.

There are few works on the cerebrospinal fluid, published in English, to which physicians can easily refer.

This book under review is the result of the large personal experience of the authors, who are not only well

trained laboratory investigators, but also experienced neuropathologists.

It always is important to correlate the results found in the laboratory with the findings in clinical practice. The present volume accomplishes this in a lucid manner and concise form, giving the results of the older and the newer tests, such as the hemolysis complement test of Weil and Kafka. The authors found "strong reactions to this latter test were rarely obtained apart from acute meningitis and the syndrome of Froin, and are almost constant in both conditions. Especially when the cerebrospinal fluid contains less than 0.1 per cent of protein, a positive hemolysis test is strong evidence of acute meningitis."

The book is permeated with similar data dealing with deviations from the normal spinal fluid. It is divided into three sections. Part I is devoted to the nature and composition of the cerebrospinal fluid and its changes in disease. It discusses the various methods of obtaining the spinal fluid and the dangers one meets via each route. Part II deals with the spinal fluid in meningitis, syphilis, and other neurological diseases. A very excellent clinical and laboratory differential diagnosis of the various cerebrospinal syndromes concludes this part.

The third and last section is given over to the detail of the technique of cerebrospinal examination.

This feature will be welcomed by all who work with spinal fluids. The techniques for the different examinations are fully described and then discussed with their clinical application. This feature makes for more intelligent co-operation and interpretation.

The volume is replete with valuable information which is easily "get-at-able" and one does not have to wade through scattered pages to collect data on the subject for which he is searching.

An excellent and ample bibliography of the more important publications, arranged according to subject, completes this work.

Pediatrics. Vols. 6 and 7. Edited by Isaac Abt. Review copies by courtesy of the publishers, W. B. Saunders Company.

Volume 6

The sixth volume of Dr. Abt's Pediatrics maintains the standards established by earlier volumes. Volume 6 is of especial interest to all physicians because the major part of it is devoted to the consideration of the infectious diseases of infancy and childhood.

There seems to be some inconsistency in the methods of local treatment of arthritis; the author of this chapter recommends absolute rest and protection for the painful joint, then he advocates rubbing ointment into the same painful joint.

The discussion on diphtheria gives in detail the essen-

(Continued on Page 1498)

The Management of an Infant's Diet

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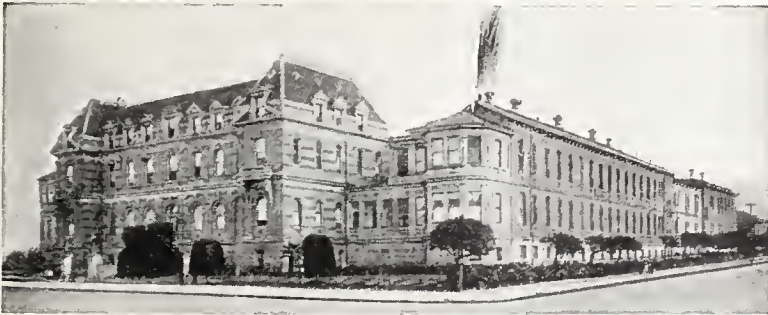
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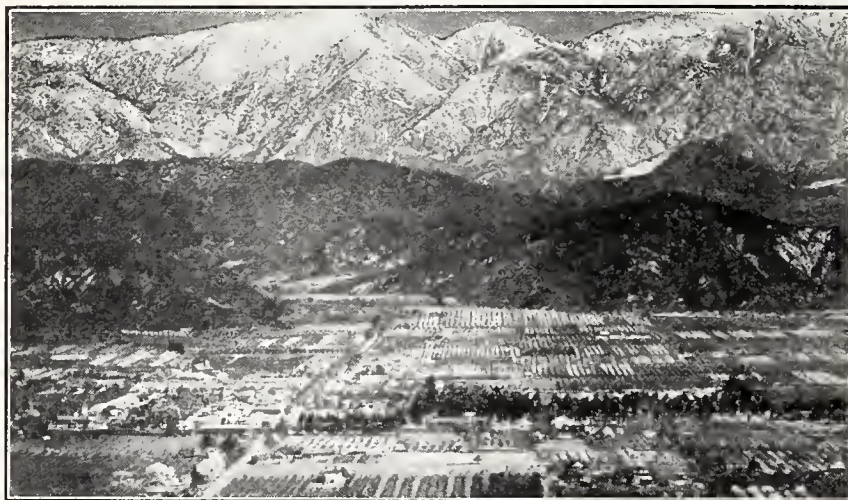
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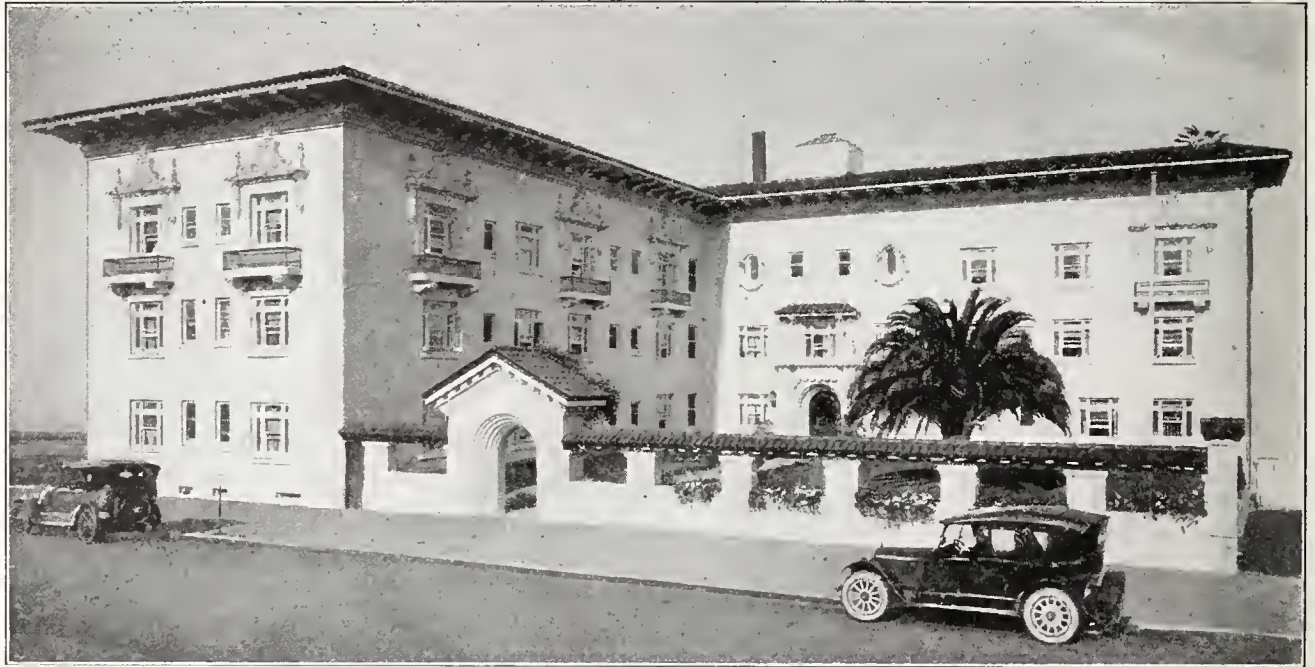
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BOOK REVIEWS

(Continued from Page 1492)

tials in diagnosing, treating, and preventing diphtheria, which includes the technic of the Schick test and the administering of toxin-antitoxin.

The chapter on scarlet fever places at our disposal the recent work done on scarlet fever, the most important being that of the Dick's, in which they have developed the test by which individual immunity and susceptibility may be determined. The methods are presented in sufficient detail.

This volume embodies many recent important advances made in scientific research, as well as the results of long experience on the part of the various authors who have contributed to the book.

Volume 7

This seventh volume is devoted to the nervous system of childhood. It maintains the high standard found in the previous volumes, and leaves little room for criticism.

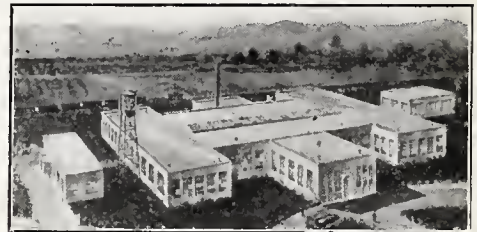
The infantile cerebral palsies are well covered, but it appears that too much stress is laid on syphilis as an etiologic factor, while the role played by the prolonged coagulation time of the blood in certain newborns is apparently overlooked.

"Surgery of the Head and Spine" is well written, complete, and contains numerous pertinent illustrations. The present-day knowledge of chorea is condensed and incorporated in a well-prepared chapter.

Acute poliomyelitis is elaborately considered from all angles, but it is unfortunate that the therapeutics are not given in more detail.

The volume is rounded out by interesting chapters on the psychopathology of childhood, defects of speech, and one on the sexual life of the child.

Smallpox Influences History—India is one of the greatest present sufferers from this scourge. In the years 1918 to 1922 nearly 650,000 deaths from smallpox were reported. China pays a huge annual toll in sickness, damaged bodies, and lives to this account. Scotland, Germany, France, Spain, Australia, Burma, Mexico, Brazil, Argentina, Chile, Costa Rica, Santo Domingo, and Canada have all had epidemic visitations within the last five years. Once more the disease has assumed epidemic proportions in England, where the false prophets of anti-vaccination still preach their dangerous doctrines that smallpox has become a trivial disease, that it can be controlled by sanitary measures alone, and that vaccination is impotent to protect against infection.



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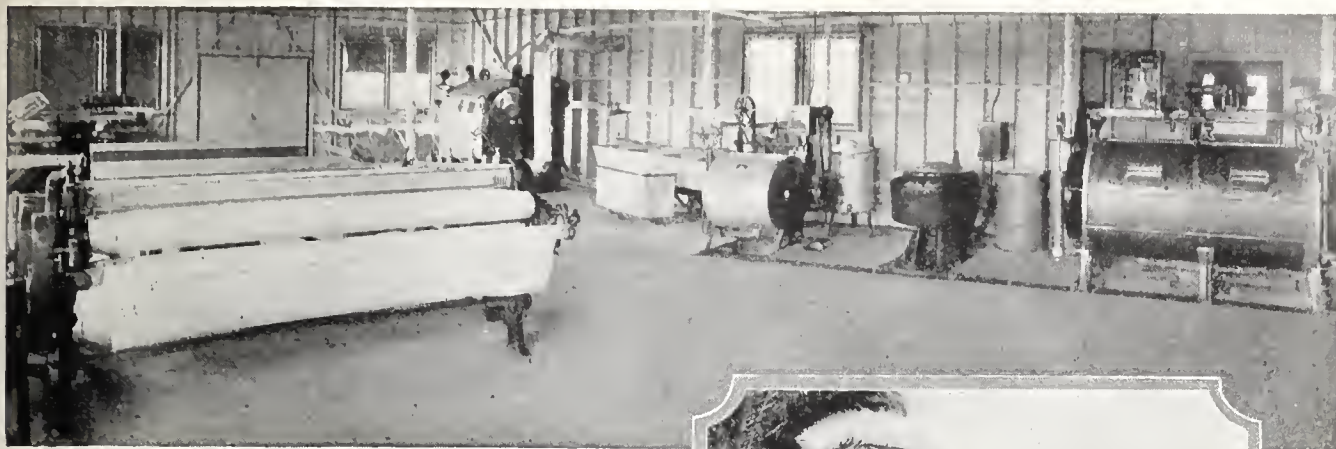
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	Secretary, Brett Davis, Merced.
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ALUM ROCK SANATORIUM For the Treatment of Tuberculosis San Jose, Calif.	HOSPITAL FOR CHILDREN AND TRAINING SCHOOL FOR NURSES General Hospital for Women and Children 3700 California Street, San Francisco	RADIUM AND ONCOLOGIC INSTITUTE Diagnosis and Treatment of Neoplastic Diseases 1052 W. 6th St., Los Angeles, Calif.
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CALIFORNIA SANITARIUM For the Treatment of Tuberculosis Belmont, San Mateo County, Calif.	MANNING, DR. J. B. Home for sickly or convalescent children Santa Barbara, California	ST. JOSEPH'S HOSPITAL Limited General Hospital Buena Vista and Park Hill Avenues San Francisco
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FRANKLIN HOSPITAL Limited General Hospital Fourteenth and Noe Sts., San Francisco	MOUNT ZION HOSPITAL General Hospital 2200 Post Street, San Francisco	WOODLAND CLINIC AND SANITARIUM Woodland, California
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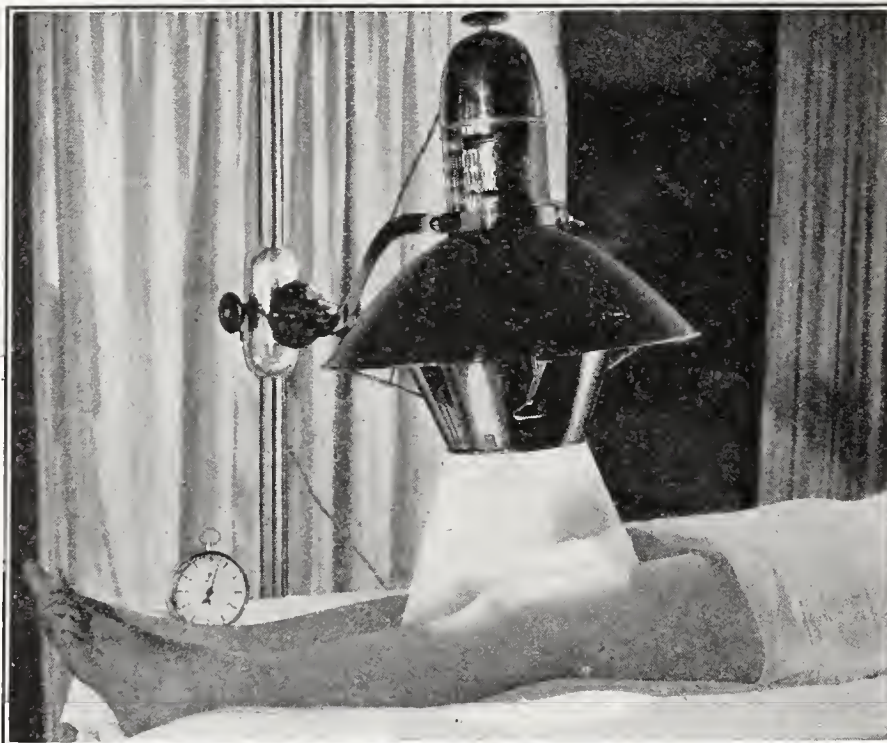
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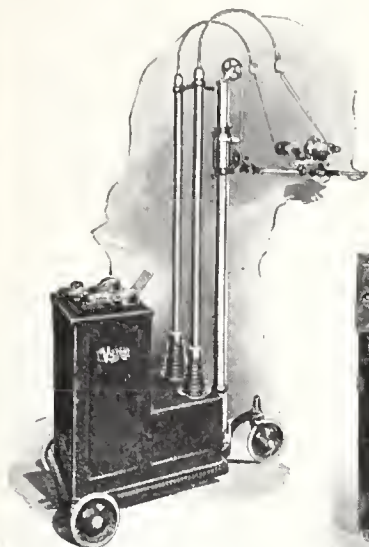
753 Flood Building
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The Relationship of Tuberculosis to Fistula in Ano—It is the belief of W. A. Fansler, Minneapolis (Journal A. M. A.), that we are not justified in making the diagnosis of tuberculous fistula except by definite microscope picture or in cases in which the lesion has the typical appearance described elsewhere in this paper. Considering all cases of fistula in ano, it is doubtful whether more than 2 or 3 per cent are tuberculous in character. Tuberculosis is very rarely primary in fistula in ano. If it occurs at all it is not more than a small fraction of 1 per cent. Probably 15 per cent of fistulas occurring in tuberculous patients are tuberculous; 0.33 per cent of tuberculous patients also have tuberculous fistulas. (These figures are based on a too insignificant number of cases to justify a positive statement.) In view of the ease with which the tubercle bacillus affects the mucous membrane of the bowel, it would seem possible that in some cases—at least in tuberculous persons, in whom the fistulas appear to be a simple inflammatory process—that the original lesion in the bowel wall is due to the tubercle bacillus. However, this is purely a matter of opinion and has not been proved. In any event, it has but little bearing on the prognosis or treatment of the fistula. It is probable that tuberculosis as such has a tendency toward the formation of rectal fistula, but that this tendency is not as great as is generally supposed. The general condition of the patient is also a decided factor. It would seem that the formation of rectal fistulas in persons who are underweight is undoubtedly a definite warning of the presence of pulmonary tuberculosis or of a tendency toward its development. These persons are entitled to a most scrutinizing general examination, which, even if negative, should be repeated periodically.

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TRUTH ABOUT MEDICINES

New and Non-official Remedies

(Abstracts from reports of Council on Pharmacy and Chemistry, A. M. A.)

Note—These do not represent all of the actions of the Council, but they do represent those remedies manufactured by firms who co-operate with California and Western Medicine in its advertising columns, and thereby with the physicians in California.

In addition to the articles enumerated in our last report, the following have been accepted:

Laboratory Products Co.—Protein S. M. A. (Acidulated).

Eli Lilly & Co.—Antistreptococcic Serum, Normal Horse Serum, Pertussis Vaccine, Pneumococcus Vaccine Prophylactic, Staphylococcus Aureus Vaccine, Staphylococcus Vaccine, Streptococcus Vaccine, Vaccine Virus.

Merrell-Soule Co.—Vi-Mal-Dex (Orange).

Parke, Davis & Co.—Corpora Lutea Desiccated (P. D. & Co.). Capsules Corpora Lutea Desiccated (P. D. & Co.), 2 grains; 5 grains. Tablets Corpora Lutea Desiccated (P. D. & Co.), 2 grains; 5 grains.

Insulin—Squibb 10 Units, 10 Cc.—Each cc. contains 10 units of insulin—Squibb (New and Non-official Remedies, 1925, p. 174). E. R. Squibb & Sons, New York. Also 20 units, 40 units, 80 units.

Neo-Silvol Ointment, 5 Per Cent—An ointment composed of Neo-Silvol (New and Non-official Remedies, 1925, p. 379), 5 per cent. in a base composed of glycerin, benzoinated lard, hydrous wool fat and petrolatum. Parke, Davis & Co., Detroit.

Mercurosal Solution—Each cc. contains mercurosal (New and Non-official Remedies, 1925, p. 234), 0.025 gm. (5/13 grain), in distilled water containing 0.1 per cent of sodium citrate. Parke, Davis & Co., Detroit.

Theocalcin—A double salt or mixture of calcium theobromine and calcium salicylate. It contains not less than 44 per cent of theobromine. Theocalcin acts like theobromine, but is claimed to be less likely to produce gastric irritation than the official theobromine sodio-salicy-

late. It is supplied in bulk and in 7½ grain tablets. E. Bilhuber, New York.

Vi-Mal-Dex (Orange)—A mixture containing approximately, maltose, 28 per cent; dextrose, 10 per cent; dextrin, 48 per cent; orange juice sugars, 9 per cent; citric acid, 1 per cent; ash, 1 per cent; moisture, 3 per cent. One hundred gm. contains the equivalent of 93.5 cc. of fresh orange juice. Vi-Mal-Dex (Orange) is proposed as a carbohydrate food for use in the feeding of infants. In addition to the carbohydrates, dextrose, maltose and dextrin, it presents the anti-scorbutic properties of orange juice. For use, Vi-Mal-Dex (Orange) is mixed with water or milk. Merrell-Soule Co., Syracuse, New York.

Doctors are Taken En Masse—Let a doctor err, once or many times, and forthwith behold the condemnation of the entire profession. Yet while the failings or foibles of a divine may be ridiculed or condemned, critics never dream of charging his creed with the faults of the man. Let a lawyer lie or a judge be bribed, or a witness perjured, yet the majesty of the law is not impugned.—Editorial, Illinois Medical Journal, September.

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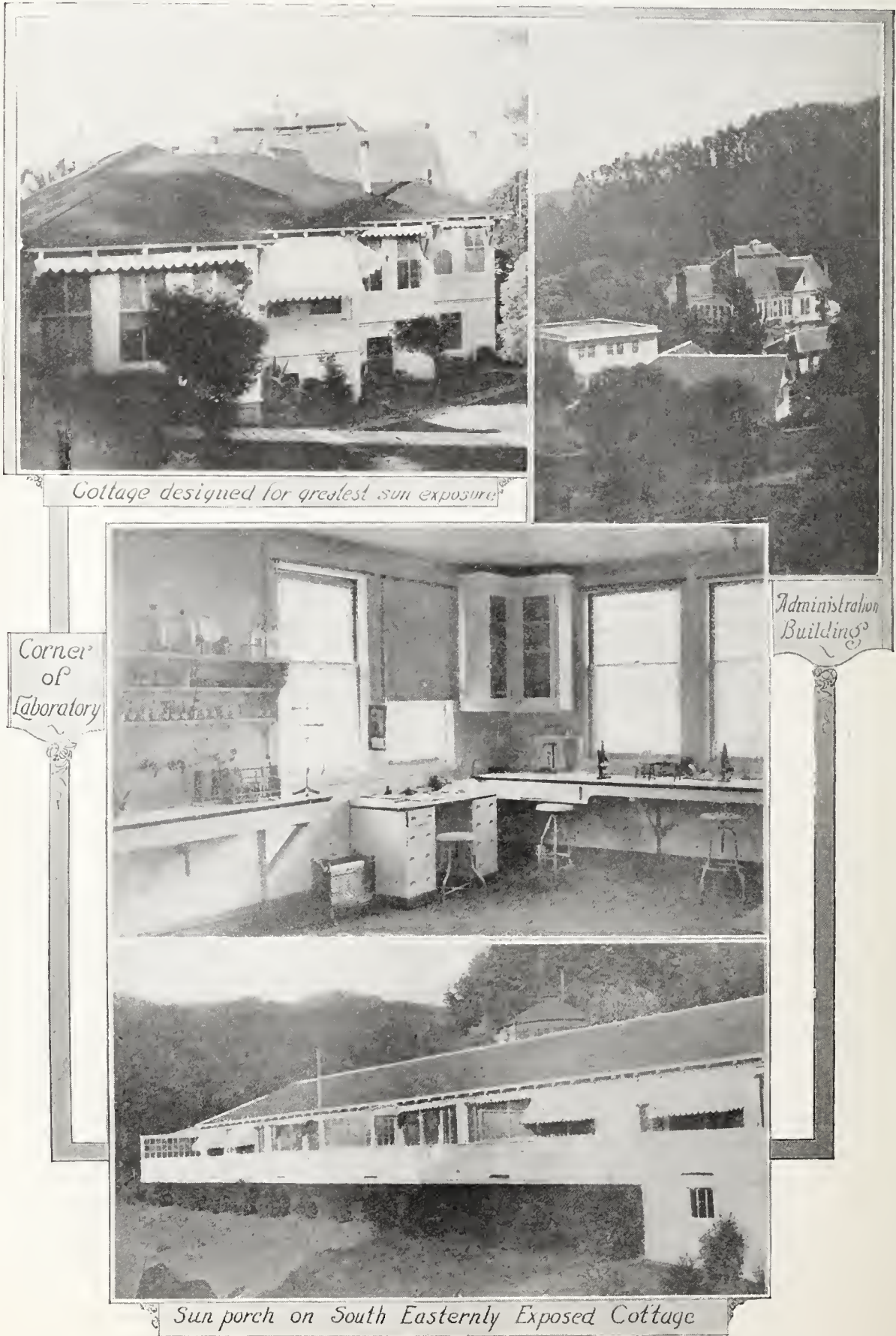
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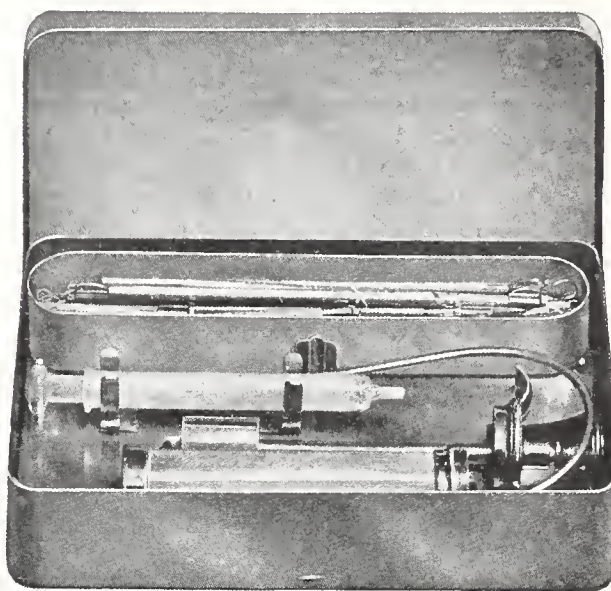
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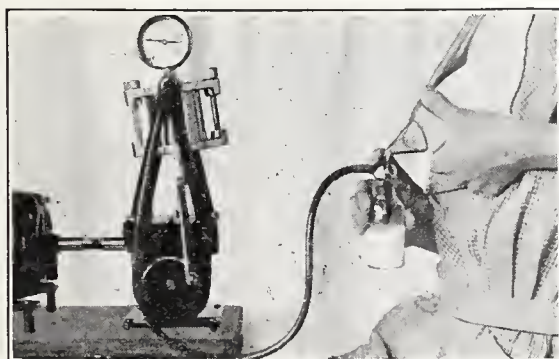
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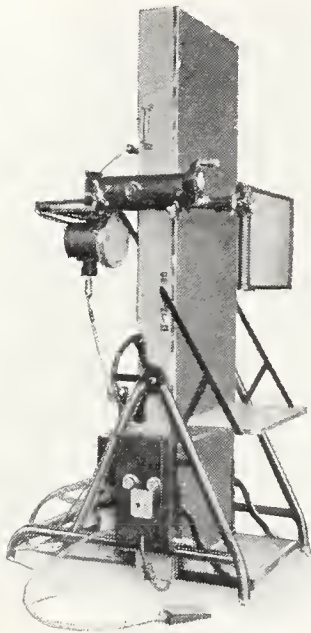
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The Non-Surgical Management of Peptic Ulcer by the "Physiologic Rest" Method—The material analyzed by Frank Smithies, Chicago (Journal A. M. A.), comprises 470 patients affected with ulcers and who were treated non-surgically according to Smithies' plan published in 1916. In the hospital cases, the average duration of incarceration was twenty-six days, a saving of nearly half the time and money required by the regimen advocated by Ewald, Schultz, Sippy, and others. Actual bed confinement averaged less than nine days. In 40 per cent of patients, all pain had disappeared within twenty-four hours of beginning treatment; an added 33 per cent experienced pain relief within forty-eight hours; 8 per cent required seventy-two hours; 15 per cent almost ninety-six hours; in approximately 4 per cent it was necessary to relieve pain by opiates. The last group consisted of ulcers whose extension had advanced to the serous layer of the stomach, or the ulcers were of the deep, fissured type, directly located at the pyloric or cardiac orifice. A total of 81 per cent were subjectively comfortable in three days or less. Of 41 per cent of ulcers exhibiting positive occult blood tests when treatment was begun, at the end of five days 92 per cent of the patients' stools were blood-free. Seven cases went on to actual perforation (1.5 per cent). In sixty-six patients who came to laparotomy for numerous intra-abdominal lesions, following institution of ulcer management, completely healed scars were demonstrated in fifty-four, approximately 82 per cent. In the remaining twelve patients, malignancy, perforation, multiple ulceration or actual benign ulcer activity were present. Dyspepsia-free intervals averaging eleven months were recorded in 234 cases before treatment; it lengthened to thirty-seven months as an average after treatment. Thirty-two patients before treatment had had quiescent periods averaging nineteen months; after treatment those on whom we have reports had increased to an average of forty-four months. Recurrences were noted in 14 per cent (sixty-six cases). Of the whole group, 470 patients in their present status, there is justification for claiming cessation of the ulcer process in 361, or 77 per cent.



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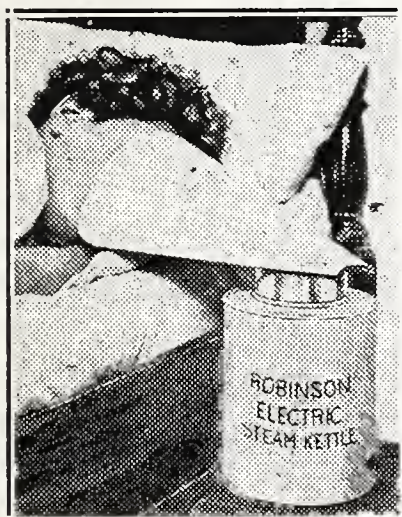
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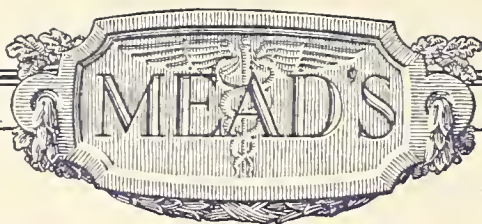
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Number 12



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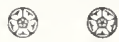
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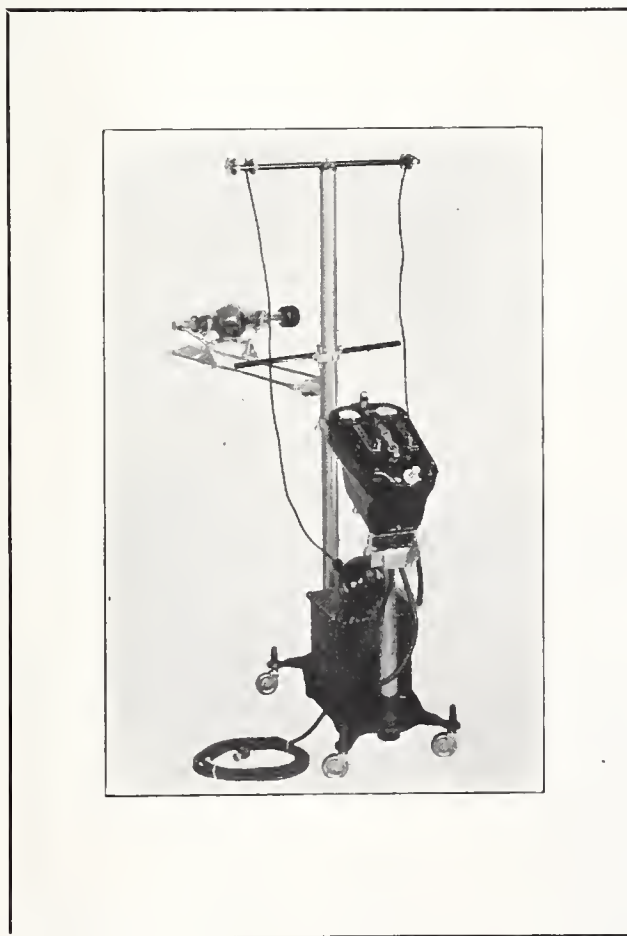
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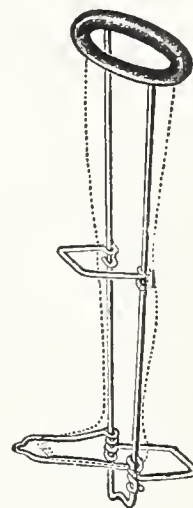
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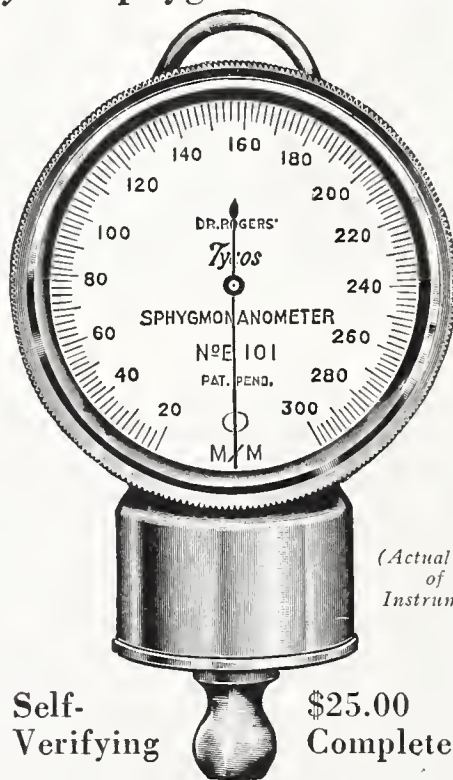
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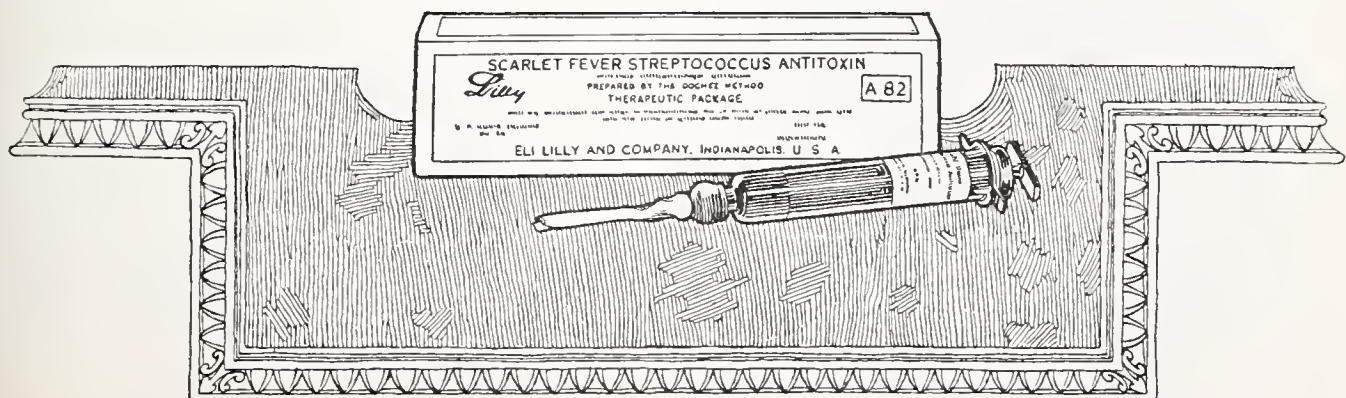
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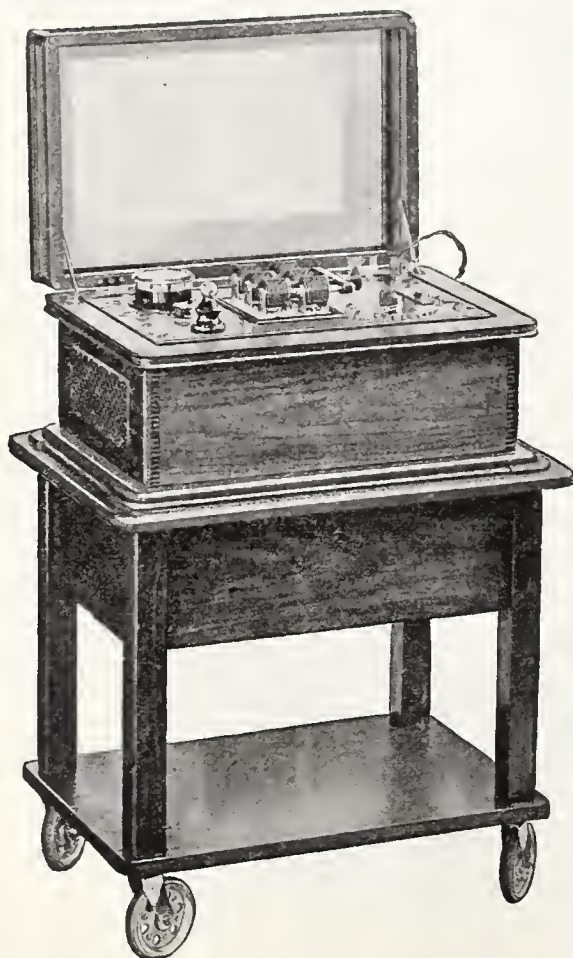
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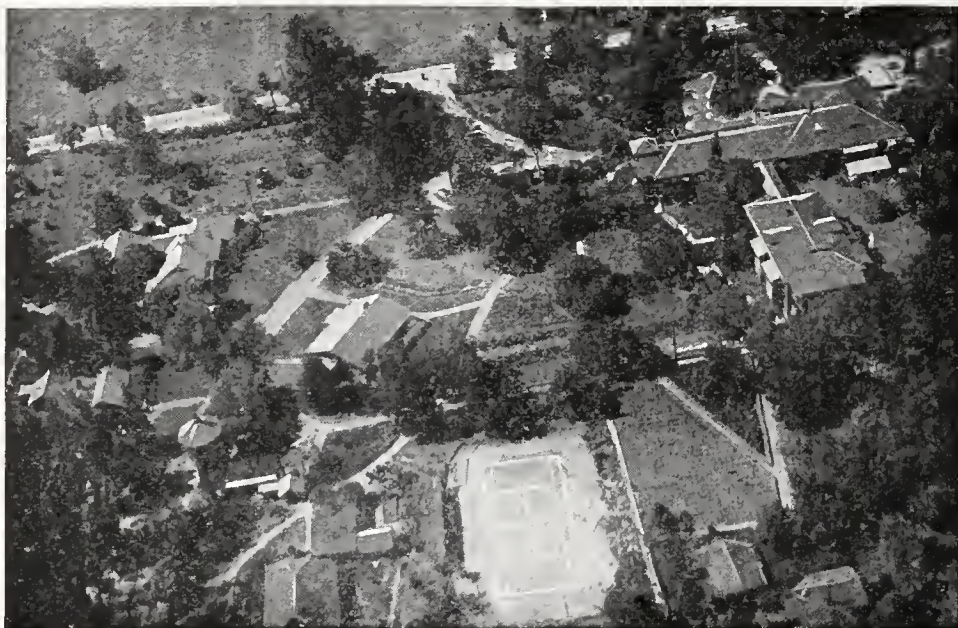
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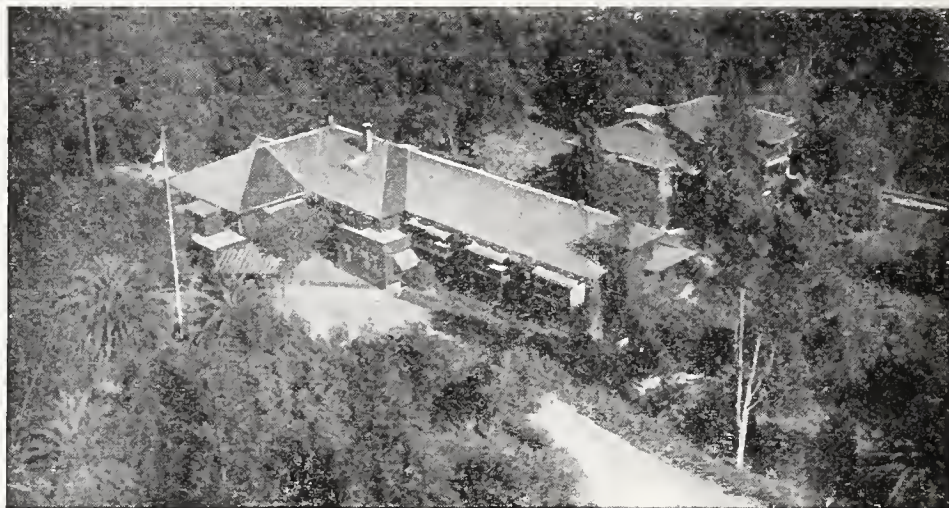
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William Cadogan (His Essay on Gout). By John Ruhrah, M. D., University of Maryland. Review copy by courtesy of publishers. Paul B. Hoeber, Inc., New York, 1925. For sale by our advertisers.

The Medical Record Visiting List or Physicians' Diary for 1926. Revised. New York: Complimentary review copy by William Wood & Company, Medical Publishers. For sale by advertisers in California and Western Medicine.

The Medical Department of the United States Army in the World War. Volume XV. Statistics. Part Two, Medical and Casualty Statistics. Based on the Medical Records of the United States Army, April 1, 1917, to December 31, 1919, inclusive. Prepared under the direction of Major-General M. W. Ireland, the Surgeon-General. By Major Albert G. Love, M. C., U. S. Army. Washington: Government Printing Office, 1925.

Insects and Disease of Man. By Carroll Fox, M. D., Surgeon U. S. P. H. Service. With 92 illustrations. Review copy by courtesy of publishers, P. Blakiston's Son & Co., Philadelphia. For sale by advertisers in this issue of California and Western Medicine.

Annals of Roentgenology. Volume VI. Skull Fractures Roentgenologically Considered; 83 Roentgen-ray Studies on 44 Full-page Plates and 49 Text Illustrations. By William H. Stewart, M. D. With Surgical Comments by William H. Lockett, M. D. Review copy by courtesy of publishers, Paul B. Hoeber, Inc., 1925.

Man: His Making and Unmaking. By E. Boyd Barrett, Ph. D., Professor of Psychology, Georgetown University, Washington, D. C. Review copy by courtesy of the publisher, Thomas Seltzer, New York. For sale by advertisers in California and Western Medicine.

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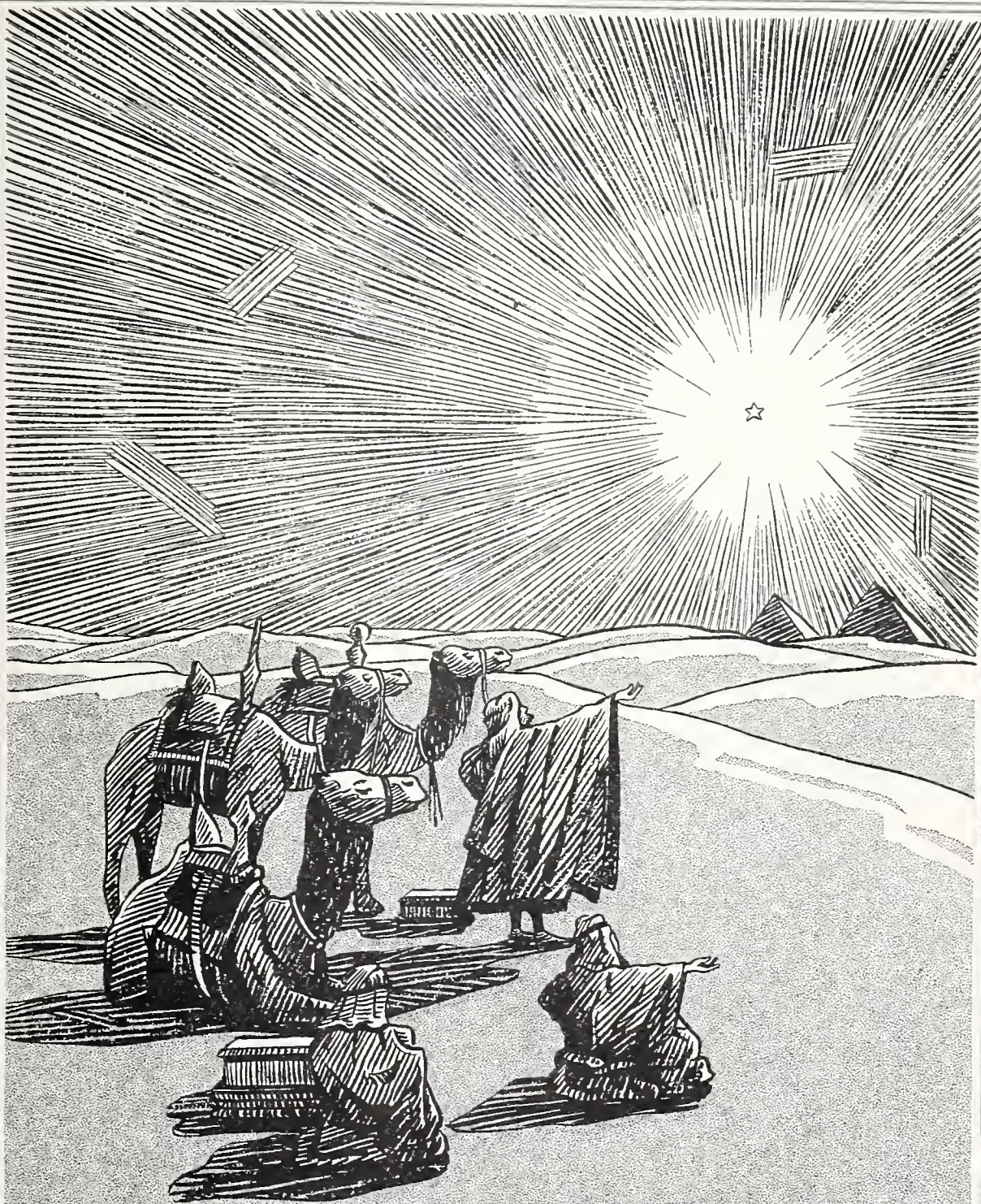
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Tuesday 8:00 a. m.—Weekly Staff Conference.

Tuesday 9:00 a. m.—Urologic and Cystoscopic Examinations. Louis Clive Jacobs, M. D.

Wednesday 8:30 a. m.—Operations. Charles G. Levison, M. D., and Harold Brunn, M. D.

Thursday 8:30 a. m.—Eye, Nose and Throat Operations. Aaron Green, M. D., and Herbert Cohn, M. D.

Thursday 9:00 a. m.—Medical Ward Rounds. Emil O. Jellinek, M. D.

Friday 8:30 a. m.—Clinical X-Ray Conference. Lloyd Bryan, M. D.

Friday 9:00 a. m.—Pediatrics Rounds. E. Chas. Fleischner, M. D. and Jos. Sampson, M. D.

Friday 9:30 a. m.—Prenatal Clinic. Louis I. Breitstein, M. D.

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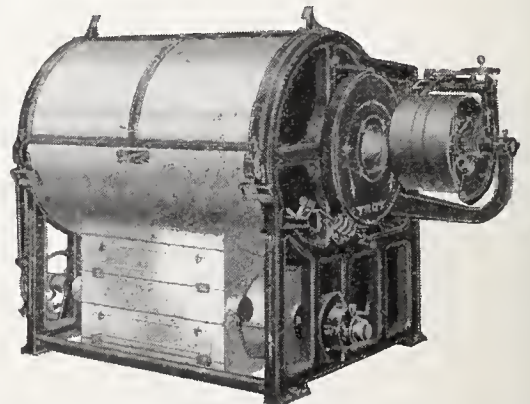
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Quack Advertisements Denounced—The Executive Committee of the Association of National Advertisers, which is composed of representatives of concerns whose combined advertising budgets exceed \$150,000,000, has recently adopted resolutions calling on the members of the association to discourage the advertising of medical preparations offered as preventives of, or cures for, such diseases as tuberculosis, and cancer, which are at present regarded by the best minds of the medical profession as incurable so far as treatment with drugs is concerned . . . to spread misinformation on such a vital subject is . . . to commit a social crime.

The committee calls attention to the fact that every advertisement that perpetrates a fraud or causes a sneer from intelligent readers increases the reputable advertiser's task and his selling cost.

The National Vigilance Committee, which publishes the Truth-In-Advertising Bulletin, in commenting on these resolutions says:

This type of advertising must go. It costs all of us too

much—cost in human life, in taxes paid for the support of indigent victims, in direct damage to the business of every enterprise which employs advertising to create markets and sustain good-will.

This is distinctly encouraging. The patent medicine manufacturer depends on advertising. If the members of the National Advertisers' Association heed the recommendations of their Executive Committee, a long step will have been taken toward the suppression of this pernicious business.—Health News.

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2	127 Gram.	14	14 Gram.	28	7 Gram.
3	64 "	15	13 "	30	6½ "
4	48 "	16	12 "	32	6 "
5	38 "	17	11 "	35	5½ "
6	32 "	18	10½ "	38	5 "
7	27 "	19	10 "	41	4½ "
8	24 "	20	9½ "	46	4 "
9	21 "	21	9 "	52	3½ "
10	19 "	22	8½ "	59	3 "
11	17 "	24	8 "	66	2½ "
12	16 "	26	7½ "	74	2 "
13	15 "				

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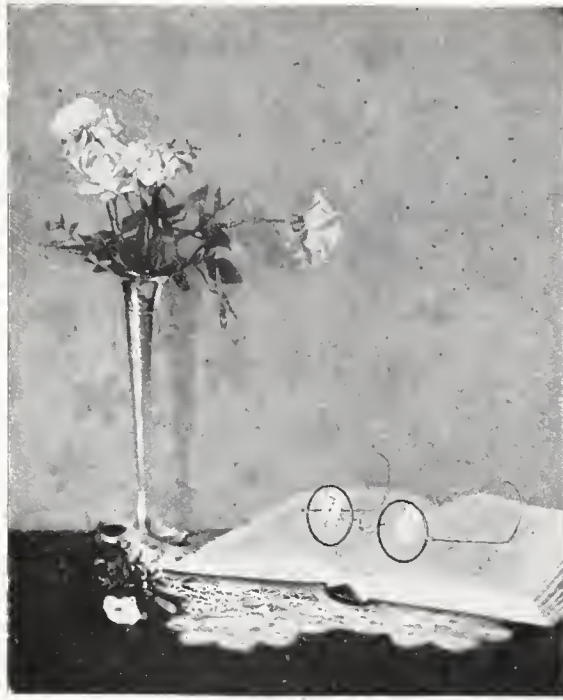
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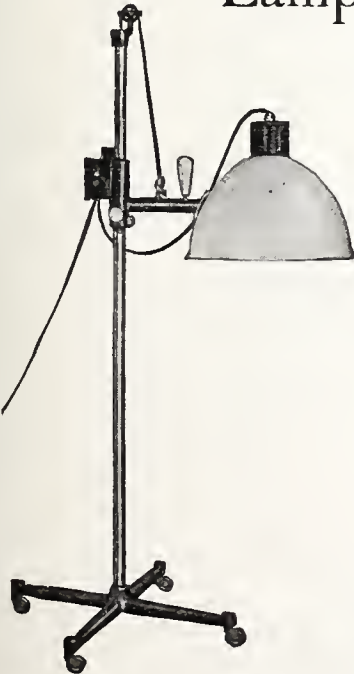
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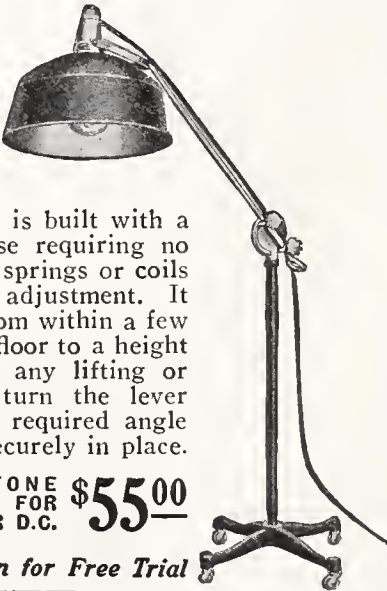
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CALIFORNIA AND WESTERN MEDICINE

VOL. XXIII

DECEMBER, 1925

No. 12

THE STATUS OF THE CLINICAL PATHOLOGIST

By ROBERT A. KILDUFFE, M. D., *Director Laboratories Atlantic City Hospital,
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IN EFFECT, Doctor Kilduffe's article and the many and interesting discussions constitute a symposium on one of the much-discussed angles of medicine and health progress.

It is often necessary for an editor who examines hundreds of manuscripts a year to drive himself through some of his work. Then, again, copy comes along that is so intensely interesting that the editor lays his "blue pencil" aside and gives himself up to the joy of reading. This symposium is in the latter class. Rarely will the physician reader encounter so many clearly elucidated angles to a vexing problem as are here brought together—by men who do not, by any means, entirely agree.—Editor.

Discussants are M. C. Terry, John W. Shuman, Elmer W. Smith, E. H. Ruediger, William F. Cheney, Wilfred H. Kellogg, William Ophuls, L. S. Schmitt, Newton Evans, Rene Bine, A. W. Hewlett, William J. Kerr, Stanley Stillman, Gertrude Moore, F. R. Nuzum, Walter V. Brem, A. M. Moody.

tion, but it is surprising and not so readily explained to find a source of information and authority standing sponsor for the dictum that "the status of the clinical pathologist is not the same as that of the internist or surgeon. The latter deals with variables—human beings—the former conducts manipulations on fixtures—inanimate substances."

Fortunate it is, indeed, that even a pronunciamento of authority may—when needs must—be subjected to scrutiny. Unfortunate it is, also, that by many this statement will be accepted at its face value as crystallizing a somewhat common idea that the clinical pathologist, in some ways, stands apart from other men and that, in some way yet to be exactly defined, his qualifications are different from and, perhaps, less exalted than those of his purely clinical brethren.

That some such attitude exists cannot be denied; that it can be justified may be disputed. The responsibility for its inception can only be placed with difficulty—if at all; for its continuance the clinical pathologist himself is largely responsible.

In the early days of medicine it was comparatively easy to separate the medical profession into three broad groups:

I. Those, comparable to the physician of today, who studied the patient and his symptoms and proceeded accordingly and whose work was done within the living body of the patient, as it were.

II. Those, comparable to the surgeon, whose work was done *on* the living body of the patient; who rearranged it and improved upon the defects of nature and who, as many have maintained, detected and corrected the errors of the first group.

III. Those, pathologists as originally conceived, whose work was done largely independently of the living body in a study of the causes and effects of disease and its mechanism and who, inadvertently, at times revealed the errors of omission and commission of both the preceding groups.

In those comparatively prehistoric days the field of laboratory examination was restricted, the tests

ANYONE attempting a classification of physicians as individuals or groups, in accordance with their qualifications or attainments, is apt to find the task entirely gratuitous and repaid only by criticism of his efforts.

A recent discussion anent the status of the clinical pathologist—or, perhaps, it were better looked upon as an initiation of a discussion, for the subject is not to be dismissed offhand by a dogmatic pronunciamento or two—forms no exception to the rule, but without discussion and the comparison of views and opinions, no conclusions can ever be reached.

It is customary, in philosophical discussions, at least—and it would seem as if the clinical pathologist must exercise a certain amount of philosophy in this matter—to clarify the preliminaries by some attempt to clearly define the subject matter, and it would be advantageous, therefore, to more or less succinctly determine if possible what is a clinical pathologist before attempting to assign to him offhand a classified niche in the practice of medicine.

That some such attempt is necessary is obvious, for even to the casual observer it is clear that there are many conceptions as to what constitutes a clinical pathologist, all very essentially modifying and effecting attempts at his classification. It is a common occurrence to note in the advertising columns of medical journals, for example, advertisements seeking "Laboratory technician; must be M. D.," evidencing at once that in that hospital, and in the minds of its directors, a pathologist is simply a person of more or less skill and training in the manipulation of laboratory apparatus.

This is not altogether surprising and capable of some explanation,

and methods of examination relatively few in number, and their indications and significance apparently clear and distinct. Possibly it was in those days that the idea of pathology as the "handmaid of medicine," instead of its colleague, first took root.

Those were the days when albumin in the urine meant "Bright's disease" and sugar diabetes. In those pleasant times every man was his own urologist and microscopist; he made his own examinations and determined their significance at will. Those without the time, or not caring to give it, sent their work to others who more or less restricted their efforts to those lines and whose function, as the practitioner saw it, was simply to make the tests and furnish him with a report.

With the evolution of scientific medicine, the scope and extent of laboratory examinations and technic broadened by leaps and bounds until, at the present time, unless by strenuous effort and continuous study and reading he manages to keep apace, the average individual soon finds himself lost in a maze of complexities. In fact, so numerous and so varied and so complex have the methods of laboratory study become that now even the laboratory has its specialized departments.

In the early, and even relatively recent, days the hospital laboratory, except in large and prominent institutions, was apt to be a somewhat forlorn corner in the basement or some place not especially desired by any other individual or department, and devoted to more or less routine examinations as dictated by the fancy or idiosyncrasies of the staff and the energy, ability, and initiative of the one in charge—too often, the resident physician, less often a more or less qualified technician.

At times, in order to gain a foothold in the hospital and as a stepping-stone to a future place on the clinical side of the staff, a younger man took the place as "pathologist," regardless of his primary desires or qualifications. Then came the movement for the betterment of hospitals and the establishment of the laboratory as an important and vital part of the hospital.

Forthwith, hospitals suddenly realized that laboratories must be equipped—particularly as regards personnel—and, likewise, that the supply of qualified and competent men was somewhat below the demand. With the usual eye to hospital expenses, salaries were not often of such proportions as to cause financial upheavals, and some reluctance and dismay grew out of the fact that pathologists could not be had for the same price as technicians, and some occasional surprise occurred to find that valiant pathologists now and then made their acceptance of positions contingent upon an equal footing on the staff with other staff physicians.

Not a little of the somewhat derogatory opinion held of the pathologist in some quarters may be laid to his willingness—often in a spirit of scientific endeavor—to accept positions with inadequate salaries and undignified standing, as regards his status on the staff. This is true of the present day in many instances. What other construction can be drawn when a great medical school, for example, advertises for a "well-qualified physician" who must be, it is stipulated, a graduate of one of several great universities, to take a position as whole-time patholo-

gist to an affiliated hospital for the astounding remuneration of \$2200 a year! Can it be wondered at that many hospitals not only offer inadequate salaries in return for the highest qualifications, but moreover, rule, in addition, that the pathologist shall not be allowed to see patients sent to him personally in consultation, and that when called to see patients in the wards or private rooms, with staff physicians, *his* status shall not be that of a consultant?

The difficulty is to understand why pathologists submit to such restrictions. Certainly, their status under such conditions is decidedly different from that of the surgeon or internist. In the endeavor to comply with the qualifications set up by hospital requirements, an important factor in the selection of a pathologist became, not what does he *know*, how fitted is he to correlate the work of the wards and the laboratory, but *how many kinds* of things can he do, how many different kinds of tests can he make? Technical and manipulative expertness became paramount, and the idea of the pathologist as a worker of tests was fostered and grew apace. A further helping hand to this conception was given by a certain proportion of physicians who look upon the test as the thing rather than its *interpretation*; who too often look upon the significance and interpretation of laboratory examinations as clear and simple, and who feel within themselves as omniscient competence, not only to select the most applicable and informative tests to be made, but, further, to announce in no uncertain terms its exact significance in the case at hand.

The status of the surgeon on the medical Olympus seems quite definite, and is easily ascertained on application; the status of the physician is not quite so clear. If by these latter are meant those who are especially trained and particularly adept in the diagnosis and treatment of medical conditions by medical means, their place in the sun may be more or less definitely determined; if, however, is meant the general practitioner who has progressed or catapulted into an office building, his exact status is determined, not by the fact that he deals with human beings—"variables"—but by his qualifications, scientific acumen, and ability.

It is somewhat difficult to see just why there should be any question as to the status of the pathologist or to be tolerant with discussion as to his place in medical practice. If recollection is not at fault, the great surgeons and many of those renowned among physicians founded their greatness upon a thorough training in pathology and pathological investigations. Was their clinical greatness achieved because or in spite of this, or did their knowledge and ability only commence with their initiation into the clinical world? Was their ability to make a diagnosis—upon which intelligent and successful treatment is always founded—aided or hampered by their training in things pathological?

NO FEAR OF CONTRADICTION NEED BE EXPERIENCED IF ONE LAYS DOWN AS A PREMISE FOR CORRECT DIAGNOSIS AND INTELLIGENT TREATMENT—EITHER MEDICAL OR SURGICAL—A THOROUGH KNOWLEDGE OF THE PATHOLOGY OF THE CONDITION. THE CLINICAL PATHOLOGIST POSSESSES SUCH KNOWLEDGE. WHEREFORE, THEN, IS HE OF LOWLY

STATURE UNLESS HE COUPLES A PRESCRIPTION OR TWO OR A METHOD OF TREATMENT WITH HIS LABORATORY FINDINGS AND THEIR INTERPRETATION?

Because "he deals with fixed substances." Let us contemplate this conception. This, perhaps, might be true of the technician—not of the pathologist who, if he is worthy of the name and possesses the confidence of his associates, certainly comes into close clinical and personal contact with the patient upon whom the tests are made and from whom test materials are secured.

The radiologist takes a picture, works with a multitude of "manipulations on fixtures and inanimate substances" most impressive to the uninitiated and yet, forsooth, is a respected and exalted member of the profession.

The serologist draws a specimen of blood and conducts a complement-fixation test—not an inspiring spectacle, to be sure, but one involving a most varied degree of skill and knowledge, and is looked upon askance. Wherein lies the difference? *The radiologist interprets his findings!* He is furnished with clinical data; privileged, when necessary, to conduct such examinations of the patient as are deemed of interest, and furnishes the clinician not only with the finished plate or film, but also with a statement as to the significance, in terms of the patient, of the picture presented. This seems to be the essential point of difference: The radiologist assumes, and is asked to assume, the responsibility for the interpretation of his findings, while the privilege is largely denied to the pathologist who is looked to simply for the report.

Now it is impossible to deny, if one is at all conversant with the subject, that it is not the making of the test, but its interpretation, its significance in terms of the particular case which is of value.

Technicians may be taught to perform various manipulations, sometimes of intricate and complicated character, but the end-result is simply a completed test—no more. The informative value of the test lies in its interpretation, and for that the technician is not qualified. For that is required a varied and extensive training, not only in pathology and immunology and a host of allied and related subjects, but, in addition, the training, skill, and experience and ability to read the results by a combined estimation of all the findings evaluated by observation, deduction and inferential reasoning concerned, not only with the test, but with the patient!

It seems to be more or less generally admitted—sub rosa at least—that the physician in general is not as well qualified as the radiologist to read and interpret the significance of x-ray pictures. It seems to be a more or less common conception, also, that anyone can read and interpret the results of laboratory examinations. The correctness of this last assumption seems open to discussion.

From the standpoint of the laboratory worker, cognizant of the number of laboratory reports which may be added to the patient's chart because of the extensive area now covered by the various methods of laboratory examination, it would seem that there is an all-important difference between the employment of laboratory methods and their clinical utilization.

No one is more quick than the clinical patholo-

gist to note that the development of laboratory methods has had a tendency to detract from clinical acuteness in the study and analysis of the patient; to develop a tendency to demand of laboratory methods that they shall render unnecessary the, perhaps, arduous and at times burdensome analysis of the history and the results of a painstaking meticulous, thorough, and minute physical examination. This I have previously noted (*Journal A. M. A.*, May 13, 1922), together with its effect upon the decadence of observation as a clinical art, and attention is again called to this by Conner in an able and timely paper in which he pleads for "an effort on the part of all of us to resist and counteract the growing inclination to regard the use of laboratory and instrumental aids as the chief means of diagnosis, and to give too little weight to the more laborious but more important measures of painstaking clinical observation and careful deductive reasoning." In other words, he pleads for the *intelligent* use of the laboratory as a *phase* of the examination of the patient and the interpretation of the findings in the light of *all* the information obtainable, thus emphasizing that the laboratory is most useful and informative to those by whom it is intelligently and not blindly used.

There always has been discussion as to who shall interpret the laboratory reports. As I have stated elsewhere (*Med. Rev. of Rev.*, 1922): "Theoretically, the physician, as the one in close contact with the patient, should be the interpreter; actually, however, for even the laboratory finds itself divided into highly specialized departments, unless he be a man of exceptional training and experience, fortified by extensive reading and a retentive memory, it is almost impossible for the physician of today to be familiar with all the resources of the clinical laboratory of today."

THE QUESTION ULTIMATELY RESOLVES ITSELF INTO THIS: SHALL THE CLINICAL PATHOLOGIST BE PERMITTED—EVEN REQUESTED—TO ASSIST IN THE INTERPRETATION OF LABORATORY REPORTS ON THE ASSUMPTION THAT HE IS—OR SHOULD BE—WELL QUALIFIED BOTH FROM THE LABORATORY AND CLINICAL STANDPOINT TO EVALUATE THEM, OR SHALL THE INTERPRETATION OF LABORATORY REPORTS BE CONFINED SOLELY AND ENTIRELY TO THE CLINICIAN BY "DIVINE RIGHT," AS IT WERE, AND THE PATHOLOGIST BE SIMPLY THE INDIVIDUAL FROM WHOM THEY EMANATE?

This latter assumption concedes or attributes to the clinician *in general* an omniscient ability in this respect. However, when the clinical pathologist, as he does, observes the diagnosis of syphilis cast aside because of a single negative serologic report; or that a negative blood reaction is a source of amazement in the presence of neurosyphilis; when he is constantly appealed to as to the reason for and significance of an anti-complementary report; when he observes the more or less complete reliance placed upon the total white cell count in a suspected infection; the importance given to an isolated gastric analysis; the administration of bacterial vaccines in daily doses; requisitions for malaria, but neglect of the total white count when the patient has had a chill; the surprise that an agglutination test could be negative in the presence of undoubted typhoid

fever or the dismissal of this possibility because of a negative reaction; the fact that more laboratory tests are ordered for the corroboration of preconceived ideas than for their purely informative value; the lack of evident motive for the requisition of whole flocks of non-related laboratory tests difficult, to say the least, to correlate with the clinical findings or history, and the not infrequent tendency to consider exhaustive clinical or historical data unnecessary if there is a laboratory test applicable to the condition—confronted with these and other experiences common to all laboratory workers, it is not to be wondered at if the clinical pathologist at times has a fleeting doubt if *all* clinicians are able to utilize the laboratory to its fullest extent; or that the mechanism leading to the production of various positive reactions is *always* clearly understood and their clinical significance quite clear.

It is a safe statement to make that the intelligent practice of medicine demands an intelligent conception of the structure, physiology, and pathology of the part one essays to treat. The best clinician, be he surgeon, physician, or what not, is he who has the pathology of the condition at his finger-tips.

Although the clinical pathologist per se does not treat disease, it can be safely suggested that, knowing the pathology of the condition; the mechanism resulting in the manifestations which constitute its symptomatology; the methods of estimating the degree to which, as a result of the condition, functional efficiency is disturbed and the particular function impaired, together with the general resources at hand to combat these effects—although, perhaps, the pathologist might not be prepared to dash off a prescription or two offhand, it is quite likely that the measures he would ultimately suggest would be rationally conceived. It is not likely, for example, that he would prescribe expectorants in the stage of consolidation in pneumonia nor expect much from their use. If he deals only with "inanimate substances," with test tubes and reagents, he is not a real clinical pathologist. The real clinical pathologist is a doctor of medicine, with the same training as the surgeon or physician; equally well grounded in the clinical arts, and, moreover, particularly adept in the specialized manipulations of his chosen specialty, and able to interpret in terms of the patient the pathology he demonstrates in the laboratory.

He is a man who is capable not only of conducting various laboratory manipulations, but also by virtue of his special training, his reading, and his correlated laboratory and clinical experience, to apply them to the diagnostic problems at hand and, what is quite important, to select from those available, those which are likely to be informative. He is closely concerned with the treatment of disease as governed, and at times even indicated, by laboratory procedure. He should be, as has been said, the man who knows the most about disease.

He is the one to whom the thinking clinician, more interested in the welfare of his patient than the magnification of his dignity, can say: "Here is the patient. These are the clinical findings. This is the history. What can the laboratory do in the interests of this patient and his return to health?" And only when such a clinician and such a patholo-

gist put their heads together are the interests of the patient best conserved.

The real clinical pathologist not only sees the test, but he also sees the patient and applies, not only his laboratory, but his clinical knowledge as well to a consideration of the problem. He works not for but *with* the clinician and, sometimes, when he steps over into the clinical world and becomes a physician or surgeon, he finds his status in that sphere readily established and not a whit impaired by his previous specialization in another sphere.

It is, perhaps, true that it is not the pathologist's duty to make the diagnosis for the clinician, but rather to supply him with informative data. It is equally true that there are times when the data requested by the clinician are neither informative per se nor apt to be made so by the interpretation put upon them. Under these—and, indeed, under all circumstances—the true status of the clinical pathologist should be evident: he should be openly, as he often now is indirectly, a consultant.

DISCUSSION

M. C. TERRY, M. D. (Consolidated Building, Los Angeles)—I agree with Dr. Kilduffe that the clinical pathologist is a physician with the same training as the surgeon or internist, but I do not think he is equally well grounded in the clinical arts. If he were all that, then the thinking (and conscientious) clinician would endeavor to become a clinical pathologist himself, or he would say to the pathologist, "Here is the patient—take him," and we should soon have no pathologists. The clinical pathologist is a specialist, as Dr. Kilduffe has also said; let us recognize the limitations implied.

He should, of course, keep in touch with the clinic and with clinicians, the better to understand and explain to others the significance of his own work, for the new ideas such contact produces and for material for whatever special problem he may have in hand. But it is fortunate for him that his time is not often required for bedside consultation, even in cases in which a considerable amount of laboratory work is done. To a great extent he can choose his own consultations of this sort—true, without pay, as a rule.

The real clinical pathologist has few days without consultation in his laboratory or over the phone, and these are generally sufficiently clarifying for both the clinician and the pathologist. True, again, the pathologist seldom gets paid for this very real service, and that seems hardly fair, but here the pathologist's troubles are a part of the general social problem of medicine, and the solution of that problem is hardly in sight.

JOHN W. SHUMAN, M. D. (Westlake Professional Building, Los Angeles)—Pathology is an integral part of medicine. It embraces bacteriology; it functions diagnostically and therapeutically in the laboratory upon material things, pre and post-agonal, pertaining to the human being. The term "clinical" pertains to bedside or clinic. The doctor of medicine who devotes most of his time and energy to pathology always has been and still is termed a pathologist; usually he is very weak along clinical lines. The doctor of medicine who devotes most of his time and energy to the study of subjective and objective signs and symptoms of disease at the bedside has always been and still is called a clinician; he, too, frequently is not well versed in pathology. It is logical to call an M. D. who is wisely interested in pathology and clinical medicine a clinical pathologist; he could be called a consultant in medicine. There is no more excuse for a well-informed consultant in medicine to misinterpret an x-ray series of the gastro-intestinal tract than there is for misinterpreting fecal vomiting or for his failure to recognize a malarial parasite than there is for him failing to recognize an enlarged spleen.

It is not the status of the clinical pathologist that we should discuss, but the status of clinical pathology. Kilduffe is quite right in reference to his "three prehistoric

groups as they used to be." I may add they are still with us, but in closer harmony. I have no regard for that dangerous type of surgeon who would submit a piece of tissue without complete data to the pathologist, demanding a diagnosis. Happily, this method of procedure is being changed, and it is the clinician working with his pathologist and with the best interest of his patient at heart that has brought about the changes. Today the status of clinical pathology is that the up-to-date physician must know and be able to do "his stuff" diagnostically and therapeutically better than he ever did it before. The public demands it. Diagnosis calls for the same use of clinical methods which entail dependable laboratory procedures, all of which must be supervised and correlated by the doctor who is managing the patient, and his consultant.

Kilduffe's discussion is a most thorough outline for a consultant in any branch of medicine. The paper is well written, and is a fine exposition of the idealistic status of the clinical pathologist. Any individual who aspires to become well versed in clinical pathology may well study his article.

ELMER W. SMITH, M. D. (St. Mary's Hospital, San Francisco)—I agree most thoroughly with most of Dr. Kilduffe's article. The physicians and the hospital staffs have been relying so long upon the advice and reports of the lay technician, unsupervised by a medical man, that they naturally would be inclined to place the man with the M. D. degree who does similar work in the same class. I feel that the clinical pathologist, especially one connected with a hospital, should not be expected to do the ordinary routine work. Technicians can readily be trained to do this work in a short time, and in some cases do it more dexterously than the pathologist himself. He should see the reports and have their interpretation in hand so that he can intelligently discuss the case in hand with the physician or clinician in charge. His services as consulting pathologist or clinical pathologist should merit the same evaluation as that of the consulting clinician. The real clinical pathologist should have time to read, to visit other laboratories for new and supplementary methods, etc. The clinical pathologist is expected to know something on practically every phase of medicine. He is called in for consultation by every specialist from the eye to the genito-urinary specialists, yet his services, in the past at least, have not commanded the same recognition either financially or professionally.

Nowadays there are too many requests of the laboratories for a "diagnosis" rather than a report that will help lead to a diagnosis. I agree with Kilduffe that a proper diagnosis requires the use of our common observations or "senses," as well as laboratory reports; yet in many instances the clinical pathologist, or even the lay technician, is expected to form a diagnosis without one iota of information about the patient. One actual case illustrates this: A physician sent to a pathologist a bit of mucous membrane, requesting a *diagnosis*, without one bit of information regarding the source of the material or any other data. The clinical pathologist does not possess supernatural intelligence, nor should such be expected of him. He should be treated as a fellow practitioner on an equal basis, in a common cause, working for a common end: namely, the diagnosis of the disease and a study of the progress or trend of the same.

E. H. RUEDIGER, M. D. (Angelus Hospital, Los Angeles)—Clinical pathology in the broadest sense of the term really includes everything pertaining to illness except the treatment. A clinical pathologist should be a graduate in medicine and SHOULD BE LICENSED TO PRACTICE MEDICINE. ON SEVERAL OCCASIONS COURTS HAVE RULED THAT DIAGNOSING DISEASE MEANS PRACTICING MEDICINE, AND ANY PERSON NOT LICENSED TO PRACTICE MEDICINE WHO DIAGNOSES DISEASE AND CHARGES A FEE FOR SUCH SERVICES IS GUILTY OF PRACTICING MEDICINE WITHOUT A LICENSE. The clinical pathologist frequently makes diagnoses. For instance, a tumor is sent to him for *diagnosis*. In diphtheria, tuberculosis, malaria, typhoid fever, leukemia, and in many other conditions the diagnosis is frequently made in the laboratory, and a positive diagnosis is usually impossible without laboratory aid. It may be argued that the clinical pathologist acts under directions of a licensed clinician, but this is not tolerated legally and should not be

ethically. Under existing laws a surgeon may not remove appendices, thyroids, unless he is licensed to practice medicine and surgery, even if such an operation is requested by someone who is so licensed.

At the present time there is not enough co-operation between clinician and clinical pathologist. Usually the clinician is to blame. He does not seek advice because he wants all the credit for making the diagnosis. On this point I have seen clinicians go so far as to forbid the clinical pathologist from making the diagnosis of tumors. The clinician demanded a description from which he could make his own diagnosis.

For the benefit of medicine and for the benefit of the patients, clinicians and clinical pathologists must work together. Progress in medicine will be impossible unless clinical findings and laboratory findings are carefully compared, and to that extent the clinical pathologist should be a consultant.

WILLIAM FITCH CHENEY, M. D. (Shreve Building, San Francisco)—In a busy world like ours it scarcely seems worth while to spend time discussing the relative importance of individual workers. A man ought to be judged in the medical profession, as in any other vocation, not by the position he holds or the income he receives, but by the quality of what he produces. Whether his work is done in hospital wards, at patients' homes, in laboratories or operating-rooms, *the object of each and every member of the medical profession should be service to humanity; and his ambition should be to do his work with the maximum of benefit to those who entrust themselves to his care.* What difference does it make where the work is done, and who shall decide that one place of work is more honorable than another? *If we all try at all times to be just to one another, as well as to those outside our profession; if we walk humbly, without undue estimation of our own importance in the scheme of things, there will arise no occasion for belittlement of any man's work because we consider it of less value than our own.* We need one another's help, and we cannot get too much in the effort to solve our problems; and the only true measure of another man's worth is not the character of his contribution, but the thoroughness, the intelligence, and the honesty with which he does his part.

WILFRED H. KELLOGG, M. D. (State Hygienic Laboratory, Berkeley)—I believe Dr. Kilduffe has, in the main, the right idea regarding the proper place in medicine of the clinical pathologist, and that in the future it will be recognized more than at present that the field of clinical pathology is essentially a specialty of medicine. At the present time the idea that laboratory procedures are comparatively simple and are of such an exact nature that any so-called technician is competent with a few weeks' experience to be entrusted with the responsibility of a diagnostic laboratory is entirely too prevalent. Strange to say, many physicians who appreciate fully the necessity of education and careful training for themselves will lightly employ anyone who claims to be a "bacteriologist" without further investigation. I have more than once received requests from physicians that I take their office nurse for a couple of weeks' training so that they can do Wassermann tests. *The woods are full of this "domestic servant type of technician," and it will require not only education, but something else to correct the situation, fraught with danger as it is to the patient, to the reputation of the doctor and to the esteem in which a very important part of the practice of medicine is held by the rest of that profession.*

For the purpose of protecting the physicians of this state, of aiding good laboratories to maintain their excellence and of helping those not so good to raise their standards, the State Board of Health has, through the State Hygienic Laboratory, instituted a system of inspection and approval of diagnostic laboratories. The procedure is largely voluntary on the part of the laboratories, and has been received with a cordial welcome by the true clinical pathologists of the state. Those laboratories that have the proper equipment in personnel, apparatus and technic used for the work they are doing are given an official certificate of approval. The inspection does not at present cover tissue diagnosis or bio-chemistry, as these seem outside our field, which is that part of the clinical pathologist's activities having to do with the pub-

lic health. *To date, about forty-five laboratories have been certified, and physicians should look for this certificate on the wall of the laboratory they patronize.*

WILLIAM OPHULS, M.D. (Dean Stanford Medical School, 2398 Sacramento Street, San Francisco)—I have read with the greatest interest the manuscript of the article by Robert A. Kilduffe on "The Status of the Clinical Pathologist." It appears to me that Dr. Kilduffe has presented this subject very well, and that the discussion covers all aspects of the situation. I, therefore, have nothing further to add to this symposium, and I am herewith returning Dr. Kilduffe's manuscript.

L. S. SCHMITT, M. D. (Acting Dean University of California Medical School, University of California Hospital, San Francisco)—The yard-stick with which to measure relations between medical units of whatsoever nature is the benefit derived by the patient. To obtain the greatest benefit, this relation must be characterized by co-operation and team work. Individualism must be submerged.

In order that the best service be rendered to the patient, some one person must be charged with the conduct of the medical service rendered. Obviously, this should be the attending physician or surgeon.

If we accept, as a premise, that the clinical pathologist is a physician skilled in laboratory technique and the interpretation of laboratory procedures, to obtain the desired team work he must have a knowledge of the patient's condition. To do so, he should be versed in the art of clinical observation, but he should also know the uses and abuses of laboratory procedures. If this makes him a "consultant in medicine," it is a change in nomenclature rather than in conditions.

Therefore, the status of the clinical pathologist, as expressed in Dr. Kilduffe's paper, should be that of a specialist to be called upon by the attending physician or surgeon when needed to complete the team and secure the greatest amount of service for the patient.

NEWTON EVANS, M. D. (President College of Medical Evangelists, Loma Linda, California) —The perusal of the paper and the discussions has been most stimulating. The position of the clinical pathologist in the medical profession is a subject needing study, and the essential points in the solution of the problem have been clearly presented. When one approaches the problems with a realization of the paramount importance of the greatest good to the patient, the personal standing of the clinical pathologist will necessarily become a secondary matter.

In my opinion the physician who has, by his earnest work in pathology and laboratory procedures, reached a position of eminence in the medical profession, commands the highest respect. To the young physician the career of the clinical pathologist, for obvious reasons, is comparatively unattractive. In working to a place of prominence in this field he does not have the incentive of the larger income or popular acclaim which come to the surgeon or other specialist or to the general practitioner. In the face of these difficulties the physician who makes his place in the profession as a pathologist is worthy of honor.

RENE BINE, M. D. (San Francisco)—What is a clinical pathologist and what should be his status in medical practice, Kilduffe asks, and so do many others, without apparently reaching an agreement.

The general practitioner looks upon the pathologist—or should—as an individual who has specialized in one branch of medicine—as a consultant to be made use of and called upon to assist whenever, in the course of his professional work, he finds that he requires counsel or assistance in the specialist's chosen field.

The specialist, regardless of his field, must *show* that he can be of help before the general practitioner will call upon him, and the wisest doctor is the one who, knowing his own limitations, is big enough at all times to admit them to himself, his patients, and his colleagues.

In a hospital, where every opportunity for team work exists, the pathologist should have no trouble in receiving the recognition Kilduffe strives for. But his status will depend not upon his title, but upon his ability, personality, and tact. This means a diplomatic attitude toward those of the staff who are not big enough to avail them-

selves at once of his skill, but who can usually be finally won over. It took time for the children's specialist to show that he knew a little more about children than most of the mass of physicians, and so has it been with the ophthalmologist, the aurist, the orthopedist, the radiologist, etc., etc.

In our battle against disease let us make the best possible use of all our resources, and let us not fight to see whether it was the surgeon or the physician or the bacteriologist who "won the war" and "who has priority in the collection of indemnities"; medical historians or patients or whoever cares will decide that soon enough, rightly or wrongly. Do not waste energy telling anybody what he should not do; either help him do it, or show him modestly and tactfully how much better you can do, in the hope that in time he will look to you for that co-operation which you yearn to give him.

A. W. HEWLETT, M. D. (Professor of Medicine, Stanford Medical School)—Dr. Kilduffe, in his interesting paper, has again called attention to the changing conditions of medical practice. More and more the physician in charge of a patient must depend upon others for data concerning the pathological conditions with which he is dealing. X-ray examinations, clinical laboratory reports and examinations by specialists must be accumulated and interpreted in the light of the patient's symptoms. As a rule, the physician in charge can best interpret the various findings, for he is familiar with all aspects of the case. In certain instances the laboratory worker, roentgenologist or specialist may see a meaning in his findings which would escape the physicians in charge, or he may be able to suggest further examinations which might clear an obscure problem. It is plainly his function to furnish this guidance, either as a comment on his report or after making himself familiar with the patient's general condition. But it is difficult to formulate any rule which will apply to all types of clinical laboratory. For the time being it seems to me that the clinical laboratory should be allowed to develop without restrictive rules. Capable men who have something to offer beyond the usual routine will become recognized, and they should be properly compensated.

WILLIAM J. KERR, M. D. (Associate Professor of Medicine and Acting Head Department of Medicine, University of California Medical School) —Specialization in medicine has led to a variety of difficulties, both for physicians and such workers as have been developed to carry on special lines as adjuncts to the work of the physician. It does not seem that there is any clear solution to many of these difficulties. The complexity of the situation has resulted in much dissatisfaction from the standpoint of the public, and a great deal of controversy among physicians. In the beginning the physician who did the more or less simple procedures in the study of his cases was a better physician, because he could apply these findings directly to the problem at hand. As the procedures which may be used in the study of a given case have multiplied and require the skill of those who are specially trained in their manipulation, it has not been possible for the physician or surgeon to devote the time or the study to the technical details. These details, however, may be mastered by those without a medical training; they may be carried on under the direction of a physician who, with his further training and knowledge, may apply the findings to his work without detriment to the patient. However, such technical assistants can seldom be relied upon for interpretation of the findings and must work in close co-operation and association with the physician. There is such a diverse group of individuals who are doing clinical pathology, either as assistants to physicians or as assistants in a general, private or hospital laboratory, that there can be no set standards as to qualifications or salaries at the present time. There are relatively few physicians who set themselves up as clinical pathologists and supervise the work in large laboratories. To my mind, such workers should be on a salary which is ample to provide for the necessities of life, depending upon their training and ability.

It is natural that one who has had a clinical training and can carry on this work must be called upon frequently for interpretation of findings. This might mean a consultation in a given case, but for the average case, or the great majority of cases under consideration, a bed-

side consultation would not be required. Such a clinical pathologist would be of great service to the clinician, and would at the same time improve his knowledge of clinical matters. He should not feel belittled in the knowledge that he is assisting the clinician in solving the problems at hand; he should delight in the fact that he is developing a field of medicine which, due to the great specialization in recent times, has become necessary. It is quite obvious to me that if the clinical pathologist should feel he must be called into consultation at the bedside frequently, he would soon have practically no time to supervise the work in his department. He would be less and less a pathologist and more and more the clinician, and sooner or later would have to choose as to whether he would devote his time chiefly to the laboratory or chiefly to the bedside. He would soon find the situation intolerable, and because of the possible increase in income would probably become a pure clinician. It is not to be denied he might be a better clinician than his fellows because of his training in clinical pathology, but the physician is not worthy of the name unless he keeps abreast of the work in clinical pathology and is able to apply the findings to the problems at hand. He may do many procedures which are more or less routine which are done as a protection to himself and the patient, but he should always see abnormal specimens or findings for his own education and as a further protection to the patient and to himself. Anyone who relies entirely on the laboratory, whether the work be done by a technician or a clinical pathologist, without frequently seeing the results of the tests himself and being able to interpret them at the bedside, is not a physician of the highest type and should be discouraged. The great interest at the present time in laboratory work has led to excesses in the amount of work done with great economic loss to patients. If we as physicians could be more thoughtful of the limited number of procedures which might be used with profit in a given case, we would better serve both the patient and ourselves in solving his problems.

STANLEY STILLMAN, M. D. (Professor of Surgery, Stanford University Medical School, San Francisco)—Dr. Kilduffe's paper is timely and very rightly calls attention to a situation to which not enough thought has been given. There is a growing recognition of the value and need of obtaining the advice and opinion of the clinical pathologist in a large number of cases. In fact, in many institutions and among many groups of clinicians such consultations are frequent. A notable instance is the prominent part taken by Professor Kolmer in the case of President Coolidge's son. Again, it may be noted that at St. Mary's Hospital in Rochester the clinical and pathological laboratories are in close relation to the operating departments. In a number of other institutions also steps have been taken to make the laboratory and the clinical pathologist more accessible. In many of the older hospitals the clinical and pathological laboratories were placed in remote and almost inaccessible situations, and the clinician was not expected, either as a visitor or for purposes of consultation and discussion.

The situation is changing, and it is a desirable thing to hasten the day when the clinician and laboratory man shall work in closer relationship. The rapidity of the change depends largely on the attitude of the laboratory worker. If he desires to broaden his work and develop his interest in the practical application of his laboratory findings with reference to symptoms, diagnosis and therapy, his knowledge will be widely sought on a consultation basis without in any way interfering with the field of the clinician.

The clinical pathologist is presumed to be a man thoroughly educated in all branches of medicine. His chosen specialty should not take him so far afield as to separate him completely from the clinician. Contacts should be made and maintained not alone through the practitioner, but through diagnostic groups and clinical societies. If discussions of the practical application of laboratory findings by radiologist, bacteriologist, pharmacologist, pathologist, serologist, and metabolist were more common, the inclusion of these specialists in consultation work would rapidly spread.

GERTRUDE MOORE, M. D. (Director Western Laboratories, 2404 Broadway, Oakland)—To my mind the train-

ing and aptitude of a clinical pathologist should be both that of a medical technician and a clinical diagnostician. He is the man who knows and supervises the detail of the laboratory, and is at the same time familiar with the strictly clinical side. He is, therefore, the one, before all others, most able to determine tests indicated, to supervise the details of their manipulation and, most important of all, to interpret their meanings in terms of pathology existing in the patient. It is his duty to advise in the use, and method of administration, of certain therapeutic measures. I, therefore, believe that he is in the truest sense a consultant, whether he meets the attending physician at the patient's bedside, in the laboratory, or discusses the case over the telephone. He is the man to whom the worthwhile practitioner looks for aid. In my experience, such consultations are common. They may not be called by that name, and some may bring little financial reward, but they are none the less real consultations, and the clinician is daily realizing more and more their value to him. The time is past when pathology is looked upon as a lowly calling. In my community the pathologist is accorded the same honors and the same consideration by organizations and individuals as is accorded any other member of the profession.

F. R. NUZUM, M. D. (Santa Barbara Cottage Hospital, Santa Barbara)—Dr. Kilduffe's paper points out the uses to which the clinical pathologist and the clinical laboratory should not be put. I believe that these abuses are rapidly becoming much less frequent. I also believe that a proper relation between the clinical pathologist and clinical men is rapidly being reached.

The clinical pathologist must be supplied with sufficient data to give a proper interpretation to any of his findings. The competent clinician does not scorn assistance from the clinical pathologist. He profits through his association with such a man, and in this manner makes himself proficient in the proper evaluation of laboratory work.

In the organization of hospital staffs, proper emphasis must be placed upon these matters, so that men likely to misuse the clinical laboratory in their work may become properly educated.

WALTER V. BREM, M. D. (Pacific Mutual Building, Los Angeles)—It is difficult for a clinical pathologist to discuss the status of clinical pathologists without speaking from his own experience, and in speaking from his own experience he may reveal an unenviable attitude of mind—either an undue egotism or an inferiority complex.

However, I will venture to say that, although we have met with some confusion regarding the place of pathology in the practice of medicine, there has never been any question regarding our professional status, either on the staffs of various hospitals or in the different medical societies, and we have been called in consultation, remunerative or otherwise, as often as is good for our laboratory work. We feel, therefore, that the medical profession has been more than generous, and we believe that the status of the clinical pathologist is a question of personal equation.

We do feel, however, that the problem of stimulating high-class men to specialize in pathology is a much more serious and pressing problem. Indeed, adequately trained tissue pathologists are becoming more and more scarce, and fewer physicians are choosing pathology as a specialty. The reason for this is that the importance of pathology, especially tissue pathology, is not recognized sufficiently well to cause provisions to be made for the adequate compensation of pathologists, that is, for compensation commensurable with that of his clinical colleague of equal ability. Moreover, when efficient and honest laboratory service is available many physicians and surgeons send their work elsewhere because of smaller fees or direct or indirect rebating. This tends to depress the fees of the real pathologist, fees which are already too small, or tempts him to indulge in unethical practices.

Of course, this situation renders the field unattractive for men of the highest ability. When such men are induced to specialize in pathology there will be no question of status.

A. M. MOODY, M. D. (St. Francis Hospital, San Francisco)—I have carefully read the article by Dr. Robert A.

Kilduffe on "The Status of the Clinical Pathologist," together with the appended discussions.

Experience has taught me that it is not only impossible, but impractical for a medical director of laboratory work to spend the amount of time in clinical work necessary to make him really proficient in things clinical, without being correspondingly neglectful of his duty as pathologist.

The degree of helpful application of any medical man's experience, in whatever branch of medicine he may be practicing, will alone determine the status of that individual.

DOCTOR R. A. KILDUFFE (closing)—The main purpose of the paper was not to present any set or individual viewpoint, but to arouse discussion of a problem meriting attention.

Those familiar with the trend of current discussion of medical education and medical practice cannot fail to appreciate that neither have as yet attained the ideal; nor can it be gainsaid that the fullest clinical utilization of laboratory resources as a part of the clinical study of disease is the exception rather than the rule—whether one considers the recent graduate who, too often, looks upon laboratory examinations as the *sine qua non* of clinical study, or the older practitioner who may either give them an unwarranted significance or more or less disregard them entirely.

Laboratory and clinical medicine are not distinct entities; one is complementary to the other. The clinician must know enough of laboratory medicine, of pathology, to utilize its methods wisely and to the best advantage. The pathologist must be sufficiently a clinician to interpret in terms of the patient the abnormalities he demonstrates in the laboratory.

It is well, indeed, to commend the thoroughness of one's colleague and the integrity of his efforts; but it is better to be eager and able to utilize them to the fullest extent.

If the entrance of the laboratory, as personified by the pathologist, into the wards or the problems of clinical medicine as an active participant in their attempted solutions is to be looked upon as an intrusion, then all that is necessary is a sufficient number of technicians to handle the work. It seems more sensible and more conducive to success in the efforts to solve the clinician's problems to expect and demand of the pathologist that he be something more than a manipulative expert. A clear understanding of the situation demands a preliminary clear and distinct differentiation of the pathologist from the technician.

It must be recognized that clinical pathology is a specialized branch of the practice of medicine, and that it is neither limited to nor comprised in the mechanical and more or less automatic performance of technical manipulations in the form of tests. There is some reason to maintain that in the minds of some, at least, the conception of clinical pathology has been limited to tests of one sort or another, and of the pathologist as the performer of tests.

Ewing summarizes the function of the pathologist as:

"1. To investigate the causes of fatalities . . . to elucidate the causes of disease . . . and to correct partial or erroneous diagnoses.

2. To keep himself familiar with the literature and progress of the medical sciences.

3. To co-operate with the internist in general diagnosis and to serve the surgeon in gross anatomic and physical diagnosis.

4. To serve as a consultant in the wards and the operating-rooms where, by virtue of his special knowledge, he should be able to bring data with which, as a rule, the clinician is less familiar.

5. To supervise the work of the clinical laboratory . . . restraining excessive demands, establishing correct indications for the resort to laboratory tests, and aiding in clinical research."

Doctor, if that addict you prescribe for happens to be a detective, you are in trouble with the law.

If he is not an under-cover agent, but another who really should not have the drug, what about your conscience?

GLUCOSE INTOLERANCE ASSOCIATED WITH ECZEMA

By SAMUEL AYRES JR., M. D., Los Angeles

(From the Department of Dermatology, White Memorial Hospital)

A preliminary report is presented, dealing with the glucose tolerance reactions in a series of thirty-six consecutive cases of typical eczema.

The tests were made in two laboratories, each using the Folin-Wu colorimetric technic.

The fasting blood sugar values in these cases of eczema were not found to be abnormally high except in a few cases.

Very striking deviations from normal were found, however, at the one and two-hour periods, following the administration of the test glucose solution. Of the thirty-six eczema cases, 33.3 per cent showed 200 mgs. or more of glucose per 100 cc. of blood at the end of one hour in contrast with only 5.6 per cent of 300 normal controls, and 16.6 per cent of the eczema cases showed 200 mgs. or more at the end of two hours in contrast with only 0.8 per cent of 253 normal controls.

Of the thirty cases which were tested at the end of three hours, 40 per cent had not returned to a conservative estimate of normal (110 mgs.).

Important discussion by Oscar V. Schroeter, Los Angeles; Kendal P. Frost, Los Angeles; Lorena M. Breed, Pasadena; George Piness, Los Angeles; H. P. Jacobson, Los Angeles.

REPEATED attempts to discover the cause of eczema have led gradually to a realization of the fact that there is no one cause. The conception of eczema as a symptom, rather than a disease entity, is helping materially in solving the riddle of its causation. No one regards abdominal pain as a disease; it is merely a symptom of one out of many possible causes. The mechanism by which the pain is produced, namely, stimulation of the visceral or peritoneal receptor nerve-endings, with passage of the impulse to the brain and frequently to the corresponding cutaneous area, is the same in many conditions. Thus, an acutely inflamed appendix, a gallstone, a tabetic crisis, or a green-apple "tummy-ache" may produce the symptom of abdominal pain, although there will be certain variations in its location, intensity, quality, etc. In the same manner, apparently, a number of causative factors, may, through the medium of the cutaneous vaso-motor system, produce the symptom which is commonly recognized as eczema. Sensitization to the proteins of certain foods, pollens, animal emanations, etc., classed together as allergy, constitutes one of the major causes of eczema. Improper utilization of fat, especially in infants, has been claimed also to be causative in a certain proportion of cases of eczema. The substances which may produce an eczematous reaction through local irritation are too numerous to mention. Poison oak, lacquer, dyes, chemical agents of all kinds, are some of the more common examples.

Disturbances in carbohydrate metabolism have long been recognized in a half-hearted way as being responsible for, or at least associated with, eczema in a few instances. Practically none of the textbooks on general medicine, even in the chapters on carbohydrate metabolism, make any especial mention of eczema as a possible manifestation of a dis-

turbed carbohydrate metabolism, and the current texts on dermatology are equally silent on this point.

The first scientific work of any importance establishing a relationship between eczema and disturbed carbohydrate metabolism was the recent report by McGlasson on the fasting blood sugar in a series of 158 cases of assorted dermatoses, mostly of an eczematous type. Of the entire series of 158 cases, 139 cases, or 87.9 per cent, gave fasting values of 120 mgs. of sugar or more per 100 cc. of blood. Between 90 and 100 mgs. would probably be considered an average normal reading. McGlasson groups his cases according to the clinical appearance at the time of examination. Thus, of the group of 44 cases of seborrheic dermatitis, 77.3 per cent gave readings of 120 mgs. or more; in the flexural dermatitis group, comprising 32 cases, 90.6 per cent were at 120 or above; in the "toxic rash" group of 39 cases, 87.2 per cent showed values of 120 or above, and in the group of 22 cases showing vesicular eruption of the hands, feet, and crotch, 77.2 per cent were above 120 mgs.

All of McGlasson's sugar determinations were made in one laboratory, using the Gradwohl gravimetric method in the majority of the cases, although Gradwohl's modification of the Lewis-Benedict colorimetric method was used in many of the cases. Both methods were used simultaneously in ninety tests with very close agreement between the two methods, the average for the gravimetric being 133.4 mgs. against 135.2 mgs. for the colorimetric method. McGlasson found that many of these cases improved rapidly on a low carbohydrate diet even when no local treatment was applied.

The present study was undertaken in order to examine in more detail the nature of the carbohydrate metabolism in typical eczema. The exact definition of what constitutes "typical eczema" is rather difficult, since an eczematous eruption, if untreated, may pass through a number of phases, sometimes as many as six or seven. Thus, there may be at first simple erythema; later, edema; then vesiculation, exudation, crusting, and, if the inflammation subsides, desquamation; or if the inflammation continues in a subacute form, thickening or lichenification. The alterations brought about by treatment proper or improper, and by occasional pus infection, still further complicate the picture. It does not seem possible that any one phase can be singled out as typical eczema in contrast to the other phases as atypical. Nor does it seem rational to classify too sharply cases of eczema according to the stage in which they are seen. Possibly a month or a year later they may be in entirely different stages.

With these facts in mind it will be seen that erythematous, vesicular, oozing, or lichenified types are included in this series as representing cases of typical eczema, but cases frankly not eczema, such as erythema multiforme, seborrheic dermatitis, or dermatitis herpetiformis, are not included. The tests were made routinely on both private and clinic patients whenever they could be persuaded to submit, and aside from the above restrictions no attempt was made to select the cases. On the other hand, every effort was used to make this series one of consecutive cases, so that the results would definitely

indicate the extent to which disturbed carbohydrate metabolism was associated with eczema.

The glucose tolerance reactions were tested in thirty-six consecutive cases of typical eczema. The cases were distributed between two laboratories, the laboratory of Drs. Brem, Zeiler and Hammack, and the Metabolic Research Clinic of the White Memorial Hospital, each using blood obtained by vein puncture, and each employing the Folin-Wu colorimetric technic. The test meal consisted of 1.75 gm. glucose per kilo of body weight in 300 cc. water, administered in the morning fourteen hours after the last meal; in a very few cases the test meal consisted of 100 gms. of glucose, without regard to the weight. The analyses of the two laboratories showed a general agreement.

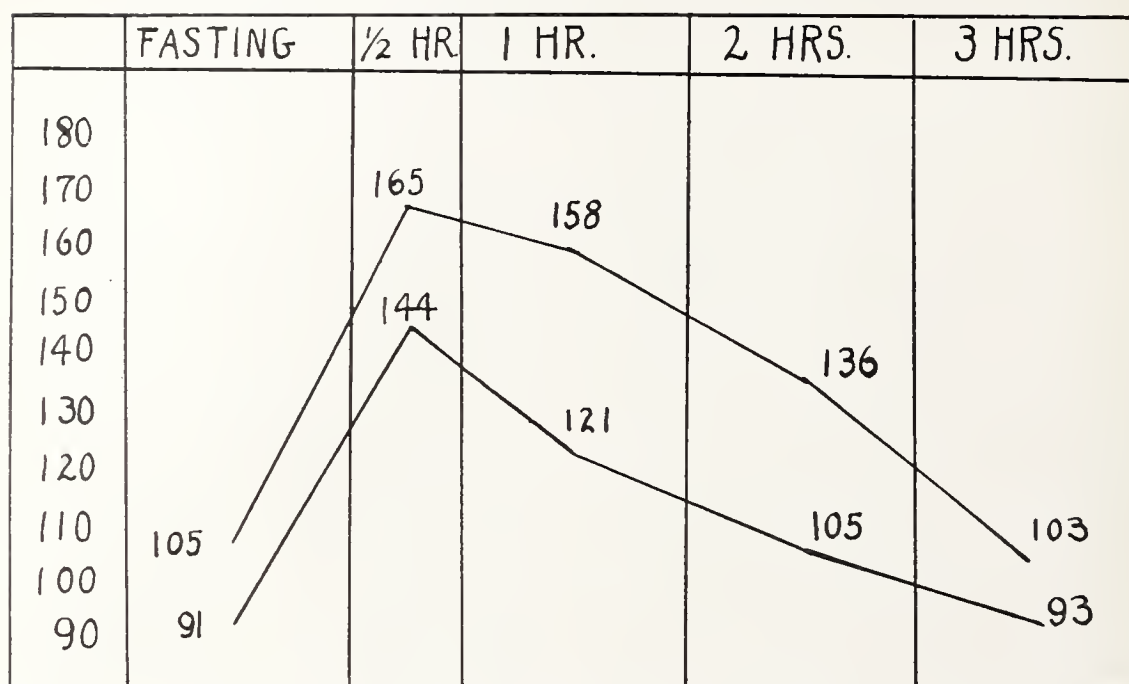
A striking difference is noted in the fasting blood-sugar determinations in this series of thirty-six cases of typical eczema, as contrasted with McGlasson's series of 158 cases of miscellaneous disorders, mostly of an eczematous type. In McGlasson's series, 87.9 per cent gave fasting blood-sugar values of 120 mgs. or more per 100 cc. of blood, in contrast with only 8.3 per cent in this series. It is possible that the study of more cases will raise the average fasting values.

A detailed study of the tolerance curves, however, confirms the impression given by McGlasson's work: namely, many cases of eczema are associated with a disturbance of carbohydrate metabolism. As a basis for comparison of these glucose tolerance reactions in eczema, a large series of tests in clinically normal individuals, recently reported by Horace Gray, was used. These control determinations were collected from recent literature, and represent results obtained according to various standard technics. Of these normal controls, 276 fasting blood-sugar tests were made—158 at the end of one-half hour, 300 at the end of one hour, 253 at the end of two hours, and 103 at the end of three hours. Of the thirty-six eczema cases, thirty were tested at all five intervals, and six were tested only at the fasting—one hour and two-hour periods.

Figure 1 illustrates the sharp contrast between the average curve of the thirty patients who were tested at all five periods, and the average curve of the clinically normal controls. If the six eczema cases who were not tested at the one-half and three-hour periods were included, the contrast would be even more marked, because the average value of these six patients at the end of the first hour was 240.8 mgs. per 100 cc. The one-half-hour period probably would have shown an even higher reading.

Some of the curves in patients with typical eczema coincided with the average normal. Many of the curves showed values of 200 or more even at the end of the second hour, the normal being 105 (Gray's series). The patient showing the greatest abnormality was a man 21 years old who had a papular eczema of the face, neck, and arms of three months' duration. His fasting blood sugar was 219.7, at one-half hour it was 235.5, at one hour 317.4, at two hours 303, at three hours 200. In this case the urine was negative for sugar throughout, although many of the eczema cases showed glycosuria at the first, second, or third hour. One patient who had what was supposed to be an occupational

FIGURE 1. Average curve of thirty eczema cases which were tested at all five periods (upper line) in contrast with average curve of normal cases.



eczema of the hands from soap and water showed 0.9 per cent of sugar in the urine at both the one and two-hour periods, and a blood sugar of 108 fasting, 296 at one hour, and 182 at two hours. Although he made very little progress under local treatment alone, the condition entirely cleared up when he was placed on a low carbohydrate diet.

Of the thirty cases tested at all five periods, the peak of the curve was reached at the one-half-hour period in 53 per cent, at the one-hour period in 36.6 per cent, and at the two-hour-period in 6.6 per cent. Thus, there is a tendency not only to develop a higher peak in eczema, but a delayed rise and also a delayed return to normal. Of these thirty cases which were tested at the three-hour period, only 56 per cent had returned to 100 mgs. or below, the average of the controls being 93.9 mgs.

The high percentage of cases in the entire series of thirty-six eczema cases showing unusually high values at the one and two-hour periods is shown in Figure 2. The fact that 16.6 per cent of the eczema series showed values of 200 or more at the end of two hours, while only 0.8 per cent of the control series showed such value, is one of the most striking evidences of a disturbance in the carbohydrate metabolism in at least some cases of eczema.

The interpretation of these findings must be approached with the utmost caution, since the series is not large enough to permit sweeping deductions. Nor has the investigation been under way long enough to permit adequate observation of the therapeutic benefits resulting from a low carbohydrate diet. In a few instances where the patients have remained under observation the results have been highly gratifying; this accords with McGlasson's observations. Repetition of the tests following a period of low carbohydrate diet would be of value in determining the ability of the patient to recover his tolerance for sugar. Whether the decreased carbohydrate tolerance, which occurs in many cases of eczema, is due to some underlying endocrine disturbance or to functional overstrain of the pancreas

from excessive carbohydrate intake is a question for further investigation to decide. A history of an excessive use of sugar or starch is not always obtainable.

It must be emphasized that some cases of typical eczema show perfectly normal sugar tolerance curves. It must be clearly understood that a decreased sugar tolerance is not being urged as the cause of eczema. Subsequent investigation may show that the decreased tolerance per se is the cause of some cases of eczema, and that it is only an incidental symptom of some more fundamental cause in other cases. Protein sensitization is still an important factor to be reckoned with in many cases of eczema, especially in infants. One patient in this series, a boy 12 years old, showed a definitely decreased tolerance, and also gave strongly positive cutaneous reactions to five of the common food allergens among the grains, fruits, and vegetables. Another patient, a man aged 34, gave strongly positive reactions to several pollen and vegetable allergens, but showed a normal sugar tolerance curve.

SUMMARY

1. A preliminary report is presented, dealing with the glucose tolerance reactions in a series of thirty-six consecutive cases of typical eczema.
2. The tests were made in two laboratories, each using the Folin-Wu colorimetric technic.
3. The fasting blood-sugar values in these cases of eczema were not found to be abnormally high, except in a few cases.
4. Very striking deviations from normal were found, however, at the one and two-hour periods, following the administration of the test glucose solution. Of the thirty-six eczema cases, 33.3 per cent showed 200 mgs. or more of glucose per 100 cc. of blood at the end of one hour, in contrast with only 5.6 per cent of 300 normal controls; and 16.6 per cent of the eczema cases showed 200 mgs. or

FIGURE 2. Percentage of abnormal readings.

	FASTING	1 HOUR	2 HOURS
Mgs. per 100 cc.	Per cent of cases	Per cent of cases	Per cent of cases
	120 or above	200 or above	200 or above
NORMAL	7.9%	5.6%	0.8%
	276 cases	300 cases	253 cases
ECZEMA	8.3%	33.6%	16.6%
	36 cases	36 cases	36 cases

more at the end of two hours, in contrast with only 0.8 per cent of 253 normal controls.

5. Of the thirty cases which were tested at the end of three hours, 40 per cent had not returned to a conservative estimate of normal (100 mgs.).

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DISCUSSION

OSCAR V. SCHROETER, M. D. (1002 Union Bank Building, Los Angeles)—Ayres' paper serves to accentuate the conclusion that eczema is only what dermatology and etiology prove it to be, a varying symptomatic manifestation; it is a cutaneous reaction. This reaction has, undoubtedly, a varying basis, due to the different pathologico-chemical state of the blood in different diseases and also to the particular degree of tolerance in various individuals to the same. This latter factor, only, can account for cases of poor sugar tolerance, which show no dermatological reaction. But the answer to the question, "Why does one individual with poor sugar tolerance have eczema and the other not?" is a deeper and more difficult problem of greater value. Various chronic diseases and disorders of metabolism produce eczema. Doctor Ayres has, very accurately, shown one. The therapeutic problem of dermatologists, in the face of an eczema, is to learn the particular basis of the same and treat it, as well as the skin condition locally.

KENDAL P. FROST, M. D. (Pacific Mutual Building, Los Angeles)—We are indebted to Doctor Ayres for elaboration on McGlasson's primary work in this field. I believe that the sugar level is not the only way in which these patients show themselves chemically. I feel that many patients who fall in this group are not entirely expressed in terms of carbohydrate, but that there is a protein element as well. This has been shown by Lorena M. Breed of Pasadena, whose results were published in a large series of cases not primary eczemas, but many of her cases had both disordered protein and carbohydrate metabolism of a type which seemed to point to liver disturbance. This group has recently been brought to our notice and promises to become an important one.

The picture of eczema and dermatitis is so complex that we are always grateful to anyone who is able to throw more light on the subject. Personally, I prefer to follow the French terminology and speak of "the eczemas" rather than in the singular term "eczema."

LORENA M. BREED, M. D. (Pasadena Hospital, Pasadena)—Doctor Ayres has emphasized one constituent only of the blood, blood sugar, in his study of eczema. It might be interesting, and instructive as well, to study the complete blood chemistry in these cases, and also to ascertain in what classes of cases one finds an elevation of fasting blood sugar.

In his work on protein therapy and the non-specific reactions, Petersen reports a constant elevation of blood sugar during the period of anaphylaxis.

The fasting blood sugar is very often elevated in people with a normal sugar tolerance because of a slight acidosis during even the short fasting period between the evening meal and breakfast. In these cases a carbohydrate meal or a dose of glucose will relieve the slight acidosis and the sugar level will return to normal. We often find, during a glucose-tolerance test, a fasting blood sugar level of 200 mgs. or over, and one hour after the per body weight dose of glucose, that it is lowered to 100 mg., instead of being elevated.

Fasting blood sugar is almost always high in lowered liver function, especially in cholecystitis. Only last week

we were called upon to do a blood chemistry for a patient who was awaiting an operation for gall-bladder disease. The blood sugar was 250 mgs. and the surgeon hesitated. After two days on a pureed vegetable diet, the blood sugar was 240 mgs. and the operation was performed. The gall-bladder was thickened and contained stones.

In a study of 250 cases on whom functional tests were done, together with complete blood chemistry on each, high values for blood sugar and uric acid, as well as N. P. N., were constantly found in those cases with clinical evidence of cholecystitis. Of this number twenty were operated and we had the opportunity of seeing, not only the pathological gall-bladders, but that the blood sugar and uric acid returned to normal following the operation.

That an absorption of split-proteins, whether from the intestinal tract, or from some focus of infection, will produce a sensitization of body cells is a well known fact. When we remember that the liver is very closely associated with the perfect digestion of proteins, that it stores sugar, and that one of its most important functions is that of detoxication, it becomes evident that this organ and its various functions must be reckoned with in any case of protein-sensitization, whether manifested on the skin, as in the eczemas, or on the mucous membrane of the respiratory tract. As the histology of the skin and the mucous membrane is the same, we may have eczema in one person, hay-fever in another and asthma in still another, or all three affections in the same person from the same cause.

GEORGE PINESS, M. D. (1136 West Sixth Street, Los Angeles)—From observation of Ayres' charts, I am inclined to believe that most of the cases presented here have an endocrine disturbance associated with their eczema, either having a definite relationship toward eczema or by being simply coincidental. I feel that if the series of patients studied by Ayres were tested to proteins, and by that I mean just at the proper time with properly prepared proteins, a great many of them would give definite reactions. It is an accepted fact that eczema is an allergic reaction and, as shown by the work of Petersen, blood sugars are constantly elevated during anaphylactic periods. Therefore, I contend that probably the cases discussed by the writer are of protein sensitive type and that the blood sugar tolerance tests are not an etiological factor.

H. P. JACOBSON, M. D. (424 South Broadway, Los Angeles)—Doctor Ayres' venture into the study of relationships between eczema and metabolism will serve a two-fold purpose of emphasizing anew the futility of attempting to treat these cases purely as local conditions, and will, no doubt, serve to stimulate others to further study of the problem from the standpoint of etiology.

His observation of an impaired glucose tolerance in patients suffering from eczema represents only one factor in a complex problem, the solution of which is, as yet, incomplete. It is my impression that the abnormal glucose curve in these patients is significant of a type of alimentary hyper-glycemia due to a hepatic deficiency and an inability on the part of the liver to convert glucose into glycogen in normal quantities. These patients almost invariably complain of a chain of digestive symptoms referable to the gastro-hepatic tract, thus lending weight to the presumption that the reason for the abnormal glucose curve in the blood is to be found in the liver.

The nature of the particular hepatic lesion in any given case, of course, varies. In some, it may simply consist of an exhaustion of the organ, brought about by an over-indulgence of carbohydrates and thereby overtaxing the functional capacity of the liver. In others the exhaustive state may be brought about by a focal infection in some remote part of the body or in the immediate neighborhood of the gall tract, surcharging the portal circulation with bacterial toxins and thereby making a consequent extra heavy demand upon the liver and upon its detoxicating function. (The liver is one of the chief detoxicating organs in the economy.) Or, as a result of a generalized degenerative process in the vascular, cardiac or renal system, the liver becomes involved, in which event, not only will there be found an impaired glucose

curve, but the values of the products of the protein metabolism generally will be found altered.

In other words, the fairly constant impaired glucose curve, observed in cases of eczema by Doctor Ayres, should be interpreted in the light of a symptom only, the cause of which must be sought for in every case to enable us to proceed with judicious treatment. That, in turn, implies a comprehensive knowledge of, and skill in, the theory and practice of internal medicine.

DOCTOR AYRES (closing)—I appreciate very much the generous remarks and the valuable suggestions which have been offered in the foregoing discussions. I have merely tried to call attention to the role of the carbohydrates in the problem of eczema.

Carbohydrate metabolism, on the other hand, is intimately linked with other vital functions upon which detailed observation and research must be focussed before the riddle can be solved.

With all due respect to the splendid work which Piness has done in the field of allergic phenomena, I cannot subscribe unreservedly to his statement that "it is an accepted fact that eczema is an allergic reaction."

Some eczemas are allergic reactions, just as some headaches may be allergic reactions, but it would be inadvisable to admit of no other causes. The eczemas on the hands of dishwashers and the eczemas due to various other external irritants are certainly not of the protein sensitive type. On the other hand it would seem quite reasonable that there may be an associated disturbance of both protein and carbohydrate metabolism in some of the eczemas. I would be the last to say that many of my cases did not fall in this category. But, again, I do not believe it has been proved that protein sensitization is an ultimate cause. Certain facts point to allergic reactions as symptoms of more fundamental disturbances, just as in the case of decreased carbohydrate tolerance, and the real solution of the problem lies in the discovery and correction of that primary disorder. Breed's observation on liver function seem to me to offer extremely interesting possibilities.

Again let me emphasize the fact that I am not urging carbohydrate intolerance as the cause of all eczemas; it is only a small but very important factor.

Oxygen Want in Health and Disease—Charles W. Greene, Columbia, Mo. (Journal A. M. A.), discusses the oxygen capacity of the blood; normal alveolar oxygen pressures; the physiology of high alveolar oxygen pressures; the physiology of low alveolar oxygen pressures; the anoxemic crisis; the significance and danger of the asphyxial post-crisis events; the remedy for anoxemia—an artificial oxygen supply; oxygen want in anesthesia; oxygen availability in disease; the oxygen problem in cardiac deficits, and the anemias. He concludes that the administration of oxygen has no advantage to the normal body. Airs of more than 60 per cent of oxygen may produce pulmonary inflammation by local action. Oxygen administration has no physiologic clinical advantage in hemorrhage, anemia, or other circulatory mechanical defects. Oxygen-enriched airs are of life-saving value in all clinical cases of pulmonary obstruction, edemas or other deficiencies that retard the process of oxygen absorption or prevent the full saturation of the hemoglobin of the pulmonary blood. Oxygen administration must be controlled by recognized physiologic methods, must be continual, and must not produce local pulmonary injury. Oxygen administration cannot be successfully pursued except with clear understanding of the type of response to anoxemia and the recoveries on re-oxygenation through the complex and interdependent reactions of the nervous system, the respiratory system, the circulatory system, and the blood. For all these we have in present-day methods and animal verification an accurate scientific basis of determination.

A doctor's widow is looking for a job because her husband lost his savings in a malpractice suit just before he died. Whatever else you do, doctor, protect your wife and children from disasters inherent in the hazards of your profession.

THE USE OF WHOLE LACTIC ACID MILK IN PRIVATE PRACTICE

By JAMES W. CHAPMAN, M. D., Pasadena

Lactic acid milk changes the bacterial flora of the intestine only to a slight extent and this change is not essential for its beneficial action.

Milk, soured by addition of U. S. P. Lactic Acid in the proper amount, seems to have an effect practically the same as that soured by organisms.

The chief advantage of whole lactic acid milk lies in the fact that it is a concentrated food and can be fed to athreptic infants and other below-weight infants, whose tolerance for fat and sugar has been lowered, in sufficient amounts to bring about a gain without causing an intestinal disturbance.

Whole lactic acid milk is not a panacea. I do not believe its use is indicated in normal infants. We have found it to be of greatest value in the feeding of the so-called athreptic infant, although, in some intestinal upsets, its value is unquestioned.

DISCUSSION by T. C. McCleave, Oakland; Paul S. Barrett, Fresno.

NO NEW facts are presented in this paper. It was written because we thought it might be of more or less general interest to relate some experiences with the use of whole lactic acid milk in private practice, where conditions are vastly different from those found in hospitals and institutions where most of the work with soured milk formulae has been done.

At the outset it might be of some interest to describe briefly the historical background of soured milk and its use as an article of diet. It has been used extensively among all peoples and in all climes for untold centuries. As a food for infants and invalids it has been used by the Armenians and other Near Eastern peoples quite as long as the well-known matzoon.

Metchnikoff attributed the sturdy health and longevity of certain of the Balkan peoples to their extensive use of soured milk as food. His observations and investigations gave a tremendous impetus to the use of soured milk and to the souring agency, the so-called *B. bulgaricus*. Metchnikoff attributed the beneficial result following the use of sour milk to the organisms souring the milk, stating that they brought about a change in the bacterial flora of the intestine. For many years soured milk and the various organisms capable of souring milk were given for no other purpose than to bring about a change in the bacterial flora of the intestine. Beneficial results were explained on such a basis. First, *B. bulgaricus* held the limelight and Bulgarian tablets were prescribed at the least provocation; later, *B. lactic acid* and *B. acidophilus* became the organisms of choice for one reason or another, based on not very convincing experimental work.

That there seemed at first glance very good reason to suspect intestinal bacteria of causing many of the diarrheas of infancy and childhood, may be seen when stools are examined during an intestinal upset. Often pure cultures of one organism are found, the commonest perhaps being *B. coli*, *B. welchii*, *streptococcus faecalis*, *B. pyococcyaneus*, and *B. proteus*, and to each one at some time or other has been ascribed the causation of diarrheas in infants.

The result of most of the work done in recent years on the subject of the role of bacteria in the

etiology of diarrheas in infancy, excluding, of course, the dysentery group, has been, I believe, overwhelmingly against the opinion that they have much to do with it. Their presence in more or less pure culture seems to be rather an effect than a cause. The intestinal mucosa, damaged by too much or improper food, seems to be unable to exert its normal inhibitory power over the growth of these organisms.

Veeder some years ago worked on the problem, and his conclusions were that bacteria had very little to do with the vast majority of diarrheas and intestinal upsets occurring in infancy. Howland and Marriott seemed to hold the same views. The work of Davison and Rosenthal seems also to belittle the role of bacteria in causation of diarrheas in infancy. A report of work done by investigators in various parts of England on the bacteriology of normal and diarrheal stools in children is perhaps most convincing. These investigators were unable to find evidence that bacteria usually found in normal intestines are ever the cause of diarrheas in infancy and childhood. It would seem, therefore, that we must conclude that, while it is conceivable that the bacterial flora of the intestine might play a part in the etiology of diarrheas in infancy and childhood, it has never been proved that they do.

If bacteria have nothing to do with the etiology of the majority of the diarrheas of infancy and childhood, we must discard Metchnikoff's theory and look about for some other explanation for the beneficial results following the use of soured milk. In 1902 the *Jahr buch für Kinderheilkunde* carried a report of the use of acidified milk in infant-feeding. In 1909 M. Klotz, in the same journal, reported that acidified milk had a favorable effect on fat protein and mineral absorption. We do not see reports in the literature of acidified milk being used again in infant-feeding until 1918, when Marriott called attention to its advantages.

Marriott was engaged at the time in investigating the reasons why an infant's tolerance for cow's milk was less than for woman's milk. He concluded that the reason was that the cow's milk was so much richer in buffer substances. These buffer substances required so much acid to neutralize them that the acidity of the gastric juice was lowered to a point where it did not properly function. He thought that if cow's milk were acidified, much more could be given at a time without causing a gastro-intestinal upset, because the buffer substances would be to some extent rendered inert before entering the stomach, and the acidity of the gastric juice would not be changed to any great extent.

The initial process of digestion in the infant's stomach depends on the HCl secreted by the gastric glands. Normally, the amount secreted is optimum for the digestion of breast milk. Breast milk, compared with cow's milk, is highly acid, that is, it has a comparatively high P_h index—about three times as high as cow's milk. Theoretically, at least acidifying cow's milk, with an amount of acid that would bring the P_h index up near that of breast milk, would be a great aid to the digestion and assimilation of cow's milk.

With these ideas as his guiding principles, Marriott began working with cow's milk, soured by incubating in it a pure culture of *B lactic acid* aero-

genes. To make up the difference in the carbohydrate content between cow's milk and breast milk and so increase caloric value, cane sugar or the dextri maltose was used. Later, karo was used almost exclusively. Karo syrup was used for the reason that, being a mixture of several sugars, it should be ideal for the purpose, containing, as it does, dextrin 55 per cent, maltose 30 per cent, and glucose 15 per cent. The readily absorbed and difficultly fermentable dextrin and glucose is nicely balanced against the easily fermentable maltose, making a mixture that is not conducive to diarrhea; in fact, surprisingly large amounts may be given without getting into difficulty.

The Mixture Described—Cow's milk, soured by incubating in it bacteria and an easily assimilable carbohydrate, has a P_h index very nearly approaching that of breast milk and a caloric value per ounce equal to that of breast milk. The results obtained from the use of the mixture in the St. Louis Children's Hospital and the Washington University showed very conclusively that it was of great value, if not in all feeding cases, certainly in those most difficult of all the athreptic type.

After leaving the hospital and attempting to use cow's milk soured bacterially, all manner of difficulties were encountered. The question of which bacteria to use in souring the milk was a big one. Contamination and death of the cultures, through lack of proper facilities for handling, occurred frequently. The age, purity and viability of commercial cultures varied, and consequent variations in acidity resulted. Often the expense of cultures or of milk soured commercially was an item to be considered. In many homes the cultures could not be handled properly, the question of temperature and contamination being too much for the average mother. The acidity of the milk was never above suspicion. It seemed to me that unless the acidity of the milk is more or less constant, much of its benefit is lost. Frequently enough to keep up our interest, milk could be soured in the home under conditions which made it dependable, and in these instances the results were uniformly good. On the whole, however, the use of milk soured bacterially outside hospitals seemed to me very unsatisfactory. Influenced by others who claimed to have obtained good results from their use, alleged pure cultures of bacteria in various forms—liquid, jelly, and tablets—were used, but no good results were obtained that could be attributed to the cultures. As a matter of fact, none could be expected from their use because acid must be present in cow's milk prior to introduction into the infant's stomach if we expect to reduce the content of buffer substances in cow's milk and so protect the acidity of the gastric juice.

The acid content of milk soured in commercial laboratories is rarely ever above suspicion. It is, of course, possible to obtain milk soured in commercial laboratories, but so far we have no evidence that convinces us that they can be used to accomplish our purpose. One seldom finds in such laboratories workers who really get the clinician's point of view. Most of them stress the point that their product changes the bacterial flora in the intestine, but, as has been pointed out, we do not believe this

to be of much importance in dealing with intestinal upsets of children. Bacterially, soured milk will vary in acidity between wide limits according to the bacteria used. To produce a milk soured bacterially, in which the acidity is proper and constant day after day, requires a scrupulous attention to detail, which is beyond most commercial laboratories. Most of the commercial soured milk has an exceedingly sour taste which often results in the infant's refusing to take the milk, and in some instances this has been known to prejudice a certain type of mother against the milk, which naturally complicates matters.

In the face of such difficulties, we came to the conclusion that lactic acid milk, as produced by incubating in it certain bacteria, could not be used as extensively as it should in private practice. Some diarrheas could be controlled with protein milk, and the infant could be made to gain for a time by adding carbohydrate and a little fat, but this scheme had its limitations and we were soon forced back to a sweet milk formula. In certain types of cases as soon as a sweet milk formula was given, a stationary weight resulted, and if then enough carbohydrates and fat were added to bring about a gain in weight, greasy stools returned.

The so-called athreptic infants presented, and for that matter do now present, the greatest problem. All pediatricists are only too familiar with the infant who will not gain unless given an amount of food which, even if continued a short time, will bring about an intestinal upset. An infant, in other words, who requires more food in order to gain weight than it can assimilate without going beyond the limits of its tolerance. We felt that if these infants could be given whole lactic acid milk, they would all gain weight and their tolerance to fat and sugar could be increased.

It was suggested to me by J. F. Perkins of Dallas, Texas, who, under Marriott at St. Louis, had been a pioneer in the use of whole lactic acid milk, that U. S. P. lactic acid could be added to sweet milk and used exactly as bacterially soured lactic acid milk was used. This idea came to him from Marriott, who, as a result of some work on the acidity of the contents of an infant's stomach, came to the conclusion that the acid was the important factor in sour milk—not the souring agents.

In the choice of an acid to use in souring milk, Marriott was governed by several considerations. Hydrochloric acid, since it is already present in the stomach and is the very acid we wish to protect by acidifying the milk, suggested itself first. It is, however, an inorganic acid and must be neutralized and excreted and might in time become a burden to the body—might even result in acidosis by depleting the body bases. Other organic acids, such as acetic, citric, and butyric, tend to cause diarrhea. Lactic acid seemed most free from disadvantages. Several of the acids named have been used by other investigators, namely, hydrochloric acid by Faber, and citric acid by Hess, and their reports have been favorable, and it may well be that further investigation may show them to be the acids of choice. In the light of the evidence we now have, we believe that lactic acid is the safest, being completely oxidized, requiring no neutralization in the

body, and in the amount necessary to raise the P_h index of cow's milk to the proper point, exerting no harmful effect on the gastric intestinal tract.

The method of souring milk with U. S. P. lactic acid follows very closely that suggested by Marriott. If certified milk is used, no sterilization is deemed necessary, but if ordinary raw milk is used it is boiled five minutes. While boiling, the milk is stirred to prevent the formation of a scum. If such a scum does form, it is removed before the acid is added. After boiling, the milk is allowed to cool, because if acid is added while milk is too warm it will clot in large curds, which will interfere with its passage through the nipple.

U. S. P. lactic acid is used 4 cc. to each 500 cc. of milk, or approximately sixty drops to each pint. The acid is added slowly, one drop at a time, with a medicine dropper. While the acid is being added, the milk should be stirred gently. It is important that the milk be cool, that the acid be added slowly, and that the milk be stirred while adding acid, otherwise large curds will appear. Such curds do not render the milk unfit for use, but they do clog the nipple holes. Vigorous shaking will usually break them up.

If properly made, the mixture should be smooth and homogeneous, and should have the taste and odor of ordinary buttermilk. The exceedingly sour taste of most bacterially soured milk is absent. The P_h index is about that of breast milk, $P_h 4$. Carbohydrate is added to suit the needs of the individual infant—usually about 2 or 3 per cent. Karo corn syrup, dextri maltose, and cane sugar have been used—the two first named most frequently and about equally; the latter only when the others seemed not to be well tolerated. Milk sugar is never used because, not having a sweet taste, the sourness of the milk is not decreased, and also because it probably is not assimilated to the degree that the other sugars named are. The amounts of carbohydrates varied, of course, with the individual's needs and tolerance. In some infants badly undernourished, surprisingly large amounts may be given without harmful results. As a rule, however, we rarely give as much as the usual 3 per cent, finding usually that a satisfactory gain can be brought about with a small amount of sugar. The sugar is always dissolved in warm water before it is mixed with the milk; this facilitates mixing. If the infant is taking cereal, very little or no other carbohydrate is given unless the infant is badly undernourished.

All directions for preparation of lactic acid milk are written in detail, and we convince ourselves that the mother or nurse understands the reason why the acid is added before any attempt is made to prepare the formulae. Usually the lactic acid is not diluted, for the reason that the amount the infant would ordinarily take does not seem to be in excess of his ability to digest it. Never more than a quart is given in twenty-four hours. We believe that if more calories than are represented by one quart of milk, with additional carbohydrates, are required to bring about a gain, other food in the shape of cereals, soups, etc., are indicated.

It is not to be understood that whole lactic acid milk is used wherever and whenever lactic acid milk seems to be indicated. In severe diarrheas or

in cases where infants seem to have had their tolerance for fat or carbohydrate greatly decreased, skimmed milk with no suger added is used—the fat and carbohydrate being added as conditions permit. In such cases where there seems to be an unusually low tolerance for carbohydrate, corn starch is often used, as it seems to be more easily borne than other forms of carbohydrate; usually a 3 per cent solution is used, although we have used it up to 6 per cent, which is rather thick.

It has been our experience that no infant will for long refuse lactic acid milk. Often it is refused at first, but if persistently offered it will be taken quite as eagerly as any other food. A certain type of mother, familiar to all, often is greatly alarmed at the infant's refusal to take the milk, but after being assured, sometimes repeatedly, that the baby will finally take the food, she goes on with it.

We have given lactic acid milk, with few exceptions, to abnormal feeding cases only; that is, to infants suffering from acute or chronic gastro-intestinal disturbances. It has always seemed to me that the simpler a formula could be made, the better for everyone concerned—the infant, the mother or nurse, and the pediatrician; infants showing a steady satisfactory gain on a sweet milk formula are left alone. As a matter of fact, we have noted in several instances where normal infants were given lactic acid milk colic was more frequent than when sweet milk formulae were given, the colic usually being relieved when a change to sweet milk was made. It may well be that the colic was due to some other factor or factors other than lactic acid. We have not sufficient data to say positively; the above is an impression only.

After acute intestinal upsets in which protein milk has been used, in changing from protein milk to sweet milk, a lactic acid formula is valuable. We have had less trouble when it has been used between protein milk and sweet milk than when the change was attempted without it. In some cases, where it seemed indicated, we have used a formula suggested by John Howland and called by him "Reinforced Protein Milk," which is made by adding the curd from a quart of sweet milk to a quart of lactic acid milk made from skimmed milk. With his formula, carbohydrates are necessary—if not at first, at least within a few days, if a weight loss is to be avoided.

Lactic acid milk, made by souring whole milk or skimmed milk with U. S. P. lactic acid, has been used by us in approximately 50 per cent of the abnormal feeding cases seen in the past year. A number of normal infants were given lactic acid milk; some were fed lactic acid milk, so that we might use them as controls; others because lactic acid milk seemed safest because of their geographical location, lack of facilities for cooling milk, and for other like reasons. In a few of the normal infants fed lactic acid milk, colic, or what seemed from the descriptions to be colic, developed. In no case was it accompanied by a gastro-intestinal upset, and in every case a return to a sweet milk formula stopped the symptoms promptly. We have considered here only the cases in which lactic acid milk seemed definitely indicated. These number fifty-one. Thirty-two are from our private practice, and nineteen are from

two clinics. The cases from the clinics were included because the milk in every case was prepared at home with no personal supervision. A number of other infants were given lactic acid milk, but they are not included because they were seen so few times or so irregularly that the results have no meaning. In only one instance do we know definitely that a diarrhea developed while lactic acid milk was being given, and in this case, in our absence, the infant came under the care of another pediatricist who changed the formula.

	No.	Average Age	Average length of time on W. L. A. M.	Average Weekly Gain
Private cases.....	32	5½ mos.	42 days	8¼ oz.
Clinic cases	19	4 mos.	45 days	7½ oz.

Two cases are described in detail:

CASE 1. Baby L.; age 3½ months. Birth weight, 7¼ pounds; breast fed, two months; then Eagle Brand for two weeks; stools became loose, green with mucus and curds; changed to Mellin's Food; stools improved but did not gain. One month ago changed to cow's milk formula but has not gained; each time formula strengthened an intestinal upset followed; now at 4½ months the weight is 9⅞ pounds; has three or four greenish, yellow stools a day which contain mucus and protein curds. Because of the clear evidence of lowered tolerance for fat and sugar, skimmed milk acidified and diluted with plain boiled water was given. The first week no gain was recorded, but neither was there a loss; the stools improved, became yellow, smooth and pasty, whereupon whole milk was used but no carbohydrates. The next report, made one week later, showed a gain of 6 ounces. One per cent carbohydrate in the form of Karo was added and the next week a gain of 13 ounces was recorded. The next week the mother reported baby constipated. Carbohydrate was increased to 3 per cent and prune juice was advised. April 3 the weight was 10 pounds 8 ounces. Approximately one month later, May 1, the weight was 13 pounds. June 5, the weight was 15 pounds 5 ounces; July 10, the weight was 16½ pounds. The baby at this time was 7 months old. Lactic acid was discontinued and a diluted sweet milk formula given with soups and cereal. No intestinal disturbances were recorded after lactic acid milk was given except the light tendency toward constipation at first, which was overcome by more carbohydrate and prune juice. At one year the baby weighed 20 pounds 15 ounces, and measured twenty-nine inches in length.

CASE 2. Baby K. B. S.; age 4½ months. Birth weight, 8 pounds 1½ ounces; present weight, 10 pounds 6 ounces; was on breast for one month; did well; changed to four-hour schedule and then weaned in a short time because milk supply seemed to be failing; since has lost weight. Has been on Mellin's Food, Eagle Brand, Mrs. Alberty's food and modified cow's milk formula; did not improve on any; constipated since he has been on cow's milk; before on proprietary foods stools always watery, green; cried a great deal. Examination revealed nothing of importance except very thin, emaciated infant and certain degree of anhydremia-turgor being slightly reduced. Put on W. L. A. M. formula of 32 ounces: Six and one-half ounces five times a day, 3 per cent carbohydrate. In week following, infant gained 12 ounces; in next two weeks gained 27 ounces. In the 2½ months he remained on the lactic acid formula he gained a total of 5 pounds 9 ounces. Lactic acid was discontinued and the baby put on sweet milk formula with cereal gruel and soup. At 8½ months his weight was 19 pounds 6 ounces.

These two cases are typical. Other cases might be detailed in which most astounding gains appear. In one which occurs to us there was a gain of 18 ounces in one week and with no evidence of nutri-

tional edema and no intestinal disturbance, but such cases are not as typical as the two detailed are.

SUMMARY

1. Lactic acid used in infant-feeding seems to make its first appearance in the literature in 1902. In 1904 another report appears in which it was claimed that the addition of lactic acid to the food of infants resulted in distinctly better assimilation of all food elements from the gastro-intestinal tract.

2. Marriott, in 1918, after working with cow's milk in which lactic acid-producing organisms had been incubated, came to the conclusion that the acid, by removing the excess of buffer substances in cow's milk, rendered it easier of digestion.

3. Lactic acid milk changes the bacterial flora of the intestine only to a slight extent, and this change is not essential for its beneficial action.

It is almost impossible to successfully use bacterially soured milk in private practice except in a few cases in which conditions were exactly favorable. Milk soured by addition of U. S. P. lactic acid in the proper amount seems to have an effect practically the same as that soured by organisms. Lactic acid seems preferable to HCl and other inorganic acids, for the reason that it does not require neutralization in the body and can be almost completely oxidized in the body. There is the danger in the use of inorganic acids that they might, if used over a long period of time, deplete the bases of the body to the extent that an acidosis results.

The chief advantage of whole lactic acid milk lies in the fact that it is a concentrated food and can be fed to athreptic infants and other below-weight infants whose tolerance for fat and sugar has been lowered in sufficient amounts to bring about a gain without causing an intestinal disturbance.

Whole lactic acid milk is not a panacea. I do not believe its use is indicated in normal infants. We have found it to be of greatest value in the feeding of the so-called athreptic infant, although in some intestinal upsets its value is unquestioned.

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DISCUSSION

T. C. McCLEAVE, M. D. (Medical Building, Oakland)—Sour milk preparations are very widely used in the dietary of many different peoples and have had ascribed to them, by certain medical writers, nutritive properties not found in fresh milks. The Metchnikoff propaganda for soured milks attracted general attention because of his authoritative position as a bacteriologist, although his views on the subject were soon shown to be extravagant.

He believed the beneficial effect of soured milks to be due to the contained *B. bulgaricus*, and, as the sour taste is objectionable to many persons, pure cultures of this organism were often given, instead of the milk, in digestive disturbances considered suitable for treatment by this means. Later, *B. acidophilus* became the popular organism, largely displacing *B. bulgaricus*.

As stated in the paper, however, the work of Howland and Marriott and their associates appeared to show that the presence of any particular organisms in the digestive tract was not the important factor, but that to the high lactic acid content of the milk was due the benefits which, undeniably, follow its use in certain dyspepsias of infants and young children at least, and the difficulties encountered in the preparation of soured milks, by the addition of bacterial cultures, have been obviated

by the simple addition of suitable amounts of lactic acid, or, less commonly used, hydrochloric acid.

There can be no question that milk thus acidified is very valuable in certain feeding cases which do badly on ordinary milks. The taste is objectionable, however, and mothers are loth to feed it, but, fortunately, although cow's milk is rich in buffer substances, most healthy babies can digest it perfectly well when suitably modified and boiled, and acid milks are not generally necessary.

PAUL S. BARRETT, M. D. (Bank of Italy Building, Fresno, California)—For a considerable period of time the technical difficulties in the preparation of fermented or acid milk formulæ made them suitable only for use in institutions. With the change to the simple addition of lactic acid, however, the home preparation no longer presents a difficulty, providing the instructions are followed. It is my custom to boil all milk used and instruct the mother not to add the lactic acid until the milk is thoroughly cooled. Then, by adding the lactic acid drop by drop, stirring with a glass rod, a smooth, non-curdled mixture is obtained. It is also important not to heat the food above 100 degrees F. before a feeding, in order to avoid curdling.

Occasionally, in feeding a mixture according to Marriott's formula of a dram to a pint, the mother reports that the child vomits after every feeding. It is often advisable to decrease the acid content for a few days and then gradually increase it again.

It has been generally proven that lactic acid facilitates the digestion of fats but not the sugars. Experience shows, however, that it is possible to bring the carbohydrate up to a higher per cent than has heretofore been practical.

Recently, I have been using the lemon juice milk as advocated by Hess of New York with similar results; both mixtures, with their added carbohydrate, being perfectly palatable to most infants. The mothers, almost without exception, become interested in the procedure, and, after a few weeks' trial, become enthusiastic over the "sour milk feeding."

Finally, I wish to thank Doctor Chapman for bringing the attention of physicians to a method of feeding, which, while not a panacea, is certainly another valuable addition to the management of the so-called difficult feeder.

DOCTOR CHAPMAN (closing)—It has not been my experience that infants will long refuse milk acidified with U. S. P. lactic acid. Such a difficulty was common with the use of bacterially soured milk. I explain to the mother exactly why the acid is added and what to expect from its use. I have encountered practically none who objected to its use.

It has been shown quite conclusively, I believe, that very often, when an infant's tolerance for fat has been lowered, the tolerance for sugar is lowered to some extent, and, when the tolerance for fat is raised, more carbohydrate may be taken. I do not believe that citric acid will prove to be as satisfactory as lactic acid in infant feeding for the reason that the acidity of lemon juice varies, and danger of a gastro-intestinal upset is greater than in lactic acid milk.

I would like to say, finally, that, while I do not believe that soured milk will displace the simpler formula of cow's milk, water and carbohydrate, I do believe that it has a very definite place in the armamentarium of the physician who feeds infants. It is, perhaps, the most valuable addition to infant feeding since Finkelstein's "Eweiss" milk was introduced. With the proper use of w. l. a. m. and protein milk, there are practically no feeding cases that cannot be successfully handled.

The fact is that, while babies born today have many times more chance of living to maturity than they did twenty-five years ago, the person of 35 today needs help to keep as many years ahead of him as had his grandfather when he was 35 years old. The failure is that of the individual—not of medical science or physicians. Today man has everything but himself working in his favor for health and longevity.—William G. Exton, M. D.

Well, well, old fellow, you look half dead. Why don't you take a vacation, or *have* you?

X-RAY OF THE URINARY TRACT, WITH REPORT OF A CASE OF CONGENITAL UNILATERAL KIDNEY

By FRANCIS B. SHELDON, M. D., Fresno, Calif.

Review of literature.

Technic of combined radiologic and urologic diagnosis discussed.

For literature quoted, see Quarterly Cumulative Index, A. M. A., or Index Medicus.

Frank discussion by George W. Hartman, San Francisco; H. E. Ruggles, San Francisco; Edward N. McKee, Los Angeles; Charles M. Richards, San Jose.

THE manner of examining the urinary tract with the x-ray, may, like ancient Gaul, be divided into three parts. First, films taken without cystoscopy and catheterization of the ureters. Second, films taken after cystoscopy and the catheterizing of the ureters. And third, films taken after an opaque media has been thrown into the kidney cavities and the ureters. This same opaque media injected into the bladder oftentimes will give us useful information.

Good films of the urinary tract should show the outline of the kidney shadow, the border of the psoas muscle, the lower ribs, and the transverse processes of the lumbar vertebrae, and the lower part of the tract, the pelvis must be well shown also. From films made when the ureters have not been catheterized, we are able to get information regarding the position of the kidney in its relation to the surrounding body structures, the size of the kidney, and whether or not there is any opacity casting a shadow suggestive of a calculus. Before such a shadow is diagnosed as being a calculus, the relation of the shadow to the position of the other shadows of the urinary tract must be considered.

With the ureters catheterized, using a catheter that is opaque to the ray, with a single film the relation of any opacity to the urinary tract may be fairly well located. With shifting of the tube between exposures and a double exposure on the same film, or with stereo films, the location may be made more exact. In the case of a shadow of an opacity near the ureter, it must always be borne in mind that the ureter may be very much dilated, and a calculus within the ureter in such a case may not be in contact with the catheter. In these cases a final diagnosis must be made only after a good ureterogram has been made, using an opaque media in the ureter.

The most information regarding the urinary tract is obtained when the entire tract is filled with an opaque solution. The shadow of this opaque solution gives us the size, shape, and position of the various parts of the tract. Various anomalies are found with these films that otherwise would not be known. A kidney may give a good function test and at the same time be discharging much pus. When the roentgenogram is made it is found that there is a double pelvis in the kidney, one of which only is functionless. With two films or a double exposure on the same film after shifting the tube, it is possible to determine strictures of the tract. Pathological changes may take the form of contractions, displacement of the media by new growths, or dilatation of the pelvis, calyx, or ureters.

The dilation of a hydronephrosis may be confined

to a single calyx, or it may include all the calices. It may be that there is only a slight blunting of the calices, seen in the beginning stages, or it may be the terminal stage when the pelvis proper has swallowed up all of the calices. With the double-exposure film the amount of movement of the kidney during respiration is well shown; also the movement with change of posture.

The ureterogram should show dilatation, if present, and kinks or strictures when present. The normal ureter will show peristaltic waves. These latter must not be mistaken for strictures. Here again the two exposures will assist in making the diagnosis. Certainly, a diagnosis of ureteral stricture should not be made from a single film.

Oftentimes the presence of diverticulum of the bladder can be determined only from the cystogram of the filled bladder.

TECHNIC

In private practice I find that most of the patients sent in for urinary tract examination with the roentgen ray are sent with no preparation whatever. When suspicious shadows are found in these cases a recommendation that they see a urologist for cystoscopy is sent, with the report of the findings, to the referring physician. In my own work I do not use compression other than that which I get by having the patient draw in the abdominal wall as much as possible. Double screens at a distance of twenty-one inches from the target are used with high milliamperage and an exposure of one-tenth to one-fifth of a second.

Exposures of the injected kidney are made while the urologist continues to fill the pelvis, for we have found that if the injection is made at about the right rate the return flow is able to care for the overflow, and the peristaltic waves are then seen in the ureters; also the cavity of the kidney is more sure of being full. In our work a 25 per cent solution of sodium bromide is used for the opaque medium. Most always we fill both kidneys for comparison. When the patient complains too much of the discomfort the injection is often stopped, even before the exposure is made. In these cases very often the outlines of the pelvis and calices are not as clear as they should be. I have also noted that the nearer the kidney is to the normal, the more the patient is apt to complain of pain. Some urologists prefer to inject the kidney under the direct observation of the fluoroscope, and then the injection is continued till the solution is seen to flow down the ureter.

Before the kidney is injected a syringe should be attached to the catheter and an attempt made to empty the kidney of any residual urine. This is especially the case where a hydronephrosis is suspected. In many cases where this is not done the pyelogram is not clear because of the dilution of the opaque solution by the retained urine.

CONGENITAL UNILATERAL KIDNEY

The complete absence of one kidney and the accompanying ureter is rather infrequently met. The atrophic kidney with a partial ureter occurs more frequently. L. Polack (1909) collected from the literature 264 cases and analyzed them. He found

the kidney and ureter both absent in 153 of these. Braasch (1912) reports thirty-six anomalies, of which six were complete absence of one kidney. Morris reports unsymmetrical kidney or extreme atrophy of one kidney, occurring once in 2400 bodies. The left kidney is more frequent than the right. He also reports congenital atrophy to the extent of almost obliteration is rare, occurring three times in 15,904 post-mortem examinations.

Thomson Walker (1914) collected ninety-three cases of uremia or anuria, commencing within a few days after operation, and found that in ten cases there was complete absence of the second kidney, and in eight cases there was complete atrophy of the second kidney. A mortality rate of 19 per cent was due to lack of knowledge of the absence of the second kidney. Today, with the use of the cystoscope and the x-ray, such mistakes should not occur.

REPORT OF A CASE

G. L. Single. Female. Age, 22. Weight, about 90 pounds. Came to her physician for lung trouble. The family history was negative. Patient had had measles; petussis, no sequela; diphtheria in 1920. Some edema of the legs followed. Influenza in 1918, but not seriously ill. Tonsils removed in 1920. Menstruation, regular.

At this time (August, 1921) the physical examination was negative, and she was referred by Doctor C. O. Mitchell for a roentgen examination of the chest, which failed to demonstrate any abnormality.

In October, 1923, she was again seen by Mitchell, and at this time her complaint was a pain below the waist line and most severe when sitting. This pain came on suddenly. Two days later the pain was most severe when lying down, and was mostly on the left side. Physical examination showed a temperature of 98 and pulse of 90. Abdomen flat. In the left inguinal region a mass was felt, some two centimeters in diameter, which was freely movable and tender to pressure. On the right was a firm, smooth mass about five centimeters in diameter, freely movable and easily worked up under the costal margin.

In November the patient complained of pain on the right side, and a small mass could be felt. At this time she was referred to me to rule out a possible opaque urinary calculus.

The film showed a very clear outline of the right kidney, which was quite low, the lower pole being but very little above the crest of the ilium. No shadow of the left kidney could be found. A suspected absence of the left kidney was reported. No evidence of calculus was found.

In December the abdominal pain was constant on the right, over McBurney's point; not connected with the kidney, and worse when lying down.

December 15, Doctor W. W. Cross performed a cystoscopy and catheterized the right ureter. No orifice for the left ureter could be found. Under the fluoroscope, when injected with opaque solution, the right kidney was found to move very freely. It would descend till a kink was formed in the ureter, and then could be readily replaced in its normal position. No shadow of the left kidney could be found on the film at this examination.

The patient was later operated. The right kidney was suspended, and the appendix removed. At this time an intra-abdominal palpation was made to try to locate a left kidney, but none could be found. The patient made a good recovery, following the operation.

This case is reported because of its infrequent occurrence and because there have been such cases operated and the single kidney removed. It is essential that every kidney case have a thorough cystoscopic and roentgenographic examination before any operative procedure is done on the kidney.

Mattei Building.

DISCUSSION

GEORGE W. HARTMAN, M. D. (999 Sutter Street, San Francisco)—Radiologic examination of the urinary tract can hardly be considered complete without a catheterization of the ureters with opaque catheters. This not only serves to eliminate shadow-casting bodies exterior to the tract, but also indicates bizarre positions of ureters and kidneys.

Thomson Walker has recently called attention to calcified lymph glands causing hematuria by pressure on the ureters. An opaque catheter would be of assistance in eliminating such an error.

Many physicians are opposed to bilateral pyelograms. With extreme care in injecting, we have not had any unfavorable reactions while doing this. There is a decided advantage in being able to investigate and compare both sides at one sitting.

A problem which remains to be solved is the more successful handling by x-ray of permeable stones which do not show on the plate. We have observed a number of these recently, negative radiologically, in which the stones were passed after cystoscopic manipulation.

H. E. RUGGLES, M. D. (Butler Building, San Francisco)—As Sheldon has pointed out, careful, painstaking work and complete co-operation between the urologist and radiologist are absolutely essential in the field of genito-urinary diagnosis. By working together—preferably in a hospital—good team work is developed, time is saved, patient's discomfort lessened, and the possibility of error in diagnosis reduced to a minimum.

The radiographic examination is the only method of demonstrating anomalies of kidneys and ureters with certainty. Double pelvis may be suspected cystoscopically if multiple ureteral orifices are seen, but frequently the ureters unite in the lower portion of their course and the real situation only becomes apparent in the films.

Stones which may be invisible on plain films of the kidney region (comprising 15 to 20 per cent of all stones) are at times revealed by pyelography. They may appear as "holes" in the opaque shadow of the pelvis, or by absorption of the bromide solution become visible after the pelvis is emptied.

EDWARD N. MCKEE, M. D. (Methodist Hospital, Los Angeles)—One of the important things mentioned by the author, and on which we place great importance, is the preliminary preparation of the patient. About 90 per cent of the patients present themselves without any preliminary preparation whatever. This causes an increase in expense to the patient, as well as loss of time, because the necessary preparation consumes two or three days. Our method is to have the patient take a half ounce of powdered licorice compound on the evening of the second day before coming to the laboratory for examination. Besides the powdered licorice compound, the patient takes repeated S. S. enemas the following evening, and a plain enema on the morning that he reports. The regular diet is continued up to the time of the examination, with the omission of breakfast on that day.

In the matter of technic, Sheldon failed to tell us whether or not he was using the Bucky diaphragm in his urological examination. I believe that the Bucky diaphragm is quite universally used in kidney examinations; and the other essential is a fine focus tube. We also use a compression canvas band with a basketball bladder. The patient is instructed to take a deep breath, exhale, and hold for the period of the exposure.

The technic that we employ is, spark gap, 4½ inches; milliamperage, 20; distance approximately 22 inches; and time, 6 to 9 seconds, according to the size of the patient.

By co-operation the radiologist and urologist are able to make pictures of the ureter from the kidney pelvis to its outlet into the bladder. The radiologist gets everything ready for the picture after completion of the pyelography. The urologist injects the ureter gently with a 20 cc. glass syringe, as he withdraws the catheter. The moment the tip of the catheter enters the bladder he notifies the roentgenologist, and the picture is taken.

The result will be a true picture of any intra-ureteral tumors, strictures, or kinks, and an illustration of the exact topography of the ureter. The procedure is of value in ruling out many of the various pelvic conditions.

Kidney or ureteral pathology otherwise invisible is dis-

closed by the distention it produces in the pelvis or ureter by appearing as a light or negative area in the injected fluid.

CHARLES M. RICHARDS, M. D. (Garden City Bank Building, San Jose, Calif.)—The importance placed upon preliminary preparation, by the author and others discussing the paper, is not overdrawn. Technically, excellent films can only be obtained when the alimentary tract is well emptied of both solid and gaseous contents.

Patients referred to me from out of town frequently come with little or no preparation, and I often try to save them a prolonged stay or a return trip by doing the work immediately, but more often than not the work has to be repeated because the intestinal tract, chiefly the colon, is full of gas. This condition not infrequently is caused by the conscientious effort of the referring physician to prepare his patient by the administration of saline cathartics, most commonly magnesium sulphate. The best cathartics are the vegetable cathartics, castor oil, and licorice powder.

Then, too, an otherwise good preparation has often been spoiled by unskilfully given enemas, whereby large amounts of air have been pumped into the colon; so that frequently we have purposely omitted the enemas, kept the patient on liquid diet for twenty-four hours, and given the vegetable cathartic, thus producing a quite satisfactory preparation.

The report of the congenital absence of one kidney is very interesting, and only serves to remind us that no useful step of preliminary examination can be omitted with safety when nephrectomy is contemplated.

Sheldon's technic of high milliamperage and short exposures is good for the purpose of eliminating respiratory motion, but naturally eliminates the use of the Bucky diaphragm, which is one of my greatest aids in producing valuable soft tissue films, and high contrasts, which may aid in reducing that percentage of undemonstrable urinary calculi.

DOCTOR SHELDON (closing)—It would seem that the use of six to nine seconds' exposure in the making of ureterograms would give an indistinct hazy outline, because of the peristaltic movement of the ureter when filled. This would be similar to taking that much time for an exposure of the stomach. I have, therefore, in my work preferred the rapid exposure technic. I do not see the advantage of long preparation of the patient, if elimination is started two days before the examination and the intestinal tract is at the same time filled by regular diet. The preparation, as given by Richards, is very good.

Hot Air Comfort—Heating methods, heat transmission, comfort, types of furnaces, and ventilation are discussed by Thomas Hubbard, Toledo, Ohio (Journal A. M. A.). He thinks that Americans are becoming progressively more sensitive to temperature and humidity. The popular demand seems to be for higher radiation capacity in the home, in hotels, and in public conveyances. (What a shock it would be to the heating trade if we accepted a 65-degree standard.) Climatic conditions and sudden variations of weather are naturally very trying, and we invite cold shock by hypersensitiveness. Unhygienic heating, combined with foolish estheticism in clothing (e. g., chiffon to furs), results in acute and chronic diseases of the upper and lower respiratory tract. Catarrhal affections, such as chronic sinusitis, even in young children, are far more prevalent than should be tolerated by an enlightened, intelligent people. Medical progress in the study of causes of such diseases is one of the outstanding features of this age, but treatment and cure are handicapped when the unhygienic habit is in itself chronic. The complexion is the color index of good blood and normal skin circulation. It is notorious that in America the natural color index is fading and the cosmetic index is correspondingly high. The skin, like the respiratory mucosa, is actually damaged by hot dry air (and likewise is the hair) and becomes more liable to chronic diseases. Our present high temperature standard so lowers natural resistance to minor and major infections that restoration to normal health is retarded. The fresh air treatment of hospital surgical cases is testimonial to the healing virtue of tonic temperature and natural humidity in convalescence.

AFFECTIVITY—ITS IMPORTANCE IN PRACTICAL MEDICINE

By CHARLES LEWIS ALLEN, M. D., Los Angeles

Affectivity varies enormously in different individuals. Its roots descend to the lowest strata, it dates back to the earliest beginnings of mental life.

Biologically, it stands in close relationship to instincts and temperament.

That differences in affectivity in different individuals depend upon a difference in their make-up, seems pretty certain.

The affective state exerts a profound influence upon the attitude, the expression and the speech, as well as upon the cardio-vascular and glandular systems, and the body nutrition.

Affectivity varies enormously from person to person, and even in the same person at different periods of his life.

Anxiety is more frequently and clearly accompanied by physical symptoms than any other affective state.

Morbid irritability, excessive lability of mood and inability to control the instincts and affective reactions is a characteristic of psychoneurotics in general.

When phantasy is allowed full play, thinking is not concerned with actualities, but follows the direction indicated by instincts and affects.

DISCUSSION by Edward A. Franklin, Los Angeles; Aaron J. Rosanoff, Los Angeles; Josephine A. Jackson, Pasadena; Joseph Catton, San Francisco; Clifford W. Mack, Livermore.

IN THE consideration of any disease, as to its nature, its course, and its probable outcome, as well as in its management, *the wise physician will study the patient as a whole.* By no means the least important factor is his mental make-up, particularly on its emotional side. The English word "emotion" is approximately equivalent to the German "affekt," which Ebbinghaus defines as: "Feelings which depend upon the mediation of associatively awakened conceptions, and at once appear in comparatively great intensity, are called affekts." According to Bleuler, every psychic process is divisible into an intellectual and an affective side. Under "affectivity" he considers collectively affects, emotions and feelings of pleasure or displeasure, regarding the term "feeling," sometimes applied to this group, as misleading, since it is used to mean both ordinary bodily sensations and complicated cognition processes, whose elements are by no means clear to us. Affectivity varies enormously in different individuals. Its roots descend to the lowest strata, it dates back to the earliest beginnings of mental life. "It contains everything in the way of feeling tone which the mental processes acquire at the same time that they are passing from simple sense impressions and image formation through abstract conceptions and reflexion to decision and to motor impulse" (Kretschmer). Biologically, it stands in close relationship to instincts and temperament.

The instincts of self-preservation and self-perpetuation through securing food, through the avoidance of danger, and through the sexual impulse, seem to be attributes of life itself, and are present in the lowest forms. Though their manifestations in man have become in the highest complex, they still constitute the impelling force of all his actions. With them are intimately bound up the feelings in the broad sense. In primitive man the instincts were intense and uncontrolled, while the fear of dangers both known and unknown was ever present, and

what ideas he had were under strong affective influence. The mental content is greatly influenced by affects. For this influence, H. W. Maier has proposed the name "Katathymia." We know that the thinking and the world conceptions of the primitive are much more katathymic than ours. Now, while the mentality of the civilized nations is immensely removed from that of the primitive races, the ascent has been a gradual one, and many minds still retain much of the primitive habits of thought. This is especially noticeable in children and in the mentally abnormal. While we have no exact knowledge as to the cause of the emotions, which are experienced subjectively only, that they are directly connected with some physical process, and that differences in affectivity in different individuals depend upon a difference in their make-up, seems pretty certain. The importance of temperament has long been recognized, and recent studies of Kretschmer seem to show that body-build has quite a close relationship to character, though on account of the great admixture of different racial strains, the physical types are so complex that caution is necessary in drawing conclusions as to this. The relation between the endocrine glands and body structure is undoubtedly close, but as a matter of fact our knowledge as to the internal secretions is as yet fragmentary. We are by no means sure that they are exclusively products of the glands which we have recognized anatomically, and it seems not improbable that many, if not all the body cells, are capable of producing substances which are necessary for the organism. Hence, while we are justified in the opinion that affectivity is intimately related to physical constitution, we cannot make it an affair of any one set of organs.

While in the James-Lange theory of the emotions physical changes are considered the cause, the emotions the effect, the experiments of Pawlow, Cannon and others show that feelings such as pain, hunger, fear and rage, are followed by bodily changes, especially by altered glandular functioning. In their view, this is the result, not the cause of the strongly affective tone which characterizes such feelings. It has been pretty well established that in animals the mechanism regulating the physical expression of the emotions is situated in the archaic portions of the brain in the neighborhood of or below the thalamus, and Cannon locates the center regulating the adrenal secretion close to this. He believes that the impulses sent out from this center pass through the sympathetic nervous system. Emotional excitement in man is attended by many of the signs produced in dogs and cats by stimulating the adrenal center. Under excitement the heart beats rapidly, the blood pressure rises, the pupils dilate, and the processes of digestion cease. Cannon regards it as probable that "the adrenal glands, the liver, and the thyroid are as much involved in the complex of emotional response in the human as they are in the subhuman groups." As we lack proper tests for adrenal and thyroid secretions in the natural state of the body, we cannot get direct evidence of their presence or absence, hence of increased or decreased glandular activity in man. As indirect evidence, hyperglycemia or glycosuria has been noted after great emotional stress, as in football players after a hard

game, in students after a trying examination, in aviators and in citizens after a bombardment, while hyperglycemia has been reported in mental disorder with great anxiety. The influence of strong emotions in hyperthyroidism is pretty well established. By adrenalin injections many of the visceral changes of profound emotion can be produced. Persons subjected to these complained of nervousness, trembling, oppression in the chest, and "feeling the heart beats everywhere," while some athletic students reported themselves as feeling just as they did before starting a race—"all worked up and on edge." One subject said, "I feel as if I were experiencing a deep emotion, but I am not at all." These statements do not point to specific effect of the visceral changes on conscious emotional experience. Since they are similar in widely different feeling states, Cannon holds that they cannot be considered as the source of the feelings experienced. To account for the affective outburst and the features which distinguish one emotion from another, we can for the present form hypotheses only. Cannon suggests that their difference in character may depend upon the "nervous pattern ingrained in the archaic part of the nervous system," and that "when nerve influences flash through these ready but unworn pathways," the result is manifested in the affects, variable and rich in feeling tone, which we know in practice. From the foregoing it is clear that the affective state exerts a profound influence upon the attitude, the expression and the speech, as well as upon the cardio-vascular and glandular systems, and the body nutrition. Conversely, affectivity is strongly influenced by physical causes, notably by disease, witness the anxiety of heart disease, the depression and irritability in digestive troubles, the euphoria of phthisis, etc. Affectivity influences our thinking, in that the force of ideas corresponding to an affect is increased, that of those unrelated or opposed is diminished, so that the tendency is to occupy oneself with those conceptions imposing themselves as important, to the disadvantage of contra-conceptions. The depressed subject is only able to see the disadvantages, the exalted only the advantages of a certain course.

A group of conceptions bound together through having been built up around a strong affect and exerting a lasting influence upon the psyche is called a complex. The assumption that such complexes existing outside the sphere of consciousness are constantly influencing both thought and action, is the central idea in the Freudian psychology, which, stripped of many of its original dogmatic assertions, is taking its place as a useful working hypothesis for the elucidation of some of the problems of psychopathology.

Affectivity varies enormously from person to person, and even in the same person at different periods of his life. It is a most important factor in the character of the individual, determining the quality and speed of the reactions, the strength and durability of the emotions. Jealousy, envy, and pride are at once personal characteristics and affects, while laziness or energy, steadiness and industry or indifference and negligence are based upon the affective make-up. Since the affective potentiality varies so

greatly, affectivity readily oversteps the bounds of normality.

Low affectivity, while perhaps safer, does not make for high accomplishment and may be in itself abnormal. While psychopaths are usually thymopaths, so are great artists, musicians and writers, of whose utility to the world there is no question. Religious conceptions are determined almost exclusively by affective influences.

It is in psychopathology especially that affectivity plays a preponderant role, but it must be considered in all branches of medicine.

Says Kretschmer, "The psychology of the neuroses is the psychology of the human heart in general. He who knows neuroses, knows mankind." The "affect dynamic" point of view must take the chief place in a strictly medical psychology, for in it we have the best working hypothesis for a study of the neuroses, the psychopathic reaction forms, hysteria and the milder schizophrenic and paranoid borderline conditions which are continually confronting all physicians.

The power of suggestion needs only to be recalled. Now, ideas without accompanying affect have little or no suggestive power. "The greater the emotional value of an idea, the more contagious it is." The suggestive influence which one person exerts upon another depends mainly upon a reciprocal affective state. In mass suggestion the affective influences are multiplied many fold, and few can resist the contagion of great religious and political movements, once they acquire a certain impetus.

It is to be remembered that not only thought, but also other brain-controlled functions, the heart, the glands, and unstriated muscle, are under the influence of affects, so are subject to suggestion.

The so-called auto-suggestion depends entirely upon the action of the affectivity upon the logic and the body functions of the individual.

In hypnosis the associations are so limited that only things suggested by the operator are perceived or thought of; hence, those associations desired are more than usually under the control of the psyche. "The hypnotized person comprehends what is expected of him better than normally, and can utilize sense impressions ordinarily too weak for him," so that objects are so vividly conceived as to be hallucinated, while actual perceptions are kept out of consciousness, "negative hallucinations."

Now, we know that in the psychoneuroses suggestibility is enormously increased, hence the peculiar susceptibility to hypnotism. In the Freudian system, the affect-accentuated complex through "conversion," "displacement," or "suppression," is considered the mainspring of the symptoms, so varied and bizarre, of hysteria. Particularly pathogenic are ambivalent complexes—that is, those characterized by an inner conflict which the patient cannot solve, hence suppresses.

While disturbances of the affects may depend upon changes in the brain or in the chemistry of the organism, a certain constitution, usually congenital, seems to be a prerequisite in most cases. The hysteric and the paranoiac are born different from healthy people.

In all mental diseases, the symptoms—at least at some stage—are largely determined by the affective

condition; most marked is this in the manic-depressive group, the affective psychoses par excellence.

Depression is a normal reaction to misfortune; it is only when it is unmotivated, excessive or unduly prolonged that it becomes pathological. In the melancholic all but depressive ideas are suppressed, thinking is painful, and retardation may be so extreme as to give the picture of stupor. A common accompaniment of depression is anxiety, which, however, may occur in other conditions and from various causes. In some cases it is clearly connected with deficient oxygenation of the tissues, as in diseases of the heart, the blood or the respiratory organs. Freud has emphasized its connection with the sexual impulse which, when excited and unsatisfied seems to be "transformed" into anxiety. We know that normal sexuality has a certain anxiety component, and that an orgasm may occur in certain anxious situations, while anxiety attacks may be translated physically as hunger, profuse sweating, asthmatic seizures, diarrhea, vertigo, etc. There are physical causes at present unknown to us which produce depression, the patient being aware of no reason for it. In his search for a cause, he may attach to it some conception, which is clearly an afterthought, but when the falsity of this is demonstrated to him he is apt to make some new connection as long as the anxiety state continues.

Anxiety is more frequently and clearly accompanied by physical symptoms than any other affective state, often by precordial distress, pain running down the left arm, palpitation, pulsation in the abdomen, a "streaming toward the head," pressure, etc., "precordial anxiety." Anxiety tends to raise the blood pressure. An increased tonus of the pharyngeal muscles causes a distressing feeling of constriction which may lead to refusal of food. Depression occurs in various psychoses. With advancing age and the onset of circulatory disturbances, the tendency to anxious excitement increases.

Anxiety is an important accompaniment of phobias and imperative conceptions and acts.

Exaltation may vary from a natural and motivated reaction through simple euphoria, in which the feeling of happiness and well-being is not justified under the existing circumstances and is unduly prolonged to the most exaggerated self-feeling with unbounded increase of the aspirations and pretensions. When to this there is added flight of ideas and motor impulsion, we have a condition of mania. Here lability of mood is the rule, the affective condition varying with the theme, from exaltation to depression, but speedily returning to the basal euphoria. The manic picture may be an episode in many psychoses, but in its typical development is a part of the manic-depressive psychosis.

Since the symptoms just discussed may, in their milder forms, occur with a minimum of mental disturbance they naturally come under the observation of the general practitioner, who should be alive to the possible affective origin of certain puzzling visceral symptoms.

Morbid irritability, excessive lability of mood and inability to control the instincts and affective reactions is a characteristic of psychoneurotics in general, of many of the high-grade defectives, and of those borderline cases which have been brought to

gether under the general name of "Constitutional Psychopathic Inferiority." These last, the "half-insane," constitute one of the most serious problems with which we have to deal. Always dissatisfied, mostly complaining, and often in trouble, they furnish a large contingent of the criminals and "ne'er-do-wells" of the community. They are among the clients of every general physician, often never come under the specialist and can rarely be committed as insane, so remain for years a care to their friends, a nuisance to the community, the drones in the hive of industry, if nothing worse. In the foreground of their characteristics stand affective abnormalities. Even if their intelligence is average or high, it has little regulative influence upon their conduct.

Strong affects may lead to disturbances of consciousness in psychopathic individuals; for example, to the sudden explosions of blind rage, often followed by amnesia, seen in prisoners and in the feeble-minded. In other instances the affect instead of exciting, inhibits, leading to a form of stupor, seen especially in children and in young people when confronted with an emotionally charged situation, such as an examination or other task toward which there is a strong aversion or a sense of impending failure. "Affect stupor." Such situations, inner conflicts and improper attitudes, arising upon the basis of injured self-feeling, are at the bottom of a number of peculiar and anti-social acts of children, as has been abundantly proved by the newer investigations of child behavior.

Under the head of "Psychopathic Reaction Forms" or "Situation Psychoses," Bleuler has brought together such diverse conditions as paranoia, the persecutory delusions of the deaf, querulant insanity, induced insanity, reactive disturbances in prisoners, "primitive reactions," reactive depressions and exaltations, the impulsive insanity of Kraepelin, reactive character alterations, and the whole group of the psychoneuroses. "In any disturbance within the psyche, affects act differently from before and can produce morbid syndromes." "Congenital anomalies, injuries and diseases of the brain, disturbances of nutrition, intoxications and infections, and finally the prolonged action of affects, form, in varied array and admixture, the basis upon which these reactions occur" (Bleuler). It is true that similar reactions may occur in such diseases as schizophrenia and organic psychoses, and are then attached to the proper symptomatology of these diseases. Most of these syndromes are due to the exaggerated action of affects, affectivity being unusually responsive and readily brought to bear upon the associations, while reflective power is defective.

When phantasy is allowed full play, thinking is not concerned with actualities, but follows the direction indicated by instincts and affects. Characteristic of this, the "autistic" or "dereistic" thinking of Bleuler is, that in it conflict with the truth is disregarded, the "logic of the emotions" being followed. While this method of thinking is characteristic of children and primitive people, it is never entirely absent and answers to needs both affective and intellectual, particularly in fields in which we have no exact information (as in religious and philosophical speculations). It is in fact within

limits a prerequisite of intelligence, for out of free imaginings new ways are often developed.

In no form of mental disease does autistic thinking play a greater role than in schizophrenia (dementia precox) among the basal symptoms, of which disturbances of associations are of special importance. In this weakness of association, affects exert a preponderant influence upon the course of thought. In the severer forms of dementia precox, "affective dementia" is the most striking symptom. While it is not probable that affectivity is ever entirely extinguished and even very active manifestations of it occur at times, especially in the earlier stages, these patients impress us in general by the indifference of their demeanor, one of the surest signs of the disease being defect in modulating the emotions, an "affective rigidity" (Bleuler). Such patients manifest no reaction in response to a usually affect-exciting occurrence, or react with a wrong manifestation, laugh at bad news, weep at good news, etc., "parathymia." Even a usually dull patient may, however, give an adequate reaction upon the exposure of a painful complex. What affective reactions occur are usually unnatural, exaggerated or theatrical, do not impress us, and these patients seldom respond to *our* emotions, hence the difficulty in feeling ourselves "en rapport" with schizophrenics.

In epilepsy affective reactions are pathologically strong. An existing affect lasts unusually long, and is with difficulty displaced by new impressions.

It is clear that affectivity contains many elements, that it varies immensely in different individuals, and must be considered in estimating both mental and physical symptoms. We have no means of measuring it.

However, any physician who will cultivate the habit of studying the mental characteristics of his patients while judiciously questioning them can learn to form a good practical estimate as to their relative affectivity.

The control of the emotions, through the banishment as far as possible of disturbing or exciting influences (by quiet and isolation), the conveyance of favorable suggestions, especially through a calm and hopeful attitude on the part of physician, nurse, and family, supplemented when necessary by the judicious use of drugs and other measures for the control of pain, excitement and insomnia, cannot but have a favorable effect upon our results, both medical and surgical.

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DISCUSSION

EDWARD A. FRANKLIN, M.D. (411 Bank of Italy Building, Los Angeles)—The importance of affectivity cannot be overlooked because of its practical bearing on the treatment of difficult patients. Peculiar affect states put obstacles in our path.

Affectivity is closely entwined with character and emotion, and the James-Lange theory of its physical basis is most to be depended upon.

While heredity and environment play a most important role in influencing affectivity of a given normal individual, we must not overlook such important objective factors as diurnal variations, changes of climate, changes in barometric pressure, etc., and in the pathological individual changes produced by disease.

Affectivity is undoubtedly influenced by a great many factors mentioned by Dr. Allen, but there is nevertheless

a certain constancy of affect states in individual instances, as illustrated by the faculty of memory.

Disordered relationship between normal nutritional elements of the blood system and its proper utilization by nerve tissues gives rise to dysfunction on the part of the nerve tissues, and may readily cause affect changes.

Affectivity may also be influenced to a great degree mechanically by interference with the circulation of the cerebrum and chemically by pathological nutriment of the central nervous system induced by metabolic, toxemic infective, parasitic, autotoxic, endocrinic, blood dyscrastic and other states which seriously deprive the neuron of proper nourishment.

The affective state is purely subjective and, while different stimuli show differences in the affective state, still these differences are peculiar to the individual, although they may vary slightly under normal and greatly under pathological conditions.

The affective state can be submerged by suggestion and hypnosis, and these measures are of undoubted importance in treating abnormal affective states. Strong affects are particularly noted in mania, delirium, fevers, and all congestive states of the viscera due to cardiac diseases or lowered sympathetic tone, while weak affects are more marked in dementia, stupor, melancholia, anemic states or anything which impoverishes the nutriment of the cerebrospinal system.

Interchangeable affective states from strong to weak or vice versa is a common occurrence in many diseases of the central nervous system.

AARON J. ROSANOFF, M. D. (Westlake Professional Building, Los Angeles)—I should like to emphasize what Dr. Allen has already touched upon, namely, the effect that strong emotions, especially depression and anxiety, have upon the physical condition of patients. I am thinking particularly of involutional melancholia and allied conditions. In such cases, clinical experience fully bears out the experimental researches upon animals made by Cannon. Every psychiatrist is familiar with the almost invariable loss of appetite and progressive loss of weight which are to be attributed, I presume, to diminution and alterations of the secretions of the digestive organs and to diminution of gastric and intestinal motility. Unless the physician anticipates the threatened impairment of nutrition in the early stages of involutional melancholia, and secures for the patient rest, isolation, and adequate feeding by means of milk or other easily digested food given in small quantities at frequent intervals, but furnishing in the aggregate a sufficient total caloric value, the duration of that disease will be needlessly prolonged and its mortality will continue to be high.

It seems probable that hyper-adrenalism has something to do with abnormally intense emotional manifestations, such as are seen in manic-depressive psychoses. At any rate, I have been often struck with the abnormally large size of adrenals in many of the cases which I have examined at autopsy, and occasionally I have seen hyper-nephromata either in the adrenals or in the kidneys. It may be that in cases of this kind some of the adrenal tissue should be excised, just as we excise thyroid tissue in cases of hyperthyroidism. So far as I know, this has never been attempted, and I doubt if our knowledge of the relationship between adrenal hypertrophy and excessive emotional manifestations is sufficient today to justify such surgical interference. I mention this solely for the purpose of interesting those who have opportunities of performing autopsies upon cases of manic-depressive psychoses and involutional melancholia, so that eventually we may have such accumulation of evidence as would justify attempting radical procedure.

JOSEPHINE A. JACKSON, M. D. (1955 Morton Avenue, Pasadena, Calif.)—The topic timely, the subject matter exhaustively handled, the application practical—this is what we can always count on from Dr. Allen. "By no means the least important factor in the study of the patient is his mental makeup, particularly on its emotional side." Affectivity varies enormously in different individuals, and upon its degree and kind depend the power of adaptation of the individual to life.

Primitive man listened to his solar plexus, his feelings. Modern man is supposed to be governed by ideas, the cold product of the brain cortex. But the basal ganglia,

whose peripheral extension is the solar plexus, do by their proximity to the cerebrum give to every idea some warmth of feeling, some specific feeling tone.

His affectivity varies for the individual at different periods of his life, and in response to varying states of physical health. The chemistry of the body at the moment has its effect upon affectivity. No man commits murder on a full stomach; nor is a man held accountable for what he does in hot blood. Oliver Wendell Holmes asks pertinently whether the betting would be even if the prizefighter had indulged in a purgative on the eve of the fight.

"Is life worth living?" depends not on the liver alone, but on all the glands of internal secretion, for as a man feels so do his impulses flow. "Affectivity influences our thinking." An affectful idea holds the attention. The manic-depressive swings from pole to pole in his thinking as the chemistry of his body gives him the *feeling* of exaltation and again gives him the awful torture of depression.

A complex, what is it? "A group of conceptions bound together through having been built up around a strong affect and exerting a lasting influence on his psyche." "Guard well thy thoughts," for inevitably they build themselves into complexes.

The "affect-dynamic"—the point of departure for all studies in medical psychology. "The affect-accentuated complex is the mainspring of the symptoms—in the psycho-neuroses."

JOSEPH CATTON, M. D. (209 Post Street, San Francisco)—Dr. Allen's paper appeals to me because it demands consideration of the qualitative as well as the quantitative side of mental makeup. Contrast the quite due importance he gives the affective states with the often too great importance assigned to quantitative-intelligence-scaling. A mental rating has definite value, but tells but a small part of the story. One may get along with a mental defective rating if his affective side gives proper emotional attitude towards his surroundings and expresses itself in good moral makeup and personal appearance. Mental tests leave out affectivity entirely. Allen has shown that the emotional and the quality side cannot be neglected. He finds the influence of affects on mental content, but indicates that such influence is more marked lower in the scale—in primitives, children, and mentally abnormal. This last statement is only correct on the surface. I would stress the point that the *affective states are none the less active in the average civilized adult today* than in the savage, the child, or the insane. Intelligence is an overlay which has hidden, modified, guided, inhibited, and controlled affectivity in a measure; and in turn, intellectual activity has been modified, guided, controlled and made to serve affectivity. Increasing intelligence will not destroy affectivity; hence Allen's paper.

CLIFFORD W. MACK, M. D. (Livermore, Calif.)—*The great problem in medicine has always been and ever will be the conversion into useful agents of those theories that are proven experimentally.* Dr. Allen has given us a very clear resumé of the current thought and theory regarding affectivity, pointing out what can be given application in medicine. Psychopathology is like a laboratory searching for the truth about mental mechanisms. We as physicians wish to take the product from the laboratory and use it in our work-a-day contact with patients. How best to do that is the question we need answered. I think Allen's paper will help us along the road to more efficient application.

The study of the "human organism as a whole" is a most important principle to guide us in our work. In the survey of a sick person with either a physical or a mental illness, the various physiological functions are studied and their efficiency determined with such scientific exactness as we now possess. We are interested in the condition of the circulation, the renal function, the memory, and intelligence; so, in like manner, we should study the affectivity of our patient and the sum total of its influence upon the other physiological systems. The fact that thought itself is influenced and possibly conditioned by affectivity, that moods arise from associated memories in subconsciousness, that a complex may be projected into consciousness as a subjective symptom, all demand alert-

ness on the part of the physician in dealing with the complexity of disease.

Our knowledge of affectivity is of practical importance in diagnosis, treatment and prophylaxis. In gathering data for diagnosis we find that subjective symptoms may be the product of an emotional defect or their intensity may be increased by a particular state of feeling. Whether we believe in a physical origin of the emotions in the basal ganglia or the endocrine glands, we can all agree that the character of symptoms is influenced by the prevailing mood. A peripheral stimulus may only be sufficient to register discomfort, but in an emotional depression it becomes a pain, because the receptivity of the sensorium is increased. The neglect of this fact may lead us astray in diagnosis. In treatment our course of action is influenced in the same way. Despite the theories of emotion, we have all observed clinically the effect of the emotional reactions on the vital organs of the body. Dr. Allen mentions the bearing this has on the action of the brain, heart, unstriated muscles, secretory glands, etc. This is so positively demonstrated in the pathologically depressed patient that we must accept it as a fact. In every disease, then, we should consider the factor of emotions, retarding or accelerating reparative processes, nutrition, immunity production, and glandular function. Dr. Bush of the Arroyo Sanitarium tells me that the prognosis of pulmonary tuberculosis is greatly influenced by the patient's mood. Then looking at the problem from another angle, if the depression is primary, the secondary dysfunction of vital organs demands treatment. Psychic treatment alone is not sufficient, but should be supplemented by supportive therapeutic measures to prevent metabolic disorders, such as diet, drugs, and physiotherapy.

The prophylaxis of disease in general is intimately bound up with the affective mechanism of the mind. There is probably in the incipency of every organic disorder a period of functional weakness in the particular tissue that may be influenced by the emotional balance. This phase may not come under medical observation before symptoms are registered. It is noticeable in the neuroses and psychoses, which are purely functional in type. The somatic symptoms of the depressions, which quickly disappear with the oncoming elation, as well as in the opposite course of events, illustrate this point. The emotional overstrains acting over long periods of time are psychic toxins that ultimately may precipitate a neurosis or a disturbance of metabolism. The masterly control of the affective side of a patient's life then becomes a potent agent in the prevention of disease.

As our ability to apply these truths increases, our service to our patients will be augmented.

Cyrus C. Sturgis and James A. Greene, Boston (Archives of Internal Medicine, October 15), discussing the "Nutritional Changes in Exophthalmic Goiter: The Effect of Lugol's Solution," find that:

"A comparison of the body weight of these sixty-five patients with the standard weight tables shows that 80.2 per cent. averaged 18.2 per cent. below normal when they first appeared at the hospital. A study of the alteration in body weight following operation in thirty-six patients who had not been treated with Lugol's solution and therefore were operated on with an elevated metabolism, averaging +39, showed that all except one, in whom the weight was unchanged, lost an average of 5.2 per cent. of their preoperative body weight in an average of eleven days after the operation. The factors responsible for this loss of weight might be several, but it was concluded that the most important was the combination of the inability of the patient to consume normal quantities of food and the elevated metabolism, which may remain high for a period of ten days or longer following thyroidectomy. A second group of twenty-eight patients, who had been treated with Lugol's solution and in whom the metabolism was reduced to an average of +21 before the operation, was studied. In these patients, 18 per cent. had actually gained weight by the tenth post-operative day, and the loss of weight for the entire group averaged only 2 per cent. This loss is even less than the average decrease in body weight following operation in a group of twenty-five patients with colloid goiters and non-toxic adenomas.

THE CORRECTION OF FLEXION, ADDUCTION, AND INTERNAL ROTATION DEFORMITIES OF THE LOWER EXTREMITIES, RESULTING FROM CEREBRAL PALSY OF CHILDHOOD.

By RICHARD H. PYLES, M. D., Los Angeles

The treatment of adduction, flexion, and internal rotation deformities of the lower extremities, and without which nothing can be accomplished, is physiological rest.

The most efficient means of establishing physiological rest, the first and most important factor in the treatment of cerebral palsy, is the plaster of paris cast, which should be applied in all types of deformity as soon as the patient is seen. A decided relaxation is noticeable within twenty-four hours, and a general improvement will continue with the aid of proper systemic care up to the point actually produced by the brain lesion.

No operation yet devised has ever effected any reciprocal improvement in the affected muscles that have lost their cerebral control. Realizing that we have not a motor paralysis, but a destruction of the mechanism which governs voluntary expression, surgical interference is never indicated unless we have actual structural deformity to correct that cannot be overcome by manipulation under anesthesia.

DISCUSSION by George Rothganger, Oakland; Harry J. Schott, Los Angeles; Frank A. Lowe, San Francisco.

CEREBRAL palsy of childhood, if our present knowledge of the primary pathology and nature's processes of repair are correct, is an incurable condition in which the brain has been retarded in its normal development by some injury which has either partially or totally destroyed its anatomical and physiological integrity. These destructive processes, striking as they have the main switchboard from which all thought and action is distributed, puts the entire system in a state of chaos. The diagnosis is easy because every patient presents many of the classic symptoms that have been described for the disease.

With the familiar picture in mind, I shall not dwell further on an academic discussion of why and how this all occurred, but will direct my remarks toward the best method of administering justice to the patients by assisting them to make the most out of what they have left. This can only be done in three ways: by (a) localizing the focus of disease or lesion in the brain and attempting, through surgical treatment, to open up some of the natural channels of repair; by (b) physiological rest and exercise, administered according to the vital requirements of the patient, and by (c) making an effort to prevent or correct the deformity which has occurred as a result of the primary lesion.

The first has not met with very much success, except in a few isolated cases that have been treated early and where the continuity of the nerve fiber and its adjoining cell have been embarrassed by pressure from without rather than by destruction of some part of the brain. Where extravasations of the blood have penetrated between the covering membranes of the brain, and in some cases where the injury to the motor, sensory and spinal centers in the cortex are not extensive, skillful surgical treatment soon after the injury has been responsible, rarely, for gratifying results. I believe that most neurological surgeons will agree with the statement that our natural biological laboratories of repair cannot be helped in their work very often where the lesion has been one of long duration from the

cause just mentioned and never where any part of the cerebrum, its trunk, or axis have undergone pathological changes, brought about by developmental alterations in utero or any form of cerebrospinal meningitis after birth. Bearing this in mind we turn instinctively to the second and third methods of helping these sufferers, which brings me up to the subject of this discussion.

The treatment of adduction, flexion and internal rotation deformities of the lower extremities—The most important factor of such treatment, and without which nothing can be accomplished, is physiological rest. When we realize how difficult this is to obtain in a patient with a normal brain and communicating system, we will at once realize the vastly increased difficulties that confront us in our effort to produce rest in patients with many of the association fibers that deal with psychical function and the motor centers of the cerebral cortex either partially or totally destroyed. We must realize that the end-result will be compatible only with our understanding of the abnormal condition and our ability to intelligently direct this knowledge to operate in the patient's behalf. The treatment, therefore, cannot differ materially in any of the classic types recognized as monoplegia, hemiplegia, paraplegia, and diaplegia, because they express to us merely degrees of brain impairment, which may be permanent and progressive, or may be temporary, but which can only be modified by appreciating the requirements for natural repair.

The effort that is constantly and systematically carried to effect normal function through the channels of a defective mechanism is responsible for an expression of disassociated and exaggerated movement that is productive of deformity and the formation of toxic elements which flood the system when the inhibition of the higher centers is impaired or lost. Consequently, we have not alone the actual deformity, which will always be permanent to deal with, but an apparent condition which is responsible for the thermic and vasomotor expressions produced by the fatigue toxins on a highly sensitive, sympathetic nervous system. The histories of my 155 cases studied during the last five years may not be entirely accurate. However, they are sufficiently so to signify a reasonably definite knowledge of the primary cause. Sixty-five per cent were due to cranial injury at the time of birth, or shortly after. Fifteen per cent were due to improper development of the fetus in utero or from some systemic derangement of the mother, 10 per cent to cerebrospinal meningitis during the first two years after birth, and 5 per cent unknown. There were nine cases of monoplegia involving the right leg, two cases involving the left leg, two cases involving the left arm, forty-six cases of hemiplegia of the left leg, twenty-nine cases of paraplegia involving the lower extremities, and twenty-six of diaplegia. The treatment of this group has been routine, irrespective of the intelligence or mental age of the patient.

The patients suffering from speech defects have been given special training under the supervision of Dr. W. G. Stivers, and the endocrine balance under the care of Dr. Clifford A. Wright.

In the department of neuropsychiatry, the mental

age and capacity of the patient is recorded before entering the department of orthopedic surgery. Until recently this department has not been consulted in determining the operability of the patient, but as experience teaches the impossibility of satisfactory post-operative training in the most extensive types of cerebral destruction, no patient at this time is recommended for surgery that cannot pass a grade of 50 per cent or better under the standard classification. Upon this basis about 75 per cent of the following patients have undergone some form of surgical operation to improve or correct their abnormalities, not including work done on the upper extremities.

Twenty-five cases of thigh flexion contraction were operated by Souter's method. An incision, beginning just above the anterior superior spine, is carried vertically downward for about three inches, the fascia is incised transversely down to the great trochanter, and the anterior and inferior superior spines are separated from the ilium, together with their muscle attachments. The thighs are then hyperextended and abducted. The procedure lessens somewhat the traction at this point. Where the thigh adductors are contracted they are tenotomized, a condition which is present in most cases of the paraplegic type that have not been treated, as well as in many cases of hemiplegia. Knee-flexion deformities, produced by the overacting hamstrings, were treated by the Robert Jones technique in fifty-five cases. The biceps is removed at the point of its insertion from the head of the fibula and dissected up to a point about the middle of the femur. From this point it is carried forward and downward over the fascia lata and inserted subperiosteally through a raised flap into the center of the patella. Thirty-five cases of this operation were performed by me and the end-results closely observed. Three cases of this deformity have been treated by the method described by Stoffel, which attempts to reduce the power of the overacting muscles by dividing the nerve of distribution to the muscle itself. I have not had sufficient experience with this operation to make a positive statement as to its relative merits, but in one case in which the Stoffel procedure was done on the right and the biceps was transplanted on the left, together with a tenotomy of the thigh adductors, I find that voluntary movement in the left leg is much better at this time.

The foot is generally in a position of talipes equino varus, unless it has been previously corrected, or the achilles tendon has been tenotomized at an earlier date. For the relief of this deformity, the E. P. H. tendon is transplanted into the head of the first metatarsal, the tibialis anticus to the outer border of the foot and, in some instances, the tibialis posticus into the insertion with the peroneus brevis; in others, a subastragaloid arthrodesis was done. Contracted plantar fascia has been treated by the method described by Steindler, in which all of the attachments are loosened from the os calcis. Arthrodesis operations on bone that have not completed their ossification are not very satisfactory.

The equinus in all of our cases has been treated by a tendoplasty to lengthen the achilles sufficiently to overcorrect this type of deformity, and never by a tenotomy, as the tibialis anticus and the pero-

nei will frequently take up the pull when the tension from the opposing extensors has been released, producing the opposite deformity, especially if the patient's weight is borne upon the foot without the support of a brace provided with a 90 degree down-stop at the ankle joint. All of these patients, without exception, have been placed in plaster of paris casts at the time of the operation. If the deformity is confined to the foot, either a full or short leg cast is applied, but in all cases involving the thigh flexors, adductors and internal rotators, a body spica is applied, with the legs abducted as far as possible. Suitable braces are fitted as soon as wounds are sufficiently healed to permit, which is generally from four to six weeks after operation. Physiotherapy, including suitable muscle exercises, is begun at this time in an effort to encourage voluntary control.

CONCLUSION

The most efficient means of establishing physiological rest, the first and most important factor in the treatment of cerebral palsy, is the plaster of paris cast, which should be applied in all types of deformity as soon as the patient is seen. A decided relaxation is noticeable within twenty-four hours, and a general improvement will continue with the aid of proper systemic care up to the point actually produced by the brain lesion.

No operation yet devised has ever effected any reciprocal improvement in the affected muscles that have lost their cerebral control. Realizing that we have not a motor paralysis but a destruction of the mechanism which governs voluntary expression, surgical interference is never indicated unless we have actual structural deformity to correct that cannot be overcome by manipulation under anesthesia.

Reducing the power of the contracted muscle or muscle group by surgical treatment will afford temporary relief by converting the strain to groups that have long been in subjection, but unless the defective extremity is held in a neutral position by some form of fixation dressing, a deformity opposite to that corrected will develop in a very short time.

Neither the accurate mental age nor the extent of the brain lesion can be determined until the general nutrition of the patient has been improved and the circulating toxins reduced to a minimum. The patient must be thoroughly relaxed and accustomed to his or her environment.

None of this series of cases under the most efficient care have made any change in their mental capacity ratio. Experience by personal contact and educational advantages that minimize the strain on the emotional centers improve the patient by developing a communicating system with the unimpaired part of the cerebrum. The result depends upon the scope of the decerebration.

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DISCUSSION

GEORGE ROTHGANGER, M. D. (4501 San Pablo Avenue, Oakland, Calif.)—In this paper Dr. Pyles presents an enviable experience in spastic paralyses. He deserves much praise for his efforts to follow up the cases under the unfavorable conditions indicated.

I feel that the author would have added much to the value of the paper if he had expanded it for publication. The therapeutics is devoted almost entirely to the technical

side of certain surgical measures. The orthopedic treatment which preceded operation, except routine plaster of paris, has not been mentioned. It would be of value to know in more detail the reasons which led Pyles to select the several operative procedures that he did, and to know what his after-treatment was and for how long continued. One sentence would indicate that he believes all cases should be treated by open operation, except "where the vitality of the patient would not permit."

Operations directed to the relief of spasm have value only as they aid in the re-education of the muscles, and it is this re-education which is the real agent by which improvement is secured. Fixation with plaster of paris in the immediate post-operative period is of much value. But prior to determining the necessity for operation and in the very long, late post-operative period, well-constructed splints are preferable, for in them there is an opportunity for exercise of the weak antagonists of those affected with spasm, and one may thus avoid the atrophy of the complete fixation by gypsum.

HARRY J. SCHOTT, M. D. (1209 Brockman Building, Los Angeles)—In considering the treatment of spastic cases the surgeon must face a problem too often neglected and hurriedly passed over, as offering a hopeless prognosis or, at best, very poor results. One should not accept this type of case for treatment unless he be willing to devote to it prolonged and diligent care. The monetary expense to the patient is heavy, and one may be inclined to consider the end not justified by the means. The object of treatment, whether it be surgical or medical, is to establish voluntary control of muscles and co-ordination of movement. If the child is unable to walk we should attempt to get him on his feet, even if it be by means of braces and crutches. If he can be taught to help himself it is a benefit to him, as well as a heavy burden lifted from the family and attendants who must care for him.

I wish to emphasize the importance of the point made by Pyles of the great value of physiological rest, careful attention to physiotherapy (including muscle re-education), and to the correction of speech defects. Surgical treatment is indicated in certain selected cases, and the choice of methods depends, of course, upon the conditions present. It has for its object the restoration of muscle balance. Atrophic contractures, which do not relax under anesthesia, must be corrected by tenoplasties or tenotomies. The spastic contractures can be dealt with by either the muscle transplantations or by attacking the motor nerves by the Stoffel method. I believe that the Stoffel operation of neurectomy, in appropriate cases where the proper amount of nerve has been resected, and where the careful, diligent treatment is carried out, will give us better results than any of the other single procedures.

In our management of these patients our problem must be squarely met. Even though our results may not be brilliant in many, they will, in the vast majority, justify our efforts.

FRANK A. LOWE, M. D. (Flood Building, San Francisco)—My experience has been that considerable time has elapsed from the time of the occurrence of the palsy until the patient comes into the orthopedic surgeon's hands for care. The parents, relatives, or friends have consulted one or more physicians and met with discouragement. Frequently, the various cultists also have had their chance at curing them.

Due to the lapse of time, an operation for the relief or cure of the primary lesion is futile. The damaged area is irreparable, and any attempt on the part of the surgeon to eradicate it would only do further injury. In the upper extremity I find that braces or appliances hinder the progress toward recovery. So I depend upon physiotherapy, including active and passive massage and the training of certain groups of muscles to perform certain kinds of work. In the lower extremity it is more difficult to bring about a pleasing result on account of the definite function of supporting the body weight that must be performed. The adduction deformity of the lower extremity is corrected by a tenotomy at the knee by open incision and tendon elongation. The knee-flexion deformity, due to the overacting hamstrings, is corrected by a tendon lengthening of the various tendons involved by an open operation and sutures. The knee is put up in a plaster of paris dressing in an overcorrected position.

The talipes equinus deformity is corrected by subcuta-

neous tenotomies of the plantar fascia and tendo Achilles (Sayre), no sutures or stitches being used.

The subcutaneous tenotomy of the plantar fascia gives equal if not better results than the Stiedler operation and lessens chances for infection and scar formation, either one of the latter hazarding the chances for a good result. After the above tenoplasties and tenotomies are done and surgically dressed, the extremity is brought to an overcorrected position and put in plaster dressings, the parts being first padded with good absorbent cotton properly shaped and bandaged firmly but not tightly with a sleazy gauze bandage. Over this dressing is applied the plaster. Good absorbent cotton adds warmth and comfort to the parts, does not wrinkle, prevents pressure sores, and takes up moisture from the skin. The cast is fenestrated over the sight of the tenoplasties, allowing the latter to be dressed and the removal of stitches when open operation is done. The cast is split anteriorly its entire length to avoid constriction of the parts covered. Two weeks post-operative I find that these patients do better by removing the first dressings applied with the parts in overcorrection and followed by reapplying new casts, with the foot at a right angle to the leg and the knee slightly eased forward. The patient can walk in these dressings readily after a few days, with or without crutches, and enjoy life anew. At the end of four to six weeks the casts are removed and the foot, leg, and thigh modeled (depending upon the severity or extent of the involvement). From the model a proper brace can be made to support the extremity where needed. The casts are again applied and the child permitted to still further improve in the retaining dressings, until the appliance or brace is finished; then the casts are removed and the appliance fitted, and the child can get about with or without crutches.

I find that patients of a very nervous, irritable disposition and those who find it difficult to talk show a very marked improvement immediately after the tenotomies on the tendo Achilles (Sachs), thereby releasing the pull on the muscles and nerves.

Probably not more than once in five hundred cases is it necessary to do a tendon transplantation.

I believe that the Stoffel procedure is of much benefit in certain selected cases where there is overaction in the muscles of the thigh, but only in exaggerated cases.

Attempts at correction without tenotomy or tenoplasty are futile and cause great distress, without benefit, and in certain instances has produced a flaccid paralysis (E. H. Smith). Doctor Pyles is to be greatly commended on his most excellent presentation of the subject of cerebral palsies of childhood.

DOCTOR PYLES (closing).—In closing, I wish to express my appreciation to my colleagues, Drs. Schott, Rothganger, and Lowe for the interest they have shown in so freely discussing my paper. Answering Dr. Rothganger's question, my experience has been that *no* treatment in the more severe forms of spastic paralysis precedes the plaster of paris cast. It affords the most efficient method of controlling the patient for accurate diagnosis and logical treatment. He has suggested in his discussion that operations directed to the relief of spasm are of some value. Many of the operative procedures in this series of cases were selected with the view of relieving spastic clonus by neutralizing the pull of overacting muscles. This is an unnecessary procedure. The plaster of paris cast, applied under anesthesia, accomplishes this without surgery. I have carefully watched the treatment of many of these cases, comparing them weekly with similar pathological changes that were treated entirely by physiological rest with equally as good, if not better, end-results. In this respect I must differ emphatically with Dr. Lowe's statement that there is danger of producing a flaccid paralysis in making a correction under anesthesia without doing a tenotomy or tenoplasty. Trophic contractures should not be corrected by force, but one is surprised to find how many cases recommended for surgery can be corrected by gentle manipulation when completely relaxed. The judgment of the surgeon is of importance in this respect. A flaccid or ischemic paralysis can only be produced by excessive traction on the soft structures or pressure from the cast. As the mistake can be recognized by inspection very quickly, it can only be attributed to negligence. The general tendency has been, I think, to

do too much operating in these cases, which not only increases the monetary cost to the patient, but retards the after treatment and imposes unnecessary suffering.

The work now being done by Drs. Royal and Hunter may shed a different light on the treatment of spastic paralysis, but until we have established the permanent results to be received by sympathetic ramisection, conservatism should govern our recommendations in all cases.

METASTATIC TESTICULAR CARCINOMA INVOLVING THE ABDOMINAL MEDIASTINAL AND SUPRA-CLAVICULAR GLANDS TREATED BY X-RAY

REPORT OF A CASE WELL TWENTY MONTHS AFTER TREATMENT

By H. J. ULLMANN, M.D., *Santa Barbara Cottage Hospital, Santa Barbara, Calif*

DISCUSSION by W. E. Chamberlain, *San Francisco*; Lloyd Bryan, *San Francisco*; Frederick H. Rodenbaugh, *San Francisco*.

TERATOMA testis, while fairly uncommon, are so often malignant, and when malignant are so prone to form metastases, that we should keep any means by which their growth may be retarded, even when a complete cure is impossible, fresh in our minds. Surgery alone is insufficient except in the earliest stages, and is hopelessly inadequate when metastases have occurred. In nineteen post-operative recurrent cases seen at the Memorial Hospital, New York, orchidectomy had been performed upon eighteen. There were eight recurrences in the groin, along the spermatic cord; seven in the abdomen, along the spermatic lymphatics, and four in the lungs. In six cases more than one region had become involved.

Ewing divides teratoma testis into three main varieties:

1. Adult embryomas or teratomas.
2. Embryoid, teratoid, or mixed tumors.
3. Embryonal malignant tumors.

There are many intermediate forms connecting these types, and the same tumor may present several structures. The tumors arise, with rare exceptions, from sex cells situated in the rete testis, and the teratoma may develop either toward the testicle and epididymis, involving both in a large tumor mass, or, much more rarely, toward the epididymis, forming a typical tumor of this organ. The retroperitoneal nodes at the celiac axis are often involved through the lymph channels of the spermatic veins, and an epigastric tumor is often the first sign of recurrence. This is especially common with the highly malignant embryonal carcinomas. From this point there may be rapid progress upward, so that mediastinal and even cervical tumors may divert attention and become the largest tumors in the body. Invasion of the spermatic and iliac veins with continuous tumor growth extending as far as the heart has been observed both with chondrosarcoma and chorioma. Discontinuous metastasis by way of the veins is most frequent, and gives rise to tumors of lungs, liver, brain, kidney, and stomach.

Barringer and Dean report nineteen cases of post-operative recurrent teratomas treated by radium or

radium and surgery, with five living; 3, 12, 17, 18, and 28 months after treatment.

I have only one patient to report, but the results of treatment were so prompt and satisfactory that we considered them of sufficient interest to bring to your attention.

C. G. White. Age, 35. Was referred by Dr. Thorner of Santa Maria June 12, 1922. Two and a half years previously his right testicle had begun to enlarge and harden. A year later it was removed. The pathologists report was teratoma. Recovery from operation was uneventful, and he felt well for fifteen months, when he began to have pain alternately in the back and groins. He reported to his surgeon three months later, eighteen months after operation, who found abdominal and cervical masses, and referred him to me for treatment. The patient stated that he had noticed the cervical tumor for the first time about ten days ago. He had had abdominal cramps off and on for three or four weeks which were growing worse, and he felt that he was rapidly losing strength. The only incident of interest in the family history was that his mother died of a breast tumor at thirty-eight. Physical examination showed an exceptionally well developed and nourished man. He looked sick and presented evidence of rapid loss of strength. There was a rounded, smooth tumor in the left lower cervical region 3.5 cm. in diameter. Roentgenograms of the lungs showed a moderate, smooth enlargement of the mediastinal glands, and there was a hard, reniform, slightly nodular mass in the right abdomen, measuring not less than 12 x 20 cm. The right testicle was absent, the left appeared normal. There were no palpable axillary, epitrochlear or inguinal glands. Routine blood and urine examinations were essentially negative.

Treatment was started immediately. My 100 per cent dose is the amount of radiation delivered at 50 cm. target distance in ninety minutes, with 1 mm. of Cu plus 1 mm. A1 as filter, 200 KVP and 5 milamp. An attempt was made to put at least 90 per cent of this dose into all tumor areas. It required six and one-half hours to do this, and the treatment was completed in eight days. He returned on September 6 for a second series. At this time, eleven weeks since the completion of the first treatment, the cervical mass was about 2 cm. in diameter, and the abdominal mass was just palpable. Seventy-two per cent of the first dose was administered in four days. Ten weeks later no evidence of any tumor mass could be found. Our records of February 17, 1923, state that on that date "No evidence of tumor found at any point. Has been and is working full time—clinical cure."

He last reported April 23, 1924, and the same negative findings were obtained. Roentgenograms of the lungs have been repeatedly negative. The slight mediastinal increase has disappeared. He is, therefore, well of his tumor twenty-two months after treatment was first instituted.

No report has been obtained relative to the type of teratoma originally found, but it is fair to assume that it was of the highly malignant embryonal type, because of its rapid and extensive metastasis and its prompt response to roentgenotherapy.

Third Avenue and Bath Street.

DISCUSSION

W. EDWARD CHAMBERLAIN, M.D. (Stanford University Hospital, San Francisco)—A most valuable part of Dr. Ullmann's paper is his description of his technic in this successfully treated case of metastatic testicular carcinoma. From our measurements of Ullmann's x-ray output we have calculated that the 100 per cent dose which he mentions amounts to 1300 E. (The E unit is that amount of x-ray which will produce 2,100,000,000 ions in 1 cc. of air, enabling it to conduct one electrostatic unit of electricity.)

My patient, Mr. A. J. G., was referred to me on December 18, 1923, many months after removal of the primary growth—a carcinoma of the testicle. When referred he had developed huge masses throughout the abdomen and a marked degree of cachexia. I considered him unsuited to heavy dosage, but gave him 850 E over the

back of the abdomen, repeated the next day over the front. These doses were delivered with 200 KV (crest) 70 cm. A. S. D., 35 cm. diameter areas, filters $\frac{3}{4}$ mm. cu. plus 1 mm. aluminum. On January 22, 1924, the large tumor on the left side of the abdomen had disappeared, and shortly after this all traces of tumor masses were gone. On January 22 and 23, I gave him 565 E posteriorly and the same amount anteriorly.

On March 17, the patient reported with masses in the left neck, the right mamma, and the liver. Fluoroscopically, there was no enlargement of the mediastinum. The patient was quite weak, and I was again afraid to use large doses. I determined upon relatively small doses over a relatively wide area, and treated him from neck to pubis at weekly intervals, delivering 150 E posteriorly and anteriorly each week.

For a time there was a very rapid improvement, with all masses regressing until none could be made out except that the liver never went back to its normal size.

About May 15 ascites began to develop, and the patient rapidly went downhill again, although a month previously he had been back at his work and in much better shape. The patient died on June 9, 1924. The most striking feature of this case was the disappearance of the widespread metastatic masses under the 150 E dosage, about 12 per cent of Ullmann's 100 per cent dose.

An exactly similar case which also developed distant metastases has been treated by me at the San Francisco Hospital, with the same marvelous response to radiotherapy. Some six months after institution of treatment, this patient was in excellent general health and all masses had practically disappeared, although the dosage had been only a fraction of the maximum.

The striking result in Ullmann's patient leads me to believe that when there are no contra-indications the first high voltage x-ray treatment should be of maximal intensity. Unfortunately, many of these patients do not reach the x-ray laboratory until so weakened and cachectic as to lead us to fear the results of such large doses. I plan to imitate Ullmann's technic when the opportunity presents itself, and feel sure that earlier administration of the large doses will result in the longest possible period of arrest of the disease.

LLOYD BRYAN, M.D. (135 Stockton Street, San Francisco)—This report of Dr. Ullmann's emphasizes what may frequently be done with high voltage x-ray therapy in hopelessly inoperable cases. Tumors of this sort are many times particularly susceptible to the radiation.

FREDERICK H. RODENBAUGH, M.D. (516 Sutter Street, San Francisco)—Ullmann's results are similar to those obtained in two of my patients, except that I have used rather small dosage—about 25 per cent of the amount used by Ullmann.

It is my impression that embryonic tumors of this nature, when susceptible to radiation, do not require large doses, but a small fraction of an erythema dose is necessary. The ultimate result is usually bad; the patient succumbs to cachexia, or metastasis, which cannot be controlled. However, the gratifying palliative result encourages the study of these interesting neoplasms.

I hope that Dr. Ullmann will report the progress of this case at the next meeting.

DR. ULLMANN (closing)—The reason for giving a heavy initial radiation to this patient was to obtain, so far as possible, what we call the optimum dose. This dose is one that will produce the greatest injury to the malignant cells and at the same time the least injury to the patient. The patient in this instance was in excellent physical condition and, therefore, could stand a dosage larger than a cachectic individual, i. e., a dose large enough to be distinctly injurious to the malignancy. It is reasonable to assume that a large factor in obtaining results in this case was this ability to withstand a large dose.

Chamberlain's excellent results, I believe, were due to good judgment in his attempt to obtain what, to his patient, was the optimum dose. We have a happy result from radiation treatment when we hit upon this optimum dose, which varies with every case. Where our results are poor we probably either fail to properly estimate the dose, or it is unattainable because of unknown factors present.

EARLY RACHITIC CHANGES IN THE FEMUR AND TIBIA

By HALBERT W. CHAPPEL, M. D., Los Angeles

Although the etiology of rickets is still unknown, and its early symptoms are frequently very obscure, an early diagnosis may be definitely made by means of the roentgen rays, and treatment started before the development of structural deformities.

Full discussion by William Palmer Lucas, San Francisco; Rolla G. Karshner, Los Angeles; William Sidney Bowers, Los Angeles; H. H. Markel, San Francisco.

THE etiology of rickets—a disease which may exist without symptoms, but which early affects the structure of the bones—is not known, and it is, therefore, very difficult to recognize and study in its early stages. Of the various theories advanced, that of defective feeding seems to offer a cause in the greater number of cases, the diet being so unbalanced that it really seems antagonistic to the deposition of calcium in the growing bone matrix.

After a most thorough review of the literature, one is unable to select a diet that will prevent rickets in every person. A low-grade infection, lack of sunshine and fresh air, insufficient amount of exercise, prenatal influences, or some constitutional disorder, apparently causes rachitic changes in cases where the diet has been carefully selected. On the other hand, rickets is frequently found in a seemingly well child of healthy parents where the diet has always been well-balanced, fresh air and sunshine have been abundant, and there was a normal amount of exercise each day. Rickety children are often fat, rosy, and apparently well nourished.

In normal developing bone, the areas of ossification, and the calcification, proliferation and arrangement of the cartilage cells are definitely marked off from each other. This orderly arrangement is lost in rickety bone, as the lime salts are deficient in some parts of the cartilaginous matrix, and irregularly deposited in others. There is also a marked increase of the proliferating cartilage cell zone, which, together with an overproduction of the osteoblastic elements, results in enlargement of the bony structure, but of an imperfect character because of the deficiency of the lime salts.

The growing line at the epiphyseal junction is broader than normal, the width also being considerably increased and easily felt when the ossifying cartilages are subcutaneous. There is excessive proliferation of the osteoblastic layer of the periosteum, which increases the circumference of the bone. Under proper treatment the rachitic changes give way to a more normal process of ossification. When discovered and treated early, the rickety bone frequently shows but slight changes from normal bone.

The large epiphyses, bent limbs, large square head, Harrison's groove, rickety rosary, "pot-belly," delay in closure of the anterior fontanelle, profuse head-sweating, delayed dentition, and marked muscular weakness, give a clinical picture so striking that rickets can hardly be mistaken. However, in mild cases it is difficult to determine what constitutes evidence of rickets.

Occasionally there are no symptoms except bow-legs (genu-varum) or knock-knees (genu-valgum), which mother felt sure did not exist a few weeks

ago. More frequently, vague symptoms with gradual onset, and general distribution, do not suggest rickets until there have been sufficient changes in the bones to cause the characteristic deformities. Abnormal lateral mobility and hyperextension of the knee joint, resulting from relaxation of the ligaments and from weakened condition of the muscles, contribute largely to bow-legs or knock-knees. The latter are also aggravated by the everted feet, so frequently seen in these cases.

Occasionally there has been no decrease in activity. More often there has been for some time vague symptoms which did not yield to treatment which, however, was not for rickets. An x-ray of the lower extremities apparently would have been the only definite way of determining the cause of the symptoms. It is this type of rickets so frequently overlooked, even by excellent diagnosticians, and responding quickly and rather completely to treatment, which I wish to emphasize in this paper.

An x-ray on one plate, from just below the crests of the ilia to and including the feet, is necessary, not only to determine the changes in the femur and tibia, but to give an accurate record of the deformity. In these very early cases the greater changes are at the lower end of the femur, and upper end of the tibia. The whole joint has a hazy appearance, the shafts near the epiphyseal lines are clearer and more transparent than normal. There is also a noticeable thickening at these points. The epiphyseal lines are considerably broader and not nearly so clearly defined as normally. Usually there is an increase in the calcified material in the epiphyseal region. The lower epiphysis of the tibia and fibula show changes similar to those just described, sometimes more marked, but frequently not nearly so noticeable.

Operative interference is not indicated in any type of rickets where the bones are still soft. Nor is it necessary to subject the patient to the prolonged use of braces. During the acute stage there is hyperemia of the entire joint, which should be protected for several weeks by complete rest.

The type of rickets which has just been described responds quickly to the following treatment. Very slight changes, if any, are made in the diet, but cod-liver oil is given for several weeks. Exposure to sunshine in the open is a routine.

Corrective treatment is begun immediately. By means of thick chamois-covered felt pads, placed between the internal condyles, in knock-knees, the internal malleoli are gradually brought together while the knees are held firmly to the table. This overcorrection is maintained about five minutes, then light plaster of paris casts are applied as rapidly as possible from the groin to and including the foot.

In this way correction is obtained with the first casts, without using any pressure during their application. No weight-bearing for four weeks. Then another stretching gives full overcorrection which is maintained for four weeks by walking-casts. The muscle balance is restored by high shoes with one-eighth of an inch float on the inner side of the heels and soles, and frequent stretching at the knees. In from two to four months after removal of the casts

correction is not only complete, but the x-ray gives evidence of normal or greater density of the bones.

A simple device, fastened to the table, keeps the knees fully extended during the stretching. This is made of two pieces of aluminum, twelve inches long, five inches wide, padded with felt and covered with chamois. The lower one is fastened to the table by two bolts with thumb screws, while the upper one is held firmly against the knees by two pieces of webbing passing through each end of the pads and buckling on top.

By gradually increasing the pads between the internal condyles, marked overcorrection may be obtained and held ten or fifteen minutes without discomfort to the patient, especially if the outer part of the ankles is protected by felt pads. As the appliance which holds the knees firmly to the table allows about 5 degrees of flexion, there is no unnecessary strain to the posterior part of the knee joint during the stretching.

Since the process is much more difficult in cases of bow-legs, the following appliance has been very helpful. Two small semi-circular pieces of metal, to one side of which is riveted a strap, then covered with felt, and to the other a narrow piece of metal four inches long with several screw holes, are fastened as closely together as possible. On the other end of each strap is a sliding felt pad, to complete the circumference of the leg. This appliance, which may be gradually widened to seven inches, is strapped on just above the ankles. The feet are held markedly everted by an assistant while the knees are slowly brought to a position of overcorrection and held there several minutes.

The procedure with casts is the same as with knock-knees, but the float on the shoes is on the outer side of the heels and soles. The feet must be carefully watched and the floats removed when the first sign of weakness appears.

Although the etiology of rickets is still unknown, and its early symptoms are frequently very obscure, an early diagnosis may be definitely made by means of the roentgen rays and treatment started before the development of structural deformities.

1136 West Sixth Street.

DISCUSSION

[EDITORIAL NOTE—Ordinarily, discussions of papers are limited to five hundred words. However, an exception is made in the case of Doctor Lucas' discussion, because of the tremendous importance of the questions raised by Doctor Chappel, and because of the additional opinion brought to bear upon the question as the result of original investigation.]

WILLIAM PALMER LUCAS, M. D. (University of California Medical School, San Francisco) — Doctor Chappel's discussion of the pathology of the bone in rickets is very well expressed. I am not in a position to discuss his corrective treatment and orthopedic stand, but concerning the etiology of the disease, although the cause is still obscure, I do not think we need to be as pessimistic as one would be led to believe from Doctor Chappel's introductory paragraph. Since Mellanby published his experimental work in 1915 on puppies, many very valuable contributions to our knowledge of rickets have been brought forward, and we are in possession at the present time of means of successfully preventing and treating early rickets before deformities have occurred. We know that rickets is controlled by two masters—one dietetic, and the other environmental. In cod-liver oil, we have a specific both for the prevention and cure of rickets. The origin

of its use is obscure, but we know that its anti-rachitic properties were appreciated early in the eighteenth century. Mellanby placed the use of cod-liver oil on an experimental and proven basis. The work in this country, particularly by Parks, has shown conclusively that sunlight or the artificial mercury vapor quartz rays equally prevent and cure rickets. When one discusses, however, the fundamental question as to what prevents the deposition of lime salt in the bones, we have not arrived at a final answer. On the other hand, we have various studies on salt and inorganic salt metabolism in relation to bony development, and have accumulated a great deal of evidence.

During the past three years, Doctor Martha Jones of the University of California Medical School has been carrying on a series of experiments with puppies which has conclusively shown that the diet of the mother during pregnancy has a very marked effect on the tendency of the puppies to develop rickets. In our experience, brood bitches which are fed on a mixed food containing a liberal amount of inorganic salts give birth to normal puppies, while the same animals fed on a diet low in calcium, produce litters of puppies which have a marked rachitic tendency. These puppies frequently develop severe rickets on what appears to be a well-constituted diet. It is a well-known fact that infants, as well as animals, vary tremendously in their susceptibility to rickets. Some infants will develop rickets to a marked degree on the same diet and under identical conditions on which others develop normally. The same is true of experimental puppies. In such cases the fault unquestionably lies in the individual and not in the diet or environment. Metabolic studies conducted in our laboratory, as well as in those reported by other investigators, showed that the distribution of calcium and phosphorus between the urine and feces in a rachitic child or puppy is different from that which occurs in the normal individual—a much larger proportion of both elements being excreted in the feces of the former than in those of the latter. In rickets the alkalinity of the feces and urine is increased with a marked decrease in the retention of calcium salts. Experimentally, this condition, which ultimately results in rickets, can be produced in a puppy on a diet which appears to be adequate, in respect to protein, fat, carbohydrates, vitamins, and inorganic salts, but contains an alkaline salt mixture, and may be cured with no change in diet or environment other than the addition of sufficient HCl to neutralize the excess of alkali. Here, again, individuals of the same litter vary tremendously in their reaction to acids and alkalis. In certain individuals who develop rickets quickly and to a marked degree, very large doses of acid are required to reduce the H ion concentration of urine and feces to neutrality. On the other hand, other individuals can tolerate relatively large quantities of alkali and not excrete alkaline urine and feces. In rickets there appears to be a very nice adjustment between the acids and bases and an individual's ability to store bone-forming elements. If rickets can result from too high a degree of alkalinity in the intestinal tract, it is conceivable that this condition may be the result of an insufficiency of HCl in the gastric secretion. Those infants who have relatively little HCl may develop normally when breast-fed, but if the diet is changed to foods having a higher buffer content and potential alkalinity, such as cow's milk, the amount of acid present may be insufficient for normal mineral metabolism. Faber has shown that between 50 and 60 cc. of N/10 HCl are required to reduce the H ion concentration of a given quantity of cow's milk to a pH of 5.0, while 15 to 20 cc. of N/10 acid are sufficient to reduce the pH of a like quantity of human milk to the same value. If rickets is due to faulty absorption of the calcium salts in the intestines as the result of too high a degree of alkalinity, we can explain why artificially fed infants are more prone to the disease than those who are breast-fed. Individual difference in HCl secretion may also explain why one of a pair of breast-fed twins is rachitic and the other not.

While diet and hygiene are important factors in the production and cure of rickets, I am of the opinion that the diet of the mother during pregnancy and lactation is equally important in determining the susceptibility of an individual. Statistics show that the average American dietary is low in minerals, especially calcium. This is

particularly true of the poorer classes in large cities who cannot afford sufficient quantities of the mineral-rich foods, such as fresh fruit, green vegetables, and milk. In the light of our experimental observations which agree well with clinical experience, we dare to believe that when the dietaries of expectant mothers are planned to include liberal quantities of inorganic constituents in their proper proportions, a long step will have been taken toward the eradication of this disease which has baffled the medical profession for so many generations. If this theory is proven true, rickets of the future will be the responsibility of the obstetrician rather than the pediatrician.

ROLLA G. KARSHNER, M. D. (1136 West Sixth Street, Los Angeles)—As Doctor Chappel has justly stated, the x-ray is distinctly valuable in the recognition of rickets. However, a number of conditions must be excluded. It occurs most commonly at an age when other bone dystrophies, likewise manifesting multiple and symmetrical lesions, make their appearance. The differentiation is made by directing attention to the epiphyseal line. In rickets this is profoundly disturbed. It becomes softened and spreads, often with a roughly saw-tooth appearance. The end of the diaphysis resembles an inverted saucer, most marked in those joints where the mechanical forces are in line with the shafts. The epiphysis itself is not disturbed except possibly as a result of generalized atrophy. Often the lime salts are slightly condensed at the epiphyseal line. There is swelling of the periarticular soft tissues. The above changes cause limitation of motion and a general atrophy of the bones with softening, bending, and multiple fractures often resulting from non-use and impaired nutrition. Rarely there is periostitis in the acute stage. The chest will show the rosary even when it is not demonstrable clinically, and in severe cases one may see atelectatic strips in the lung beneath the costochondral junctions. With proper treatment, calcium is deposited in the periosteum and the cartilagenous epiphyses, in the latter case not as a direct continuation of the bone, but somewhat separated so that the picture may be confused with scurvy. In healed cases one often notes thickening of the cortex; for example, notably along the inner border of the shaft of the tibia and transverse lines of density in the ends of the shafts. The epiphyses remain expanded.

In chondrodystrophy the bones are shortened, dense; fractures are rare. The ridges for muscular attachments are enlarged. The joints are normal. The hands, feet, and changes in the base of the skull are unique. The shafts of the bones expand abruptly at the epiphyses, and ossification is deficient, irregular, often with localized overgrowths. The changes in cretinism are somewhat similar to those of chondrodystrophy.

Hereditary deforming chondrodysplasia (multiple oxostoses) often involves the epiphyses much as chondrodystrophy, the differential point being the formation of tumors of various density arising from the cortex, most frequently juxtaepiphyseal, and pointing away from the epiphysis. Osteopsathyrosis presents markedly diminished bone density, deformities, fractures, but no changes in the joints or epiphyses. In congenital lues in infants the destruction is in the epiphyses, principally, however, sharply circumscribed on the diaphyseal side at the junction of the periosteum and epiphyseal cartilage. There is usually periostitis, but no saucer-like expansion of the epiphyses. Scurvy presents intact joints and epiphyses with the destructive Trümmer zone simulating a second epiphyseal line, and there are frequently subperiosteal hemorrhages. Nutritional disturbances and arthritis (Still's disease) do not involve the epiphyseal lines.

WILLIAM SIDNEY BOWERS, M.D. (1136 West Sixth Street, Los Angeles)—In recent years preventive medicine, particularly in pediatrics, is rapidly advancing. I am very glad to see Doctor Chappel stress the point of an early diagnosis and treatment in rickets before marked deformity has occurred. In the more advanced cases, the parents frequently diagnose this disease, but then such marked deformity has occurred that, although proper curative and orthopedic treatment is instituted, it is almost impossible to overcome the deformity.

I do not agree that we have not advanced in our knowledge of the etiology of rickets, for in the past five

years we have acquired considerable valuable data concerning this disease. The outstanding factors in the etiology are both dietetic and environmental. The determining factors in the diet are not entirely settled, but depend upon certain salt combinations—hydrogen ion concentration, and the presence or absence of an unknown constituent closely associated with fat soluble A vitamin. The factor of environment involved is the presence or absence of radiant energy.

The seemingly well child mentioned as developing rickets on a well-balanced diet, with sunshine, fresh air, and exercise, would not have developed it, I feel sure, had cod-liver oil, or even radiant energy in some form, been properly administered, or possibly egg-yolk. Now, while this preventive treatment need not be instituted with all infants, certainly the pediatricists and others practicing with infants should recognize certain conditions which predispose to rickets, namely, prematurity, pigmented skin, and extra-rapid growth. In these cases proper preventive treatment against rickets should be instituted.

Regarding the early recognition of rickets, I believe it can be diagnosed clinically in the majority of cases as early, and in some cases earlier, than with the roentgenogram. In other words, a negative roentgenogram does not rule out early rickets, and while the roentgenogram is a valuable aid in the diagnosis in many cases, it is not a necessity in all cases. The blood inorganic phosphate findings are quite characteristic in rickets, but not pathognomonic. Many recent investigators have emphasized the difficulty of establishing a diagnosis of rickets in the early stages from the clinical findings, but certainly if the findings warrant a probable diagnosis of rickets, it is better in this disease to err on the safe side and treat the case for rickets, for this treatment in itself is harmless.

The early signs of rickets are cranio-tabes, differentiating this from congenital ossification; rachitic rosary, ruling out scorbutic rosary, and cranial bossing, ruling out luetic bossing. I believe such findings as flabby musculature, wide fontanel with surrounding softening, and delayed dentition, when occurring in conjunction with some of the above mentioned signs, are of aid in the diagnosis, but existing alone are of little value. Enlarged epiphyses, Harrison's groove, bent limbs, "pot-belly," delayed closing of fontanel, occur relatively late in the disease. Head-sweating, anemia, and palpable spleen are not dependable findings.

The orthopedic treatment as outlined by Chappel would seem conservative, and I would expect it to bring results.

H. H. MARKEL, M.D. (380 Post Street, San Francisco)—Doctor Chappel's paper is of peculiar interest to me, for I have recently had a family of three children under my care for knock-knee. The first child, a boy of 8, was so far advanced that an osteotomy of the femora was necessary. The second, a girl, needed casts only, which were later wedged on the outer side, and then wore braces. The youngest, a girl of 3, is fat and rosy and apparently well, but if she continues to be fed as the other children were she will develop a knock-knee. But I have given her mother a shotgun prescription of cod-liver oil, fresh meat and vegetables, and *sunshine*, and I expect to prevent her deformity from appearing. Another thing I have noticed is that all children who come to me for bow-legs or *knock-knees*, have *not had fresh meat to eat*. Even with a full set of teeth, the mothers all seem to fear giving them meat—why I cannot tell, except possibly a fear of choking. Recently, too, I have had consultations with Dr. Martha Jones regarding these early rachitic cases. She has assured me that her experiments have shown that deficiency of calcium metabolism in the mother in the late stages of pregnancy is responsible for rachitic changes in the young. This is manifest in the well-known saying, "For every child a tooth." I am sure that there are many more cases of rickets in California than we have formerly considered, even though we have an abundance of sunshine and fresh fruits during nearly the whole year—but we probably do not make the best possible use of them.

Physician (to rich patient)—You're all run down. I suggest that you lay off golf for a while and get a good rest at your office.—Life.

SOME IMPORTANT POINTS IN THE RAPID HEALING, COMPLETE RESTITUTION OF FUNCTION, AND LOW MORTALITY IN SUPRAPUBIC PROSTATECTOMY CASES.

By HERBERT A. ROSENKRANZ, M. D., *Los Angeles*
(From the Department of Urology, Los Angeles
General Hospital)

Since urologists have, during the past ten years, built up a system of procedure which has made possible the restoration of health and function to the patient and the adding of years of comfort to his life, so that he need no longer be subjected to a life of suffering coupled with impaired physical and mental activity and in many cases early death, I hold it to be our duty to correct any mistaken impression that may exist among some of the laity, that prostatectomy is a dangerous operation and leaves the patient impotent, a dribbler, or with some unhappy sequelae; because the simple, shockless procedure of suprapubic prostatectomy may be unhesitatingly recommended as a cure for this condition.

DISCUSSION by Louis Clive Jacobs, *San Francisco*; Robert V. Day, *Los Angeles*; Jay J. Crane, *Los Angeles*.

PREPARATORY TREATMENT—In one of my first papers on prostatectomy, read about nine years ago, I stated that the most important part of the prostatectomy was the preparation, and my experience since that time has confirmed that belief.

PROGNOSIS—A markedly emaciated patient is a poor risk, regardless of otherwise brilliant findings. I also draw the line on imbeciles, the bedridden and advanced tabetics. I believe that in the past we have been too narrow in our determination of fit surgical risks. We have been inclined to place our whole trust in the kidney function and blood chemistry findings, with a tendency to ignore a weakened myocardium, general debility, malaise, blood pressure, infectious and other complications, such as fistula in ano, carbuncle, bed sores, obesity with broken heart compensation and pyelonephritis. Such conditions must be relieved before operation. I do not operate upon a patient until or unless he is feeling good. I have not found high blood pressure up to 250 systolic to be a contra-indication to operation. A patient with a very low pressure should be carefully checked up. His vitality is low.

NURSING—The selection of competent, trustworthy nurses, is all important, not merely from the standpoint of morbidity, but from that of mortality as well. The urologist should provide himself with a sufficiently large list of reliable nurses of good character, or all of his good work may be for naught.

DIAGNOSIS—The more common mistaken diagnoses that have been referred to me for prostatectomy have been stricture, contracture of the bladder neck, acute and chronic prostatitis, tuberculosis of the bladder, bladder calculus, diverticulitis. Combination of prostatic tumor and stricture or prostatitis I have found to be not so rare, and unless these coincident conditions are first relieved the prostatectomy will either not cure the patient, or convalescence will be more or less indefinitely postponed.

CONSULTATION—I have found it a most excellent arrangement to have associated from the beginning of the treatment an internist. His counsel in a number of cases has proved invaluable.

GASTRO-INTESTINAL—Hygiene is of prime im-

portance. I have had several cases of fecal impaction, resulting from the extreme protrusion of the tumor into the rectum. In these cases the enema fluid will frequently not return, but must be syphoned away. To relieve these cases I employ oil enemas, flaxseed tea, castor oil, cascara, and other laxatives and cathartics. Unless the bowel has been thoroughly cleansed and regulated, a stormy convalescence is the rule. A high saline enema is frequently given daily. Cathartics are administered before breakfast, so that the patient's sleep will not be troubled. Charcoal tablets are administered thrice daily. Abdominal massage, walking, and easy physical exercises are prescribed.

HAEMOSTATIC—(1) Calcium lactate gr. XX t. i. d. for three days preceding the prostatectomy.

(2) Two cups of fruit gelatin daily for three days prior to operation.

(3) Fibrogen—one or two ampoules subcutaneously the night before operation. Two ampoules one hour before operation. I also employ fibrogen to adjust coagulation time of the blood when necessary.

(4) Spinal anesthesia. It lowers blood pressure and delays muscular contraction of the traumatized tissues.

CARDIAC—Endocarditis, provided compensation can be established, is by no means a contra-indication to operation. A myocardial weakness, however, that does not readily respond to digitalization is a treacherous condition. It is better for such a patient to lead a catheter life, or at any rate to dispense with operation. *Digitalization*: I utilize digalen one ampoule intravenously t. i. d., or digifoline one ampoule subcutaneously t. i. d.

TONICS—Aside from the old standard, elixir of iron, quinine and strychnine, I have achieved good results with cod-liver oil preparations in building up the patient's health, and I believe also in specifically increasing his resistance to infection and other complications that the asthenic may be exposed to. Containing as it does 400 times as many vitamins as any other preparation, is it not probable that we have too often failed to bear in mind the efficacy of this drug? Calcium chloride is a cell tonic and eliminant, and I frequently administer three grains intravenously once daily.

GENITO-URINARY PREPARATION—A bladder that contains more than 200 cc. of residual urine should be emptied fractionally, and an indwelling catheter inserted. Daily instillations of argyrol or irrigations of silver nitrate, mercurchrome, or boric acid are administered, according to the degree of infection and the tolerance of the patient, the object being to reduce congestion, infection, and sensitiveness of the bladder, and particularly of the prostate and trigonal region, in order to lessen the kidney reflex that occurs at the time of prostatectomy. *Fluids* are only moderately increased in quantity, since I have found it necessary to safeguard the myocardium as well as the kidneys. *Cystoscopy*: This procedure should be preceded by administration of acid sodium phosphate and hexamethylenamin for several days, and these drugs should not be left out of consideration in the preparatory and after treatment of those patients predisposed to pyelonephritis. If practicable,

an indwelling catheter is utilized for several days preceding suprapubic cystotomy.

ANESTHETIC—I prefer gas oxygen for the first stage, and spinal for the second stage. Some patients demand to be put to sleep for the second stage, and to these I administer gas oxygen or, if the prostate is very deeply situated, ether. I object to local anesthesia because it tears tissues, thereby reducing their resistance to infection. I have never seen any untoward result due to gas-oxygen anesthesia. Parasacral anesthesia is not adequate for suprapubic work. I have found a spinal anesthetic of from one and three-quarter to two and one-half grains of novocain, ideal in all cases except those with low blood pressure. To the latter named I give a general anesthetic. Spinal anesthesia justly deserves the high place that it holds in this operation, because it prevents hemorrhage by lowering blood pressure and by allowing the prostatic cavity and the muscles surrounding it to remain at rest for some hours following the operation. By this means it also minimizes what little pain might otherwise ensue; and also blocks any immediate renal reflex, and I believe minimizes shock by blocking many other reflexes. The patient partakes of eggnog every three hours following the operation, instead of suffering from nausea and vomiting, as may be the case after a general anesthetic. I once asked Mrs. Greer, head nurse in the urological department of the Los Angeles County Hospital, to what she attributed the excellent results that we were having with our prostatectomy cases. Her instant reply was: "Doctor, I feed my patients. I give them plenty of eggnog on the day of operation and thereafter." Some time ago I walked through the urological ward of our General Hospital and noticed a patient upon whom I had performed a prostatectomy three hours previously under spinal anesthesia. He was sitting up in bed, with a writing board on his lap and a pencil cocked back of his ear. He was folding a letter which he had just written, setting forth the happy outcome of his operation.

ONE-STAGE VERSUS TWO-STAGE—My results with the one-stage have been as good as with the two-stage in selected cases, and when I have taken care of the cases personally. The absolute indications for a two-stage operation I hold to be:

- (1) Bladder or kidney calculus.
- (2) Acute vesical retention.
- (3) A stubborn cystitis.
- (4) Intolerance to the indwelling catheter.
- (5) A prostatic tumor of enormous proportions.

In spite of the fact that my results and mortality with the one-stage operation have compared most favorably with those of the two-stage, and, although a patient occasionally dies after the preliminary cystotomy, an exitus that would have been illogically charged to the one-stage operation had prostatectomy been performed at that time, I am nevertheless leaning more to the two-stage operation for the following named reasons:

- (1) A more complete bladder drainage is obtained than by urethral catheter drainage.
- (2) Less shock at the second operation.
- (3) There is not so much likelihood of perivesi-

cal infection, although I think that all of us have encountered malignant infections that persisted in boring pockets following even the two-stage operation.

(4) Less congestion and swelling of prostate, due to absence of the irritating indwelling catheter. Less edema of bladder neck.

(5) No absorption of the occasionally very toxic urethral pus caused by the irritation of the catheter.

(6) Bladder is kept freer from infection.

(7) Less likelihood of epididymitis.

OPERATIVE—After the patient has been thoroughly prepared and stabilized, the important consideration is to remove the prostate with as little shock as possible. For this the suprapubic operation is ideal, in that it rarely requires more than seven minutes for its performance.

OPERATION—FIRST STAGE—After exploring for stones in bladder or in diverticulæ and for papillomata, etc., a sufficiently stiff one-half inch rubber drainage tube is introduced into the upper posterior wall of the bladder, and tightly secured by a purse string or other suture. The prevesical fascia is brought together with No. 1 continuous gut. In peeling up the peritoneum, care is taken not to separate the bladder from its anterior attachments to pubis and muscle. This requires some gentleness, but is worth the effort. Rectus fascia is sutured with *interrupted* No. 3 catgut to prevent hernia. Fascia and skin are sewn loosely around tube to insure free drainage of serum. Pezzer catheters get pinched, kink and tear, and their caliber is not large enough. I have never used them to any extent.

OPERATION—SECOND STAGE—The entire surface of the suprapubic opening is sharply curetted. I stretch the incision very little on account of the possibility of tearing the peritoneum. The incision is continued downward and if necessary a rectus muscle with its sheath is cut transversely, each to be carefully sutured with interrupted sutures later. After enucleation the rim of the bladder incision is freed from the rectus muscles and tightly sutured around a one-half-inch rubber tube, after which the muscle and skin are sutured separately. It is necessary to free the skin from its deeper adhesions before suturing it with the marine stitch. It is to this thorough method of suturing that I attribute the rapid healing and dry condition of the patient during convalescence. During the past two years several nurses have remarked that my cases remain clean and dry, "just like abdominal cases." *Hemostasis*: During the past ten years I have not seen fit to modify my procedure of tightly packing the entire bladder of those rare cases that bleed on the table, or of those cases that have tumors of such large size that they are potential bleeders and likely to bleed later on, even though they remain dry on the table. The pack is removed fractionally every three hours during twelve to eighteen hours. Of course, there is no room for a tube when the bladder is tightly packed. When the pack is removed, an indwelling catheter is inserted in the urethra. Pituitrin, in addition to being supportive, is also hemostatic.

POST-OPERATIVE TREATMENT—Frequent sips of

hot water, later water of room temperature. Pituitrin every four to six hours for several days. Digifoline thrice daily when that support is indicated. Morphine grains one-eighth plus atropine grains one-three hundredth if there is pain. Eggnog every three hours. Sitting position a few hours after operation, with occasional changes of position. *Enemas* and colon tube as soon as there are any gas pains. An enema is soothing and affords great relief from the pressure of gas-filled bowels upon the sore bladder. *Oliguria*: One thousand cc. intravenously of soda and glucose solution daily. Diuretin twenty grains thrice daily. The administration of 2000 to 3000 cc. of intravenous solution daily to elderly individuals will, I am sure, in a fair percentage of cases break down myocardial compensation, as will also the administration of a large amount of fluid by mouth. Myocardial weakening is the most treacherous complication that can occur, and the surgeon who can keep the myocardium in a stabilized condition will have the lowest mortality. *Pernicious hiccough* is stopped by hypodermics of morphine and atropine every two hours. *Hemorrhage*: A 5 per cent mixture of aluminum acetate in water is the most effective local injection. If this does not control, the bladder must be packed under an anesthetic. I have never found it necessary to pack a bladder post-operatively. Lately I have found fibrogen a valuable remedy. *Irrigations*: I frequently do not irrigate the bladder till the second or third day following operation, and then only with boric acid in the morning, supplemented by an instillation of 5 per cent argyrol in the evening. Instead of every day disturbing the sore prostatic pouch, which is doing its best to get along, I affect a compromise by having the nurse irrigate the drainage tube and bottle instead twice daily with mercuric chloride solution. This, together with keeping the suprapubic tube and incision carefully cleansed with alcohol does, I am sure, contribute to the freedom of infection which many of my patients have enjoyed. Cleanliness is next to Godliness, and its rigid application in these cases must be insisted upon to the same degree in which it is applied by the orthopedic surgeon. *Infection*: Infection in the prevesical space yields to swabbing with tincture of iodine and, if necessary, frequent instillations of mercurochrome 1 per cent. Infection of the prostatic pouch is treated by irrigations of silver nitrate, acriflavine, and instillations of 10 per cent argyrol. Pyelonephritis is treated by the usual methods and intravenously with 20 cc. of 1 per cent mercurochrome solution. My experience with mercurochrome intravenously in acute infections has caused me to regard it as one of the most valuable drugs that have been added to our list in a long time. It has been some years since I have had a sloughing wound in private practice, even in those cases complicated by stone. Careful operative technic, aseptic and antiseptic measures are responsible for this. It has been my observation that it is the germs that are brought in from the outside, and not those already there that do the damage. *Healing*: The small sharp curette is an invaluable instrument for removing redundant tissue and for freshening the suprapubic opening. Its discriminating use is an important factor in rapid healing in some cases.

Necrotic fat or other tissue should be promptly removed with a long thumb forceps. *Fever* is most commonly due to constipation and less commonly to infection.

GOING HOME too soon causes epididymitis, due to the many added strains that the patient is tempted to assume as soon as he arrives there. A few added days of sitting in a chair, with but little walking around the hospital, is the best for the patient. As soon as he begins to walk, he should wear a scrotal suspensory and continue to do so for several months. Patients with high blood pressure must be cautioned against overeating and overwork. Their blood pressure should be watched and controlled.

PNEUMONIAS, although rare, I have seen occur almost as frequently in those who were undergoing preparatory treatment as in those who had been operated upon. I have seen almost as many patients develop pneumonia following spinal as following ether or gas anesthesia. I believe that an infected environment, plus hypostatic congestion, play a far more important role than does the irritation of an ether anesthetic, although I do attribute one of my exits to this cause.

RESULTS—I have had one case of impotence following prostatectomy. After one year, however, the potency in this 67-year-old patient had improved to a condition better than that of the average man of his age. Recently I had a case of troublesome paresis of the bowel that persisted for four days following a spinal anesthetic. Since this condition, however, may occur after any pelvic operation, regardless of the type of anesthetic used, it would be unfair to discriminate against spinal anesthesia on this account. Dr. Crane at the Los Angeles County Hospital, in checking up on the residual urine of eighty-six patients before they left the hospital, found that 3 per cent had residual urine of as much as three ounces, 10 per cent about one ounce, and the remaining 87 per cent had none at all.

My first Los Angeles prostatectomy, performed almost nine years ago, is still living and in good health.

CANCER—Some four years ago I inaugurated the procedure of partial suprapubic prostatectomy for cancer of the prostate. I reported two cases. Inquiry today revealed that they are both in fair shape. One of them was operated upon four and one-half years ago, and is under the care of Dr. Granville MacGowan; the other was operated upon five and one-half years ago. Some time ago, having had the co-operation of Dr. Percy in some work on cancer of the bladder, I was impressed with the probable good results that could be achieved by the cautery method in cancer of the prostate. I have employed the method in several cases lately, and am inclined to believe that, by burning out the whole prostatic mass with the cautery and supplementing this by radium later on, we have the best procedure for attacking this condition. The operation is tedious, requiring sometimes two hours, the technic being to keep on burning until the *soft* surrounding tissues are felt.

MORTALITY—As has been so aptly stated: "Put a hundred men, varying from 60 to 95 years of age,

to bed for a few weeks and it need occasion no surprise if one or several of them die from something or other, even though no operation is performed." Taking this fact into consideration, urologists must congratulate themselves all the more for the very low mortality that they have been able to maintain in suprapubic prostatectomy—ranging from one-fourth of 1 per cent to 5 per cent. During a six months' service at the Los Angeles County Hospital a year and a half ago, I operated upon thirty-three unselected cases, some of whom appeared to be rather poor risks, but all of them recovered, a result due largely to the alertness and painstaking care of Dr. J. J. Crane, resident urologist. Gardner has reported 240 consecutive suprapubic prostatectomies, without a death. I have not had a death in private practice in about three and one-half years. Since urologists have, during the past ten years, built up a system of procedure which has made possible the restoration of health and function to the patient and the adding of years of comfort to his life so that he need no longer be subjected to a life of suffering, coupled with impaired physical and mental activity and, in many cases, early death, I hold it to be our duty to correct any mistaken impression that may exist among some of the laity that prostatectomy is a dangerous operation and leaves the patient impotent, a dribbler, or with some unhappy sequelae; because the simple, shockless procedure of suprapubic prostatectomy may be unhesitatingly recommended as a cure for this condition.

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DISCUSSION

LOUIS CLIVE JACOBS, M. D. (Flood Building, San Francisco)—Dr. Rosenkranz's paper is a valuable contribution to modern surgery of the prostate. It deals with a large number of procedures which are essential to the complete recovery of the patient. For when all is said and done, an operation for the removal of the prostate is not a therapeutic success unless the candidate is in good physical condition, say, three months following the prostatectomy. To achieve this result, is the ambition of every urologist. Hence, we see the importance of the preliminary treatment and preliminary investigations.

I make a routine cystoscopic examination, roentgenological examination, complete blood examinations, with estimation of the blood urea and a urine examination in every case. Blood creatinin is a valuable index of the kidney function, but the laboratory estimation of the same is unreliable on account of the variation of the colorimetric reading with a standard that is unstable.

In regard to the fractional emptying of the bladder and the insertion of the indwelling catheter, I am heartily in accord with what the doctor states. Recently, I saw a patient in consultation, from whom a very large amount of urine had been withdrawn at the first catheterization. This was followed by a hemorrhage, and shortly afterward the patient died from anemia of the heart muscle.

There has been a noticeable decrease in the mortality from prostatectomy in late years, especially in urological services under the supervision of genito-urinary surgeons, such as Dr. Rosenkranz. This is due, I believe, to the determination of the surgical risk and the minute and painstaking attention and care given to the pre-operative and post-operative phases of the surgery.

As regards the choice of the one or two-stage operation, I am a strong advocate of the single-stage procedure. Usually it can be advantageously performed, though there are some exceptions where the two-stage method should be done. The suprapubic approach reduces the post-operative complications, such as fistulae

and impotence, to a minimum, and is, therefore, the procedure to be preferred. There should be a minimum of time consumed in the actual removal of the prostate, and in my experience the anesthetic of choice is "gas and oxygen." My patients are usually conscious within five minutes of the tying of the last suture. Sodium citrate solution should be administered per rectum immediately, and fluids in moderate quantities fed through the mouth. As a safeguard against embolism, nothing should be administered per rectum after twenty-four hours have elapsed.

The following points in the doctor's operative technic are of prime importance and, to my mind, cannot be too forcefully mentioned:

Not to separate the bladder from its anterior attachments.

Incise into the high part of the bladder.

The doctor's methods for controlling hemorrhage and for draining the bladder are excellent. I pack all my cases with three-inch gauze, and allow it to remain to the third day. Occasionally, I place a tube alongside of the gauze. I never insert a catheter into the urethra until at least ten days have elapsed, and sometimes not until three weeks. If I encounter severe hemorrhage during the operation, I aspirate with the air-suction aspirator inserted into the wound and, with the bladder wall retracted, suture the capsule of the prostate.

The pharmaceutical preparations enumerated by Dr. Rosenkranz are all of great assistance in sustaining the patient, and should be used wherever indicated. Just two more drugs, I believe, deserve mention, and those are camphorated oil and caffeine.

As regards residual urine, following the removal of the prostate, this is almost always due to tags of prostatic capsule or small portions of adenomatous tissue lying in the posterior urethra, and it would be necessary in these cases to fulgurate them through the cysto-urethroscope.

ROBERT V. DAY, M. D. (412 West Sixth Street, Los Angeles)—Doctor Rosenkranz has given us a very complete and most excellent discussion of prostatism and its cure. Everyone must agree with him that the preparation of the patient is the most important part. In the bad risk I prefer the two-stage operation. With the younger patients—say under 70—without evidence of serious cardio-circulatory disturbance or irreparable damage to the kidneys by reason of the long-continued back-pressure, the one-stage operation is probably the one of choice. We control bleeding in the one-stage operation by suturing the posterior lip of the bladder neck, followed by the use of the Pilcher bag. With the two-stage operation, however, it is difficult to suture the bladder neck, and we rely entirely on the Pilcher bag. The bag causes much less distress than gauze packing.

In the main, I agree most heartily with Doctor Rosenkranz. However, I am opposed to indiscriminate medication, such as bitter iron tonics, diuretin, urotropin, calcium chloride, etc., because they are apt to upset the patient's digestive apparatus. (Digitalization is frequently necessary.) Iron and vitamins are so abundantly present in spinach, egg-yolks, and milk that such medication would seem superfluous. Water, lemonade, fruit juices, and buttermilk are the best urinary antiseptics and diuretics. Enemas often cause tenesmus and are occasionally responsible for the dislodging of a clot with resulting pulmonary embolism. Unless the patient is in great shock I never give intravenous salt, glucose, or sodium bicarbonate, for the reason that most of these men have emphysema and chronic bronchitis, and large amounts of these substances perhaps favor pneumonia. Sodium bicarbonate, after sterilization by heat, contains a considerable amount of sodium carbonate, and almost always causes a severe chill or reaction. Hemostatics are not necessary if the bleeding is properly controlled by suture and hemostatic bag.

Spinal anesthesia is invaluable in a majority of suprapubic prostatectomies. It got a bad name when the anesthetic agent used was stovain—a very toxic and dangerous drug for spinal anesthesia. We have records of over 5500 cases of spinal anesthesia used in the Los Angeles General Hospital since 1910 on the urologic and

rectal services, and many hundreds prior to 1910. The anesthetic agents in this series were tropacocain and novocain, either one of which is satisfactory.

JAY J. CRANE, M. D. (Westlake Professional Building, Los Angeles)—Dr. Rosenkranz's paper is very complete. He has dealt with all the different points very thoroughly that lead to a low mortality, and the complete restitution of the patient operated upon for prostatism. Dr. Rosenkranz has had a wide experience, and the results he has had I know have been excellent, for I have seen many of his patients cured and out of the hospital in four weeks, and I am glad to have him put down in writing the things he pays particular attention to, so that we can follow his suggestions.

It is routine at the Los Angeles General Hospital to do a roentgenological examination of the urinary tract, a complete blood chemistry, a complete urinalysis, kidney efficiency test with phenolsulphonephthalein and a bladder cystoscopic, besides the routine physical examination, which includes the blood pressure on every candidate for a prostatectomy. In following this procedure, it is not infrequent that we pick up symptomless renal calculi, diverticuli, bladder calculi, strictures, and cancer, any one of which might be overlooked, were this routine not followed, thereby changing a good prognosis to a more doubtful one. As Dr. Rosenkranz has said, one cannot depend solely upon laboratory test. The patient must feel good, and have a good moist tongue, as well as a good kidney function and blood chemistry.

In spite of the fact that many brilliant results have been obtained with the one-stage suprapubic prostatectomy, I am in favor of the more conservative two-stage method. It has been my observation that the patients operated upon by the two-stage method have, as a rule, as short a convalescing period as those that have the one-stage operation. It is a fact that most of the poorer risks receive the two-stage method, so why not conserve the strength of the patient in better condition also, for he will usually make a much better convalescence. A vasectomy done at the time of the suprapubic cystotomy will eliminate the embarrassment of an epididymitis when the catheter is replaced in the urethra. I have had patients tell me that they suffer more with an epididymitis than with a prostatectomy. Just recently it became necessary for me to do an orchectomy one month after the patient had left the hospital and had a normally functioning bladder. The patient developed an epididymitis, which broke down and had to be opened twice. Abscesses continued to form until the sloughing epididymis and testicle were removed. This would not have happened had a vasectomy been performed at the time of the suprapubic cystotomy.

Dr. Rosenkranz's method of controlling hemorrhages by packing the prostatic cavity and bladder at the time of operation is absolute. As Dr. R. V. Day has said many times, after packing the bladder you can go home and sleep, without fear of hemorrhage. It is true that this procedure is painful, but unless the wound is sutured too tightly I do not believe it is any more painful to the patient when the pack is removed than when a bag used for the same purpose is removed, and it does control the hemorrhage. There is no question about that. A small pack in the prostatic cavity, unless held by a sponge holder strapped by adhesive to the belly wall, or by a catheter through the urethra, is, I believe, dangerous, for a hemorrhage of any moment will usually carry the pack to the fundus to obstruct the outflow of urine and blood through the incision, allowing the bladder to fill up with blood clots. Dr. Rosenkranz's rule of packing the bladder of all cases that have very large prostates, and of those who show a tendency to bleed at the time of the operation, is a very safe and conservative method.

I am of the opinion that the spinal anesthetic is by far the safest anesthesia for both stages. I have found many patients who are more afraid of being put to sleep than they were of the operation, and who would submit readily to the operation if they could escape a general anesthetic. I believe the majority of cases will make a better convalescence following spinal than following any other form of anesthesia.

I have found that the tube put in the wound for drainage at first when a pack is not used should be large.

Nothing under one-half inch in diameter should be considered. When the pack is removed, such a tube should be put in for a few days. As soon as all gross evidences of hemorrhage have subsided, the two-inch tube may be readily replaced by a Pezzer catheter, which will not retard healing of the wound during the following ten days, allowing the prostatic cavity to heal unmolested. At the end of ten days a catheter can safely be inserted through the urethra, allowing the suprapubic wound to close.

DOCTOR ROSENKRANZ (closing)—The reason that I have stressed close observation and safeguarding of the myocardium is that there has not been evolved a satisfactory measurement of cardiac reserve. The spirometer does at times, however, seem to be of some use in checking up this most important factor. I take daily blood pressure readings post-operatively, and keep the pressure at a satisfactory level with pituitrin and strychnine.

As regards mercurochrome irrigations, it is well to bear in mind that mercurochrome is mercury, the daily administration of which may cause a local sclerosis, so that I would not recommend it for continued daily usage.

The reason why some cancers are of very slow growth or have their growth arrested following their partial removal, or why some of them even get well spontaneously following such removal, is not known. I have discussed the subject with Dr. Percy, and he has noticed that occasionally patients have gotten well following partial removal with either the knife or the cautery.

Dr. Day and Dr. Jacobs have advocated the suture of the capsule in cases of bleeding. About three years ago, on inserting my finger through the suprapubic incision into the prostatic urethra prior to enucleation, I felt a large artery pulsating in the urethra. The artery was almost one-half centimeter in diameter, and was palpated by Dr. Crane and the resident urologist of the General Hospital. I expected a lively hemorrhage, and got it. It was, however, immediately and completely controlled with the bladder pack. I have never found it necessary to resort to any other expedient. The pack does occasionally cause some pain. This can, however, be satisfactorily controlled with morphine, and I have had some patients in whom a tight bladder pack has not caused pain. I learned the bladder pack from Colonel Freyer. During the International Congress of Surgeons in London in 1914, I saw him remove the two largest prostates that I have ever seen. The blood spurted and welled out of the suprapubic wound in each case, as was to be expected. He immediately packed the entire bladder in each case with a five-inch roll, which completely and immediately checked the bleeding. I shall always remember his technic as one of the most valuable points that I have ever picked up, and I believe that, in time to come, this method of packing will be used with increasing frequency. It is safe, sure, simple and immediate in action.

I am glad that Dr. Jacobs stresses preliminary roentgenological, blood chemical and cystoscopic examinations, for, although the laboratory sometimes misleads us, it does at times give us a danger signal that would otherwise have been withheld.

As regards the danger of embolism following an enema, I may add that I use a soft catheter and that nothing has afforded my patients greater relief after operation than has the enema for removal of gas. Colon tubes I have found to be absolutely inadequate. I believe that many cases of so-called embolism have been something else. I have known of patients to pass out while straining at stool, and while sitting up in bed eating a meal. Both cases were attributed to embolism, but there was no post mortem. I have had one case of infectious embolism that recovered. Ten years ago I removed a very large prostate, together with a large calculus from a patient who had had a large prostate removed perineally some years previously. His bladder was very badly infected. About three days after operation I found him with a paralysis of the tongue, paralysis of pupils and one side of the face, etc. He also had a putrid and severe pneumonia. It was a case of brain and pulmonary embolism combined. This patient had a wonderful constitution, and is living and well today.

As Dr. Daly has suggested, we must use discrimina-

tion in medication. I have used cod-liver oil, properly emulsified, so as to render it palatable, and I am sure that it has built up the health of certain patients.

I wish to thank Dr. Jacobs, Dr. Day, Dr. Stevens, and Dr. Crane for their good discussions.

Spinal Drainage: Value in the Treatment of Early Poliomyelitis—The data gathered by J. C. Montgomery and W. C. C. Cole, Detroit (Journal A. M. A.), in twenty-six cases of poliomyelitis strongly suggest a possible beneficial effect on the outcome of the disease to be derived from early and repeated subarachnoid drainage. Vomiting was noted as the predominating initial symptom. Fever was the symptom complained of in thirteen cases. Headache was noted relatively rarely, although at some time during the course of the disease it was present in 70 per cent. Pain was noted in only 54 per cent. Fever occurred in every instance, and vomiting was noted in 60 per cent of the cases. Some redness or injection of the tonsils or pharynx was noted in practically every instance and persisted from one to two weeks after the onset of the illness. This was a matter of varying intensity; in some cases there was only a mild redness and in others a severe angina, the hyperemic area extending up into the nasopharynx, where a grayish-white exudate was almost invariably seen. Hyperesthesia was noted in every instance, although it, too, varied considerably in its intensity. Irritability was observed in about one-half the cases, although it was somewhat more constantly present in the early ones. Of the clinical signs, aside from hyperesthesia and pharyngitis, those most constantly present were neck rigidity and resistance to anterior flexion of the spine, these signs being found in 92 per cent of all cases, or in all but two. The reflexes were most unproductive of information in early cases. They were found normal, exaggerated, sluggish and, absent. The most that could be learned from them was that only in rare instances were they normal, and in one or two instances a difference between the two sides was of some help in arriving at a diagnosis. In two cases erythema of the face and neck was noted, and in one instance a definite punctate scarlatiniform eruption was present over the chest and back. This rash was so suggestive of scarlet fever that such a diagnosis was held probable, particularly in view of the severe angina that was present, and the absence of meningeal irritation. It was only when paralysis occurred that the true nature of the illness was recognized. Estimates of spinal fluid pressure were based on experience regarding rate of flow. While the pressure apparently varied in its intensity, nevertheless it was definitely increased in every instance except two, and these were beyond the acute stage. Similarly, the amount of fluid was increased in every instance except one. The degree of pleocytosis varied from 10 to 800. In some instances, when puncture was performed in the extremely early stage, practically no increase was detectable. It was a frequent experience that the cell count was higher on the second, third and fourth days of meningeal invasion than on the first day, even in the face of definite improvement symptomatically. This led to the conclusion that in those instances in which an extremely large amount of spinal fluid under great pressure is found, a cell count of 10 or 15 should be regarded, in a child at least, as a definite increase. It seems logical to assume that this low count at the first puncture may partially be explained on the basis of dilution. It has been the authors' practice, as soon as a diagnosis of poliomyelitis was suspected, to perform a lumbar puncture. If this showed definite increase in pressure, with or without a pleocytosis, it was repeated at twelve or twenty-four hour intervals until the pressure had definitely subsided. This usually occurred in about three or four punctures, and it was the usual experience that after pressure had once subsided it did not recur.

From the present study of the data supplied by the school districts it is estimated that about 12 per cent represents the amount of defective vision found among school children in the United States *under the present methods of examination*.—National Committee for the Prevention of Blindness.

Clinical Notes and Case Reports

ALLERGIC DERMATITIS

REPORT OF A CASE DUE TO MOHAIR

ALBERT H. ROWE, M. D., AND HOBART ROGERS, M. D.,
Oakland, California

Mrs. E. C. L., age 32, came to us May 26, 1925, complaining of an eczema which had for two years affected both forearms. The lesions when they first appeared had had a marked weeping tendency, but at this time were dry and scaly. Itching was a marked feature. The distribution of the lesions is shown in the accompanying unretouched photograph. At no time had lesions appeared on any other part of the body.

The condition had been treated previously by means of the lotions, ointments, and diets commonly prescribed by dermatologists. At one time the patient had for four months not allowed water to touch her forearms. The use of x-ray had served to control the weeping tendency, but had really benefitted the condition very little.

There was a positive history of allergy. The patient's mother had had hay-fever as a child. The patient her-



self had had hay-fever in her youth while a resident of Ohio. Her one child, 10 months old, had had eczematous lesions at the age of 3 months.

Food-testing by the cutaneous scratch method revealed only delayed reactions to raspberry, apricot, and banana, which reactions we felt were probably without significance. Tests with animal emanation proteins revealed immediate positive reactions to goose feathers, cattle hair, horse hair, dog hair, rabbit fur, sheep wool, and a marked reaction to goat hair.

The marked reaction to goat hair led to careful questioning as to contact with mohair. The patient then remembered that she had received a mohair upholstered overstuffed chair on January 25, 1923, that her eczema first appeared the first week of February following, and that the only period of improvement she had had was six weeks spent away from home.

Our instructions were to remove this chair from her home and to avoid allowing her skin to come in contact with any mohair, animal fur or wool. Improvement began about June 15 and continued uninterruptedly to the complete disappearance of the lesions, despite the fact that she had gone to the beach and was bathing in salt water every day. Her arms have now been entirely free

from lesions for one month. We do not deem it advisable to subject patients to a series of injections for desensitization when an exclusion therapy is so simple and so highly successful.

COMMENT

This case is illustrative of a very important group of dermatoses due to protein sensitization. Some few of these may perhaps be solved clinically, but in most, as in the present instance, the essential information will be withheld until the results of protein skin-testing have given the proper direction to the questioning. The patient is seldom able to associate his trouble with its cause. The only safe rule is to insist on complete and thorough protein skin-testing in all cases of unexplained or refractory dermatitis. If there is a positive history of allergy, skin testing is imperative. Positive reactions point the way to a specific therapy. In no field of medicine are results more spectacular or patients more grateful.

USEFUL APPLIANCES IN THE TREATMENT OF SOME COMMON INJURIES

By HARRY M. WEGEFORTH, M. D., AND
ARTHUR WEGEFORTH, M. D.,
San Diego

In treating patients with several fingers injured or infected, it is often difficult to redress them without causing considerable pain.

Having found that by using a perforated piece of celluloid

rounded off and covered with a strip of adhesive plaster. This will prevent irritation of the integument between the base of the injured finger and those adjoining it.

With this splint it is easy to apply a dressing that is both satisfactory to the patient and the surgeon, because all that is necessary, after the wound has been properly prepared, is to fold, in the form of a finger of a glove, the gauze on which ointment has been applied. If moist dressings are desired, the gauze, saturated with Dakin's solution, is applied around the finger so as not to interfere with the circulation of the blood. If continuous wet dressings are indicated, all that is necessary is for the patient to pour on the dressing, from time to time, the required amount of Dakin's solution, salt solution, or whatever solution is desired.

Among the many advantages of this method of treatment are:

1. That the splint can be easily removed and the finger exposed to the active rays of the sun or ultra-violet rays.
2. That it permits easy examination of the injured finger, without causing unnecessary pain.
3. That it lessens the danger of disturbing granulating tissue, as all that is necessary is to gently remove the wet dressings which do not adhere to the wound and replace them with new dressings, slipped over the end of the injured finger.
4. That the end of the celluloid splint projects about one-half an inch beyond the end of the finger, and thus affords protection from the danger of striking the injured part against objects.

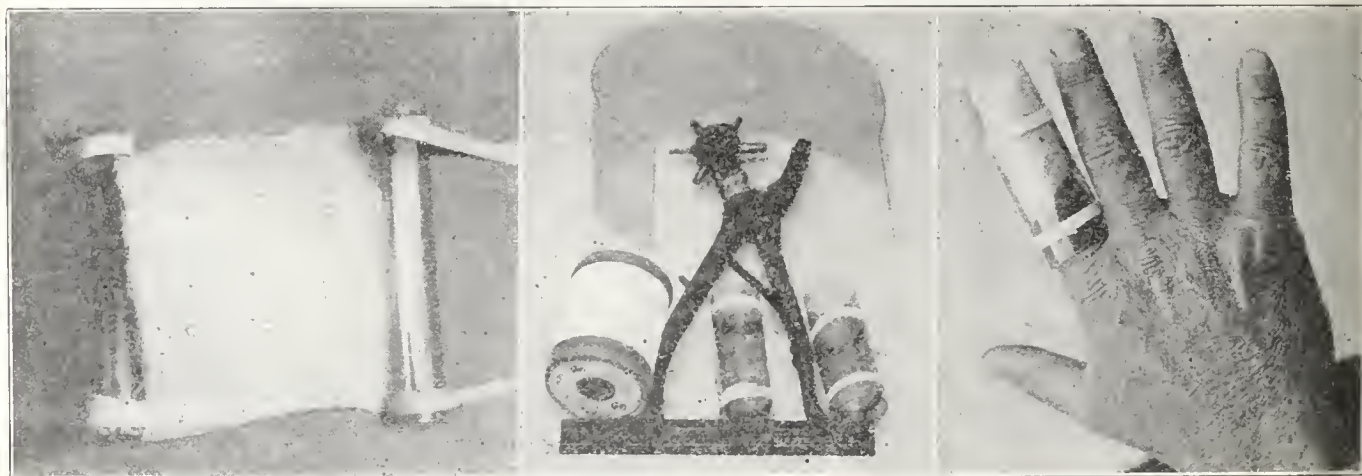


Fig. 1—The use of celluloid in the treatment of ulcers of the external abdominal wall.

Fig. 2—Materials used in making a celluloid splint.

Fig. 3—Application of celluloid splint to finger.

lloid in treating ulcers of the abdominal wall we were able to prevent pressure on the wound and to avoid soiling of the bed clothes, we decided to apply this principle in the treatment of injuries to the fingers in order to overcome the annoying pain caused by the usual redressings and to give more satisfactory support in the case of fractures.

Ordinary celluloid, such as is used by automobile-top manufacturers, is satisfactory. Pieces are cut a little longer than the finger, overlapping about one-third of the distance. In order to avoid overheating and possible maceration of the tissues when saturated dressings are applied, the celluloid is perforated at several places by means of a harness punch.

In making a splint for the injured finger, a normal finger can be used for the purpose of shaping the celluloid. Allowances in size should be made for the type of dressings that is to be used.

The splint is retained in shape by means of pieces of adhesive plaster about one-quarter inch wide wound two or three times around the celluloid. In order to avoid the slipping of the splint, the proximal end may be perforated and the splint attached to the wrist by means of a piece of tape.

The sharp proximal ends of the splint should be

5. That in case of fracture, especially in compound fractures, the splint acts as a support for the fragments.

400 Granger Building.

A Workman's Compensation Bill Allowed—Recently a workman repairing automobiles was injured, and the foreman called a physician who was not employed by the insurance company that insured the automobile concern under the Workmen's Compensation Act. The physician rendered a bill to the employer of the patient who turned the bill over to the insurance company. The latter obtained a ruling from the Industrial Accident Commission, reducing the bill to about half its original amount. The question then arose as to whether the Industrial Accident Commission had the jurisdiction to reduce a physician's fees rendered unconditionally to the employer and at the employer's request. The municipal court of Boston rendered a decision in favor of the physician for the sum he claimed. The judge found that the physician was unconditionally employed by the employing corporation, which was liable for the full amount of the physician's bill.—*Journal Iowa Medical Society*.

It is more important for a doctor, no matter what character of medicine he practices, to have adequate malpractice coverage than it is to insure his automobile.

EDITORIALS

TWENTY-THREE YEARS

With this issue CALIFORNIA AND WESTERN MEDICINE completes twenty-three years in the field of medical journalism. They have been years of growth. Stunted at times for want of sustenance, but never to the extent of "malnutrition." Neither CALIFORNIA AND WESTERN MEDICINE nor any other publication can any more please all of its readers than can any physician please all of his patients. Neither is it possible to please all of the more than 4000 owners of the magazine. We are not stupid enough to make the attempt. What CALIFORNIA AND WESTERN MEDICINE does try to do is, to live up to a fair, square, definite policy fixed by the Council of the California Medical Association, and interpreted by the editor and his counselors. The result is pleasing to most of the owners. *Thousands* of encouraging letters during the past year testify to that fact. There have been a few of the other kind, and if there were not, we would feel quite certain we were not going anywhere in particular.

CALIFORNIA AND WESTERN MEDICINE is dangerously weak in one particular. It needs a substitute editor who should be warming up. But for the moment we are all here—a happy family.

Our best wishes for a Merry Christmas and a Happy New Year to our associates, owners, printers, readers, and even our enemies—God bless them.

BACK TO YOUR PERSONAL DOCTOR

The signs of the times seem to indicate rather definitely a growing movement to have less ballyhoo, fewer "health centers," clinics, and what not, directed by non-medical organizations and public health "officers," less "*officially directed personal health*" in general, and a return to the personal health doctor for personal health assistance and advice both in keeping well and getting well.

One of the most recent and significant bits of evidence supporting this prophecy is the wise attitude of the Federated Women's Clubs of Illinois. This great organization, instead of attempting to operate health centers, clinics, and generally practice medicine themselves, have established co-operative plans with the Illinois Medical Association and the Illinois Dental Society, by which the Women's Clubs will exert themselves to have all "pre-school" children examined *by their own family doctors and dentists*. The public health authorities furnish the blank forms.

"The plan involves," says the Illinois Medical Journal, editorially, "the emphasis of the personal responsibility of each member of the Federation for the children of her own household. It is asked merely that each of the 70,000 members see to it that one pre-school child, either of her own household or her neighbor's, or some child in her immediate community, is *taken to the family doctor and dentist for this complete examination*. Blanks for this purpose will be supplied by the State Depart-

ment of Health. Each member of the federated clubs in the ninety-three counties of Illinois, where there are active county medical societies, will be furnished a list of all members in good standing in the county medical society of her county. It will be made very clear that this examination must be handled by a doctor of medicine, and an explanation will be given in detail of what the single standard of medical education can guarantee as to the character and ability of the physician.

"This means a certain responsibility on the part of the county medical societies. They are asked to give friendly support to this effort to get children, apparently well, into their *own offices*."

That is as it should be. It is rendering a fine service in the way it should be rendered. As we have stated repeatedly, it is no more trouble to take a child to a doctor's office than to a clinic. The service is precisely as good and much more satisfactory because the patient goes to the doctor of his choice. It is cheaper to all parties, and particularly to those who pay *public bills*. It promotes the cause of public health as it should be promoted. It avoids the rush, hip hurrah and circus methods of health centers and the not insignificant exposures to infection in crowds of children as they are huddled together in most "free clinics." Above all, it allows the child to get acquainted with *his doctor* instead of the facets of a machine. There are enough doctors, and to spare. They are not all Emmet Holts, it is true, but they are the best we have, and a good average at that. Certainly, they are not inferior to those who do the work for "health centers." Mostly they are the same doctors.

With the co-operation of 70,000 club women of 700 clubs in Illinois, under the presidency of Mrs. George Thomas Palmer (wife of a physician) and under the immediate direction of Doctor Lena K. Sadler, Chairman of the Child Welfare Department, every child of every group (pre, in, or past, school) can be sent to his own doctor's office and examined in a few days, without causing any special flurry.

Since CALIFORNIA AND WESTERN MEDICINE has been agitating similar methods, we have been told that some doctors would not do the work. We don't believe it, but let us find out who they are, if any. There are plenty who will. Again we have been told that some doctors would neither examine nor treat the poor without pay. Again, we don't believe it. But again let's find out who they are, if any. And again, there are plenty who will assume the privilege.

Personal health service—preventive and curative—by your own doctor, or your own personal health counselor, as President Vincent of the Rockefeller Foundation prefers to call him, is a mighty fine health-promoting slogan.

A little more encouragement of movements in this direction and more public health departments will devote more of their time and money to valuable and much-needed *public* health work and less to the practice of personal health. Finally, and most important, it will make unpopular—to extinction—the fad of practicing medicine by incompetent organizations and groups and the pestering of the giving

public for funds with which to propagate themselves. Every five-hundredth person, including men, women and children, in California is an educated doctor of medicine whose office is the only kind of health center our people need. Why centralize groups of them—these same doctors—in “health centers” with expensive overhead that the public must support?

EPHEDRINE, A PROMISING THERAPEUTIC AGENT

Tasted by the Emperor Shen Nung about 5100 years ago and placed by him in the “medium class,” and described by Li Shih Cheng in 1596 A. D. as a diaphoretic, circulatory stimulant, antipyretic, cough sedative, etc., ephedrine emerged from seclusion in 1887, though really its possibilities have been fully revealed only within the last two years. Ephedrine is the active alkaloid of *Ma Huang*, or *Ephedra vulgaris* var. *helvetica*, closely resembling epinephrine in its actions qualitatively, but differing quantitatively and in some other important particulars. Recent studies of the drug, which is an ingredient of many famous Chinese prescriptions, have been made by the Chinese pharmacologist, K. K. Chen, and by Chen and Schmidt of the Peking Union Medical College. Fortunately, the results of a very recent clinical study made by Miller of the University of Pennsylvania Hospital, supported by the Council of Pharmacy and Chemistry of the American Medical Association, parallel and confirm those of the animal work by Chen and his associates. The promising therapeutic usefulness of ephedrine and its advantages over epinephrine merit attention at this time, though undoubtedly further and extended clinical trial, which is promised by Miller and others, will finally determine its place in the therapeutic armamentarium.

The crude drug, *Ephedra vulgaris*, yields two alkaloids, namely, ephedrine and pseudo-ephedrine, the latter being isomeric with ephedrine and their physiological actions are identical. Ephedrine was first isolated by Nagai in 1887. Its formula is $C_{10}H_{15}N$, and chemically it is stated to be phenyl 1-ol 1-methyl 2-methylamine 2-ethane. Its salts crystallize well and dissolve in water. According to Chen and Schmidt, the watery solutions remain active after exposure to air and light for forty-five days. The solutions remain colorless and can be boiled without loss of activity. There is no doubt, therefore, that ephedrine is more stable than epinephrine and this is a decided advantage. Its greater stability in vitro suggests at once that its pharmacological actions would be more lasting than those of epinephrine, and this was found to be the case in the careful and extensive studies of Chen and Chen and Schmidt.

The outstanding effect in animals, according to these investigators, is circulatory stimulation, characterized by marked cardiac acceleration and a sustained rise of blood pressure lasting 30 minutes and longer. The cardiac acceleration is due to stimulation of the stellate ganglia and the accelerator endings, for the drug stimulates the heart when it is applied locally to the stellate ganglion, and also when perfused through excised hearts. With moder-

ate doses, the heart volume is increased and the rate slowed as the maximal level of blood pressure is reached, thus resulting in an increased output of blood from the heart. With high doses and concentrations the heart is depressed and finally stops from direct paralysis by the drug, though the stoppage is usually preceded by fibrillation. As a result of the increased cardiac output, the diuresis later is increased, though in the beginning it is decreased owing to the marked constriction of renal vessels. The renal vessels share in the vasoconstriction of splanchnic vessels in general, and this peripheral constriction is largely responsible for the initial rise of blood pressure produced by the drug, but later the cardiac acceleration outlasts the vascular constriction and, hence, the sustained pressure is largely cardiac. The vessels of the extremities are much less constricted, the coronary vessels being dilated and the pulmonary, unaffected. Atropine and section of the vagi do not prevent the circulatory effects, and, hence, they are of sympathetic origin.

Other effects are inhibition of the intestine, stimulation of the uterus, relaxation of constricted bronchi, mydriasis lasting about one hour, and increase of salivary, sweat, lymph and gastric secretions. Pancreatic, biliary, and intestinal secretions are unaffected. In man, slight sweating without nausea occurs after taking 0.06 gm. by mouth. The drug cannot be detected in the urine after daily intravenous doses in rabbits, and is presumably destroyed slowly. In a study of twenty-two dogs suffering from different kinds of shock and hemorrhage with low blood pressures, Chen found that 2 to 3 mgms. per kilo of ephedrine intravenously promptly raised the blood pressures. The beneficial effects in anaphylactic shock lasted not longer than one hour and in all other shock conditions for about, or not over, three hours. The drug was ineffective when the pulse was imperceptible, the blood pressure was low for long periods, respiration ceased, and when hemorrhage exceeded 25 per cent. Chen thinks ephedrine breaks the vicious circle of shock, bringing more nutrition to the heart itself, the medulla and other organs, the pulse rate being invariably increased in the shock conditions. He feels it could be used beneficially in surgical shock and hemorrhage.

According to Chen, the toxicity of ephedrine is rather low. The minimum fatal dose intravenously for rabbits, cats and dogs is about 0.07 gm. per kilo. In rabbits, the fatal dose by mouth is 0.6 gm., intramuscularly, 0.34 gm., hypodermically, 0.36 gm. and intraperitoneally, 0.39 gm. per kilo. Convulsions occur only on intravenous injection, and death is due to cardiac stoppage. Recovery from sublethal doses is complete. The ordinary effects of ephedrine can be demonstrated in animals with doses of from 0.25 to 0.5 mgm. per kilo intravenously; and also from 10 mgms. hypodermically or 25 mgms. per kilo into the intestine. In man, 40 to 100 mgms. by mouth cause a definite rise of blood pressure and decrease in pulse rate, the effects beginning in thirty minutes and persisting more than two hours. This result in man has been fully confirmed by Miller. As for the animal studies, the work of Chen and Chen and Schmidt proves conclusively that ephedrine, just like epinephrine, is a sympathomimetic drug, and that it has distinct advantages over epi-

nephrene, namely, that its actions are more prolonged, those of epinephrine being fleeting, and that it is effective by mouth, while epinephrine is not.

The equally good results of Miller in the clinic deserve mention. Miller administered from 0.05 to 0.125 gm. ephedrine sulphate orally or hypodermically to eighty-four patients under controlled conditions. There were no unfavorable phenomena, the patients did not object to taking the drug, and some felt better. The most consistent change was in the systolic blood pressure, elevations occurring in seventy out of eighty-four instances, and amounting to from 10 to 40 or more millimeters of mercury. In thirteen cases no rise of blood pressure occurred, and in six there was an actual fall. The rise reached the highest level within from one to two hours, and then the pressure fell slowly during three or more hours to the original level. The blood pressure rises after oral administrations were about as marked as after the hypodermic, but the action was more prompt after the hypodermic injection. In most cases the pulse rate was slowed, due probably to reflex stimulation of the vagus center from the high blood pressure, and a compensatory phenomenon. X-ray showed the excursions of the ventricles and aortic shadows to be greater than before. The pulse was more forceful and the heart sounds were louder. All of these changes are strictly consistent with those found by Chen and Schmidt in animals. Presumably, the cardiac output is also increased in man and the diuresis, though variable, tended to be increased, according to Miller. Albuminuria occurred in patients with increased blood pressure, and whether there was an irritation of the kidney by the drug or not is not settled. The basal metabolism was increased in two out of four cases, but hyperglycemia was absent.

Important effects were observed on the nasal mucosa. The application of a 5 per cent solution of ephedrine sulphate contracted the turbinates in two and one-third minutes in all seventeen cases tested. The mucosa appeared thin and seemed to fit closer to the bone; the color was pale, but not as anemic as after epinephrine. Relaxation began at the end of two hours and thirty-five minutes. No irritation was present, such as occurs with epinephrine.

In certain disease conditions, Miller obtained definite benefits from ephedrine. Oral administration gave temporary improvement in two cases of Addison's disease, the paroxysmal attacks of a number of cases of asthma were relieved more efficiently than with epinephrine, the subjective sensations of urticaria were relieved, and there was marked temporary improvement in circulatory collapse. Miller concludes that the widest range of therapeutic usefulness of ephedrine will be in the treatment of asthma, hypotension and acute circulatory depression, and in certain congestive nasal conditions. A distinct advantage over epinephrine is suggested in the local treatment of nasal conditions, in nasal sprays for hay-fever, sinusitis, and perhaps as an aid in operations on the nose, etc. Other advantages over epinephrine have been pointed out above.

Thus, it appears that the newer methods of experimentation confirm, extend and rationalize the effects and uses of an ancient drug understood in

a general way and used quite intelligently, though empirically, by the Chinese thousands of years ago. We should be thankful for this belated knowledge, as indeed many a patient may be ultimately grateful to the possibilities that ephedrine holds out. It may be hoped that not only Chinese materia medica, but also that of other oriental and other countries, and even of California, whose medicinal plants have not yet been investigated, will furnish remedies as promising as ephedrine.

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"THE WAY OF THE TRANSGRESSOR IS HARD"

The tragedy of the Murphy Memorial Hospital, now a familiar story to readers of hospital and health literature around the world, is at last revealing itself in all of its sordidness to the people of the beautiful little city of Whittier, California. Once the Murphy Memorial was a beautiful, well appointed, properly conducted hospital, pointed to with pride by physicians, hospital organizations and intelligent people everywhere. It was rated high in hospital directories as a scientific, health-serving institution and was rendering splendid service to a community much in need of such facilities.

Then certain cults and their cronies of the licensed medical profession got together, put on a referendum and not only *repudiated* a written agreement between the community and Colonel Simon J. Murphy, the benefactor who built and donated the hospital to the people, but what was even worse, *if possible*, they succeeded in "*opening*" the hospital as a place for all and sundry to practice their "systems" on those who might be credulous enough to trust their health in such circumstances. After all available means had been employed, without success, to save the situation, the Council on Medical Education and Hospitals of the American Medical Association and the American College of Surgeons removed the hospital from the accredited lists and it was dropped from all hospital directories of standing. The American Hospital Association dropped it from membership. The cultists and their followers were jubilant and broadcast their happiness and, unfortunately for them, their prophecies also.

WHAT HAPPENED

Politics, cultism and sciosophy generally have had full swing now for some five months. During that time the city council and their hospital board have quite thoroughly demonstrated every argument and

every prognosis made by the accrediting hospital agencies against the efficiency of such an institution. *The mayor has resigned under pressure, and the superintendent who played freely into the hands of the opposition has also resigned.*

But let Doctor Horace P. Wilson, an outstanding physician of the community, tell us, as he does in the Whittier News:

"The fiscal report of the board of trustees of the Murphy Memorial Hospital for the year ending June 30 has not yet been made public. *According to the law it was due July 31, consequently it is sixty days overdue.* This is quite contrary to the great publicity the board was to give to the affairs of the hospital. The city has been repeatedly informed that the hospital was full and self-sustaining. The last year of the old board, the hospital seldom had less than twenty-five patients for a daily average, there being over one hundred admissions in August a year ago alone. *For the last three months there have been for days but six to twelve patients in the hospital.*

"A report furnished Colonel Murphy at his request for the five months of the administration of the present regime was summarized by Mr. Darling, an expert, who says that the 'average monthly deficit for period of operation by the old board (no provision for reserves) was \$265.55; monthly deficit greater under present board by \$948.

"The unused taxes left by the old board amounted to \$32,600.79, whereas the present balance as per the report sent to Colonel Murphy is but \$28,038.11, with amount spent for equipment, leaving amount spent from tax fund for operation \$3,877.24.

"In addition to the \$3,877.24 from tax fund, the difference in cash on hand March 1 and July 31, accounts receivable and payable at the two dates, inventories, etc., enter into the figures in such a way as to cause the deficit for the five months the hospital has been under the new regime to total \$6,067.79, or an average per month of \$1,213.55.

"The contention of the new board that no taxes for the support of the hospital need be levied is not based on any evidence that the hospital is self-supporting, but it is evident that they are relying on using for operation the fund left by the old board for the purchase of equipment for the new wing."

"During this period," continues Doctor Wilson, "of five months the hospital has been open to all systems of healing, there has been just one case furnished by other than the medical profession, and that was a medical case.

"The superintendent has been paid monthly \$400 and maintenance. This is the equal of almost any superintendent's salary in the large hospitals. She has been absent from the hospital a great deal and has done personally no active work in the x-ray, maternity or surgical department. The former superintendent's salary was \$225. She was always on duty and could fill a little better than anyone else any position in any surgical or obstetric emergency. The books of the hospital are in such a deplorable shape that an accounting has been almost impossible. The very large deficit has been stated above.

"On August 7, 1925, the hospital, by action of the

American College of Surgeons, was removed from the approved list of standardized hospitals because of having forsaken every essential of such an institution.

"On September 10, 1925, it was removed from the list of accredited institutions by the Council on Medical Education and Hospitals of the American Medical Association. . . .

"We have been without an x-ray specialist, a dietitian, or a staff functioning with a co-operative hospital board, as the entire program has been at variance with the profession that do the work of the institution. The rules and regulations adopted by Mr. Smullin are the expression of a non-hospital mind and so contradictory that they are impossible of execution, and no attempt is made to live up to them.

"*Outside surgeons have almost abandoned the institution and those who have demanded that it be made an outlaw in the hospital world have contributed one patient in five months.* We have lost an endowment for all of this of \$200,000 that would have permanently solved the hospital problem and placed it beyond deficit or taxation perpetually. . . .

"Henceforth the hospital can only be maintained by heavy taxation or hospital drives to meet yearly deficits. It might be well for *those who have destroyed the morale and heart and soul of the institution* and have desecrated it in more ways than one to find some philanthropist who will restore to the institution and the taxpayer the \$200,000 the present regime has lost for it. It can't be done. No one will endow a standardless hospital.

"I regret the entrance into our civic life of political expediency and barter of fundamental civic values. We do not need this nor do we need slanderous, libelous sheets. They are the pernicious misdirectors of civic activities and it is deplorable that so large a number of our people fall for their insincerity.

"I regret beyond all telling the bitterness that has characterized the hospital agitation. It has emanated almost exclusively from those who are opposed to the reasonable standard to insure efficiency to the sick. From the onset I have insisted that the hospital was bigger than myself or any individual or the entire local profession and my own elimination from any official connection with it, by politics, was non-consequential. The institution will stand, serving the sick in some capacity, when all of us shall be as the ashes of the Tunician dancing girl in her long-forgotten sarcophagus."

If you can drive through ten miles of mud to ease the little child of a dead beat;

If you can do a podalic version on the kitchen table of a farm-house, with husband holding legs and grandma giving chloroform;

If you can diagnose tonsillitis from diphtheria, with a laboratory forty-eight hours away;

If you can pull the three-pronged fish-hook molar of the 250-pound hired man;

If you can maintain your equilibrium when the lordly specialist sneeringly refers to the general practitioner;

If you can change tires at 4 below at 4 a. m.;

If you can hold the chap with lumbago from taking back rubs for kidney trouble from the chiroprac;

Then, my boy, you are a Country Doctor. — H. W. Davis (Journal Kansas Medical Society).

- *The MONTH with the EDITOR* -

Notes, reflections, extracts from correspondence, comment upon medical and health news in both the scientific and public press, briefs of sorts from here, there and everywhere.

ALBION WALTER HEWLETT

A PERSONAL TRIBUTE

BY WILLIAM EVERETT MUSGRAVE

THE WORLD HAS LOST A GREAT PHYSICIAN AND I HAVE LOST A FRIEND AND A BELOVED DOCTOR IN THE PASSING OF WALTER HEWLETT.

HEWLETT WAS ONE OF THE TEN BROTHER PHYSICIANS WHO SO FAITHFULLY, AND EFFICIENTLY ATTENDED ME DURING MY GRAVE ILLNESS OF TWO YEARS AGO. I LOVE THEM ALL, AND NOW THAT ONE OF THEM IS GONE MY SORROW IS PARTICULARLY POIGNANT AND MY UNDERSTANDING SYMPATHY ENFOLDS THOSE WHOSE LOSS IS GREATER THAN MINE.

THERE IS SOMETHING OF THE TRUE PHYSICIAN THAT ONLY THE SICK, REACHING OUT WITH FEEBLE CRAVINGS FOR HELP, EVER DISCOVER. GOOD DOCTORS SENSE THIS QUALITY IN THEIR WORTHY COLLEAGUES, BUT THEY CANNOT DESCRIBE IT. IT EXPRESSES ITSELF IN A PRACTICAL FRATERNITY OF SPIRIT AND EVEN IN SOCIAL CONTACT TO A DEGREE NOT FOUND AMONG ANY OTHER CLASS OF PEOPLE WHATSOEVER. THIS SOMETHING, NEBULOUS IN HEALTH, BECOMES AS CLEAR AS CRYSTAL THROUGH THE MORE FAR-SEEING VISION OF THE DOCTOR-PATIENT. IT IS BROTHERLY LOVE—*THE* BROTHERLY LOVE.

DESPERATE ILLNESS MAKES THE PHYSICIAN WISER. WHEN HE COMES BACK FROM LONG WALKS IN THE VALLEY OF THE SHADOWS, HIS LOVE OF GOD, HIS FAMILY, HIS PHYSICIANS AND HIS FELLOWMEN BECOMES MORE INTIMATELY A SUBSTANTIAL PART OF LIFE, AND IT COMPENSATES AMAZINGLY FOR SUFFERING.

THE DOCTOR-PATIENT, NOURISHED BY THIS EXPERIENCE, SEES BEYOND THE SURFACE INDICATIONS OF "PROFESSIONAL COURTESY" DEEP INTO THE HEART AND SOUL OF HIS ATTENDING PHYSICIANS, AND THE PICTURE IS PLEASING. IT REFLECTS WITH BRILLIANT CLEARNESS INTELLIGENT HUMILITY, THE SPIRIT OF SACRIFICE AND A SOMETHING ELSE TOO DIFFICULT FOR WORDS AND TOO SWEETLY SACRED TO DISCUSS, WERE WORDS AVAILABLE.

THIS EXPRESSES SOMETHING OF MY FEELING FOR EVERY ONE OF THE TEN OR MORE DOCTOR FRIENDS WHO CARED FOR ME DURING MY ILLNESS; AND NOW THAT ONE OF THEM HAS GONE I MOURN HIM AS A BROTHER AND WITH AN UNDERSTANDING THAT ONLY HIS OTHER PATIENTS CAN APPRECIATE.

OTHERS WILL TELL OF HEWLETT'S INFLUENCE UPON MEDICINE, HIS LEADERSHIP AS A TEACHER OF THE SCIENCE AND ART OF OUR PROFESSION, OF HIS VALUE AS A CITIZEN, BUT I SPEAK ON BEHALF OF HIS PATIENTS WHO LOVED HIM AND WHO MOURN HIS PASSING AS THE WISE, SYMPATHETIC, WHOLE-SOME, LOVABLE, CONFIDENT FRIEND AND HEALTH ADVISOR FOR BODY, MIND AND SPIRIT THAT EVER CHARACTERIZES THE TRUE PHYSICIAN.

HE HAS GONE TO HIS REWARD. MAY GOD KEEP HIS SOUL IN PEACE AND COMFORT HIS FAMILY AND HIS FRIENDS.

"Ich Dien" (I serve), which is the motto of the coat-of-arms of the Prince of Wales, might well be placed on a scroll surmounting the Caduceus, or Staff of Aesculapius, which is the insignia of the medical profession. The essential nature of the work of the healing profession, including not only the physician, but also the nurse, dentist, the pharmacist, etc., is *service*.—Ohio Health News.

The C. M. A. meets in Oakland April 26 to May 1, 1926, following the A. M. A. meeting in Dallas, Texas (April 19 to 23), with just the right connection to avoid wasting time. Many prominent officers of the A. M. A. and national figures from various centers who will take active part in the A. M. A. meeting have already agreed to return via California, and take an active interest in the program of our own sessions. These splendid colleagues should be properly escorted and chaperoned all the way from Dallas until they leave our territory through Nevada and Utah.

"A Malpractice Suit, with its attendant newspaper publicity, can work serious damage to your reputation, no matter how many years you may have efficiently and altruistically worked in public health endeavor."

This is only one short paragraph from a most suggestive and illuminating letter recently sent to all California Medical Association members. That letter, doctor, contains sobering facts that you ought to read, and suggestions that you should heed. Read it again.

Wise Health Boards in certain centers are maintaining distributing stations for antitoxins and vaccines in County Medical Society headquarters.

There's the germ of a big idea in such service, but it will not be seen by those health boards which are out to corral the practice of personal health.

"Anyone who is asked to check over the extensive printing and typewritten notes of a well-known institute (L. F. Donahue, Journal Med. Soc. N. J.) is aware that, aside from the legal, impressive-looking document, *there is very little that has not been already known by the family doctor*. It is true that his sympathy for the patient, and his knowledge of his previous psychology, has often prevented the family physician from *telling him* that he has a murmur which may be harmless, an old healed tubercle, or a similar inactive condition. This, the strange examiner greedily puts down. The patient naturally believes that his old family doctor was an old fogey, that only by the expert's examination was he saved from the dire consequences of a neglected lesion."

The Editor's Mail

—SEVERAL CORRESPONDENTS ARE INTERESTED and some of them so disturbed over the current controversy as to whether the proposed new University of California school or courses in nursing shall be controlled by the Department of Education or the Department of Hygiene, that they ask us to discuss the subject.

Inasmuch as part of medicine (optometry) is now being taught in the Department of *Physics*, we might suggest that nursing also be placed there. By all means let's teach our medical subjects together, and the Department of Physics certainly can teach nursing quite as well as it can diseases of the eye.

Physicians wonder what are the future plans for the medical school, hospitals, and Hooper Foundation in San Francisco. It looks to those outside as if what of medicine certain influences cannot transfer to the Berkeley campus they intend to destroy—all of which reminds one of this limerick:

*"There was a young lady whose dream
Was to feed a black cat on whipped cream;
But the first cat she found
Spilled the cream on the ground,
So she fed a whipped cat on black cream."*

—A Los Angeles member offers the following criticisms of CALIFORNIA AND WESTERN MEDICINE:

"First. I believe that it is absolutely essential that every article that is supposedly original or is listed as original should have a bibliography, so that one can look

up the authority quoted. When this is not done it causes men to write poorly—they do not look up the literature on the subject; and this, as a rule, results in a rehash of articles that have been published many times before.

"Second. Original articles received by the editor should be re-read and criticized by men interested in the particular branch of medicine, to determine whether or not they are real contributions to the literature, having in mind one article that was published in the last Journal by one of our local colleagues, in which I find that many questionable references are made, as well as opinions that have been disproven in recent literature."

Comment—The first of these criticisms has been anticipated and answered many times in CALIFORNIA AND WESTERN MEDICINE, and our present custom was approved officially by the Council of the California Medical Association. In any event, the doctor does not criticize the editor nearly as much as he does the authors, and he takes a responsibility we would not take, and do not believe to be true, when he says that the lack of publication of bibliographies "causes men to write poorly . . . and produce a rehash of articles that have been published many times before."

The suggestion made in the second criticism has been a constant practice of CALIFORNIA AND WESTERN MEDICINE for so long that we thought everybody knew about it. The article apparently complained about was read and endorsed by more than one specialist in the field covered by the article, acting as confidential editorial councilors. One of these editorial councilors was a close and particular friend of the man who makes this criticism.—EDITOR.

—W. W. Cross, M. D., Oakland—You probably have learned that I have moved from Fresno, which will make it necessary for me to change the card which I have in the Journal. As I intend to devote my entire time to genito-urinary work, I should like for the card to state that. The form as enclosed is what I desire to appear in the Journal.

—Luther M. Boyers, Berkeley, sends us letters and some amazing literature from the William Bannerman Company of Chicago. They claim that one or a few injections of their solution will cure varicose veins, and that it is an effective remedy for a long list of other ills.

The letters and "literature" have been forwarded to the Bureau of Investigation of the American Medical Association.

A. Gottlieb, Los Angeles, closes a letter upon other matters by saying: "I wish again to congratulate you upon the wonderful and continually growing success of CALIFORNIA AND WESTERN MEDICINE."

—I am enclosing a paper with illustrations and x-ray plates for your use in CALIFORNIA AND WESTERN MEDICINE. If you do not feel that this is a suitable subject for our magazine, I should appreciate the return of the copy and photographs.

I shall appreciate your editorial comments on the construction of the paper, as you have helped me in the past and I know the value of your opinion.—A. J. S., Los Angeles.

—I am returning the corrected manuscript. Your corrections certainly materially improve the paper. I thank you.—P. O. S., Los Angeles.

PUBLIC OPINION or something else has influenced the Ford Hospital in Detroit to materially change its financial methods.

If reports regarding the change are true, the Fords have jumped from the frying-pan into the fire, and when properly scorched in the new position they may be expected to jump again.

Rub—Did you see much poverty in Europe?

Dub—Yes, and I brought some of it back with me.—Life.

THERE ARE NINETEEN STATES and territories that do not accept the National Board of Medical Examiners.

California is one of them, *and it is in poor company*.

Hobbs—I really believe you have stopped your worrying. What brought about the change?

Dobbs (cheerfully)—My troubles are more real than they used to be.—Boston Transcript.

California, Nevada, and Utah Doctors Publish Elsewhere:

[Note—Members of the California, Nevada, and Utah Medical Associations are invited to supply the editor with reprints or marked copies of magazines containing their articles or very brief abstracts. All that we receive will be noted regularly in this space.—Editor.]

—Wallace Irving Terry, San Francisco (Journal Iowa Medical Society), writes on "Goiter."

—John V. Barrow, Los Angeles (Journal Iowa Medical Society), writes an article on "Intestinal Protozoa and Chronic Diseases, With Especial Reference to Chronic Arthritis."

—F. M. Pottenger, Monrovia (Better Health, November), tells of "The Role of the Preventorium in the Tuberculosis Program." "If tuberculosis," says Pottenger, "as we find it among children, were given the attention that it deserves in this generation, the amount of clinical tuberculosis among the adult population of the next generation would be greatly reduced."

—L. M. Boyers, C. A. Kofoed and Olive Swezy, Berkeley, California, write on "Chronic Human Amebiasis: Diagnosis and Treatment on Basis of Encystment in the Liver Area," in the Journal of the American Medical Association, November 7, 1925.

—Adolph A. Kutzmann, Los Angeles (Better Health, November), tells a timely story about "Backache and Kidney Pills."

—John W. Shuman, Los Angeles, and William C. Allison, Los Angeles—"Hypernephroma of Bone—Case Report" (Medical World, August, 1925).

—William Manwaring, Stanford University (Better Health, November), continues his series of entertaining and informative dialogues—"A Physician's Conversations With His Son."

—Miley B. Wesson, San Francisco (Northwest Medicine, February, 1925) —"Diseases of the Prostate and Their Treatment." The author believes that:

"All males who have never reveled in 'petting parties,' been guilty of excessive masturbation, or suffered from gonorrhea will probably avoid the discomforts and dangers of chronic prostatitis. This ailment can be cured, but the treatment takes years. . . . In fact, all diseases of the prostate are curable if they are diagnosed promptly, but there is no excuse for medicinally treating a surgical prostate until the patient is beyond the curative stage."

—In another article (Journal of Urology, June, 1925), Wesson writes on "Cysts of the Prostate and Urethra," a monographic report with bibliography.

—Randolph G. Flood, San Francisco (American Journal Dis. Children), writes of the "Acid Effect of Hydrochloric Acid and Lactic Acid Milk." He concludes that:

"1. Hydrochloric acid milk exerts a marked diuretic action not shared by lactic acid formulas.

"2. The total acidity of the urine, which is the measure of the acid effect produced by any ingested acid, is markedly increased by hydrochloric acid, but is little changed by lactic acid milk.

"3. The reason that lactic acid has little effect on the total acidity of the urine is probably because it is completely oxidized in the blood stream, and, therefore, has little effect on the acid base balance of the blood plasma."

—LeRoy Brooks, San Francisco (Better Health, November), discourses in popular language on "The Other Fellow's Blood—Its Uses."

—P. J. Hanzlik and M. L. Tainter, San Francisco (Archives of Internal Medicine, October 15, 1925) write on "Blood and Symptomatic Changes Following the Intra-

venous Administration of a Variety of Agents and Solutions."

—Zach B. Coblentz, Santa Maria (Journal A. M. A., October 10, 1925), discusses "Cysticercus of Skin."

—William J. Kerr, G. D. Delprat, N. N. Epstein, and Max Dunievitz (Journal A. M. A.) discuss the rose bengal test for liver function. Former papers by the authors are followed up, and they believe that "further observations confirm our earlier opinions of the value of rose bengal as a test for liver permeability and gross function."

—W. E. Musgrave, California (Better Health, November), under the title of "I Am a Doctor," replies to the vicious attack upon physicians by William Johnston published in Collier's of September 5.

SOME OF OUR NEWSPAPERS are again selling display space to that nostrum—"Lydia E. Pinkham's Vegetable Compound." Samuel Hopkins Adams exposed this "female weakness remedy" nearly twenty years ago. He showed that the Pinkham woman died in 1883, but that alluring advertisements still invited credulous, stupid women to write to Mrs. Pinkham. As far back as 1918 the government pronounced this cure-all *misbranded*, in that its promoters "falsely and fraudulently" claimed it to be an "effective remedy" for "falling of the womb, leucorrhea, etc.," when in "truth and in fact" says the notice of judgment, "it was not." The remedy also contained 19+ per cent of alcohol.

The revived up-to-date advertisements are more subtle in their language, but how newspapers can harmonize their *own ethics* with the facts in the case is best not explained.

ANCIENT PHILOSOPHY that is still modern finds itself provocatively illustrated by:

Inquiring Visitor—To what do you attribute your long life, uncle?

Oldest Inhabitant—Well, I don't rightly know. Several of them patent medicine companies is bargaining with me now.—Princeton Tiger.

With Other Medical Editors:

—JUST WHAT DOES BIRTH CONTROL MEAN? Does it include the use of preventive measures to conception? Does it include continence? Does it include abortion? Does it include Spartan infanticide? Does it include pre-adolescent or post-adolescent sterilization? Then, too, whose birth is to be controlled? Only the defectives, the criminals and the diseased, or may it not become fashionable for Jones to have his wife sterilized before or after marriage, or Mrs. Smith her husband.

And who is to control the controllers? The governor, the legislature, the doctor, the lawyer, the butcher, the baker, the unmarried or the married, or a conglomerate board of these elements?—Virginia Medical Monthly.

—NEVER IN THE HISTORY OF THE WORLD has there been so much propaganda adroitly and skillfully spread among the people as is found today. The fate of nations, institutions, people, politics, religion, theories, and objects of commercial gain, each is linked up with propaganda spread by articles in the lay press, by lectures from the Chatauqua platform, sermons in our churches and speeches before various organizations, and last but not least, the talks over radio. Just at the present time the American people are being treated to a series of newspaper articles on health problems, presumably under the authorship of medical men, that are spreading propaganda which in no sense has the endorsement of reputable and ethical medical societies, or medical men as individuals.—Journal Indiana Medical Association.

—THIS LAND OF OURS has ever been tolerant and even overzealous in seeing that the vociferous and loud-spoken should have all the air and opportunity necessary to relieve their overburdened chests. . . .

One lurid pamphlet quotes with great gusto opinions of men so eminent that one had a title of M. A., D. C. L.,

M. R. C. S., and L. R. C. P. A man with so distinguished a title doesn't need meat—he doesn't need anything except the great outdoors where men are men.—New York State Journal of Medicine.

—The Medical Society of the State of New York has many kinds of service to offer to its members. It is organized on the mutual plan. Its members govern the society and share in its profits. The society is what the members make it, and its profits depend on the amount of investment which the members put into it, and how well they manage it.—New York State Journal of Medicine.

—There is a real danger in anti-scientific legislation, for Truth seems always hidden by the blind spot in man's eye. An example has been set for the passage of anti-vivisection laws; irregular practitioners are gaining their point in many states, and it is becoming increasingly difficult to retain compulsory vaccination, even where it is still practiced. *For every one to kindle a light there are ten to extinguish it. It disturbs their sleep.*—Boston Medical and Surgical Journal.

—Chapin, in calling attention to Goethe's remark that blood was a very peculiar juice, added that the same could be said of milk.

It constitutes the food of the young of all mammalia, but when it is produced for commercial purposes it has long been recognized as being the most useful food and also the most dangerous. At times milk has been known to have been the cause of epidemics of many types of disease, and during certain of these the question actually arose as to whether its dangers did not outweigh its value as a food.—International Medical Digest.

—MARYLAND'S so-called "Six Months' Law" attracted wide attention when it was passed in 1916. The law forbids separation of mother and babe for the first six months of the infant's life. Before the passage of the law, one illegitimate child in four died during the first six months. The rate has now been reduced to one in twelve, which is one and one-half times higher than the death rate in legitimate children.—Colorado Medicine.

—THERE ARE EVEN HEALTH AGENCIES that frequently inaugurate campaigns to "educate the doctors" to the need and value of periodic health examinations.

Acutely aware of these "beneficent and magnanimous efforts" in their behalf, the physicians travel on—keeping abreast of the developments in scientific medicine, taking part in their County Society and State Association activities, giving their patients the very best of the skill and knowledge, and doing everything within their power to make the community in which they live, a better, safer, healthier, and happier place for their neighbors.—Ohio Medical Journal.

—The white man is not adapted for permanent residence in a tropical climate; neither, it seems, is he by reason of his general physical and mental "make-up" intended for many of the artificial conditions under which he now lives, including the heated atmosphere of most interiors in the wintertime. Too much luxury, perhaps (overheated air may be regarded as a luxury), tends to deteriorate physically and mentally.—Medical Journal and Record.

—Another new A. M. A. publication, "Archives of Pathology and Laboratory Medicine" (Journal A. M. A.), will shortly make its appearance monthly. The editorial board includes William Ophuls as the Western representative. This new venture will cover a most important field of medicine, and we bespeak its support by our members. We are delighted that the trustees have honored a California physician on their editorial board.

—ONE NEED NOT MARVEL at the credulity the people manifest in regard to all kinds of fake remedies and mystery methods of healing. Most of us were raised that way.—Journal Kansas Medical Society.

—Getting Out the Journal

Getting out a bulletin is no picnic.

If we print jokes, people say that we are silly.

If we don't print them, they say we are too serious.

If we print original matter, they say we lack variety.

If we publish things from other papers, we are too lazy to write.

If we stay on the job, we ought to be out hustling news.

If we are hustling news, we are not attending to business in our own department.

If we don't print all contributions, we don't show the proper appreciation.

If we do print all contributions, the paper is filled with junk.

Like as not someone will say we swiped this from an exchange. So we did.

We got it from the Illinois Medical Journal.

Many of our Disabled Veterans are making a living as are other citizens. Those of them, and they are numerous, who are doctors, buy from their "buddies" engaged in business. They also are trying to make a living selling the same sort of service they rendered during the war. The veteran who sells automobiles or groceries would feel discriminated against if the government became his competitor, precisely as they are urging the government to compete with those veterans who practice medicine for a living.

We all want to see every veteran have all the skillful medical care he needs for himself and those dependent upon him. We all, also, want him to have this service free when need be. BUT there are thousands of the best doctors we have—themselves veterans—who are willing and glad to serve their ambulatory sick fellow-veterans as individuals for nothing, or what the patients feel they can afford to pay. When the government goes into the "diagnostic clinic" business, it is discriminating in a useless manner between those who served.

"The Michigan State Medical Association has taken the following stand:

1. The group or associated body of physicians is amenable to the same regulations and principles as is the individual physician.

2. The fact that two or more physicians have formed a partnership, group, or clinic, does not grant them special publicity privilege.

3. The creation of a group or clinic does not convey unusual publicity privileges, even though part of their activities may be of a charitable type."

ONE OF OUR ESSAYISTS has complained to this editor that his use of the noun "pathology" to indicate a pathologic condition was allowed to get by the editorial blue pencil. Our defense is, that the abuse of this word in statements, such as "there was no pathology in the appendix," has become such an extensive habit—reprehensible habit—that our editorial staff must be excused for overlooking a mistake that they have to correct so often.

— Never Again

"Ruth, dear, won't you offer little Archie part of your apple?"

"No. Eve did that and she's been criticized for it ever since."

"James Compton, Secretary California State Board of Chiropractic Examiners, recently announced that in the last few months the board had licensed 1542 chiropractors."

What About California?—"According to E. S. Elwood, managing director National Board of Medical Examiners, candidates holding the certificate of the board will be granted a license to practice medicine without further examination in South Dakota. *This makes a total of about thirty-three states, besides Porto Rico and the Canal Zone, which accept the board's certificate.*"

According to the Public Press:

—Newspaper editors are getting quite a lot of fun out of Doctor Copeland's proposal to establish "restaurants at which patrons will be able to get just the sort of food they need for whatever may be the matter with them."

The New York Times, for instance, considers this an "alluring prospect," but the editor wants to know if the "waiters are to be diagnosticians, or shall each restaurant have its own staff of expert diagnosticians." "Perhaps," continues the Times, "the Senator himself will be on duty an hour or so a day. His newspaper articles long since demonstrated that he knows all there is to know about every mortal ill and just what should be done for each of them."

All of which is but another of the numerous reasons why health-promoting publicity for the public press should be impersonal and given out in the name of a recognized medical organization rather than that of an individual. The Better Health Service is the best example of how to do this.

—More than 25,000 mental disease patients of the 250 million dollars' worth of state hospitals of the United States are out on parole. A regular avalanche of protest against this is widespread.

And who would not be nervous among politicians who traffic thus with the public health?

—The expert statisticians have again lengthened the life span several years since this editor was last in the city. It seems that a fellow must go to town every day to get the "latest" about long life. If he stays in the country for weeks at a time his "thickness" is liable to shine most prominently in his lack of information about the last decade that has been added to life.

What we would like to know is, what is to be done with all the centenarians. The "homes," asylums, and hospitals are now full to overflowing, and goat glands are said to be running short. At least they are selling for higher prices.

—A nurse attending a scarlet fever patient broke quarantine and went to a barber shop to have her hair bobbed.

Only physicians and nurses can *fully* appreciate the potential dangers in such a—to be generous—stupid action.

—Arbuthnot Lane is at it again. He resembles some other tourists who make brief visits to foreign countries and leave a trail of press clippings behind them that would make a less egocentric guest blush for shame. Our organizations of doctors should exercise greater care than they sometimes do in selecting foreign physicians to be our guests.

—Cucumbers are coming into their own again. This latest fad to "purify the system" and weigh just one hundred pounds is off to a fast start. It is sponsored by fashion dictators and cooks, and when these combine their influence they get results—with fools.

Doctors will benefit, but what a ghastly business to have to lose sleep to cure fools with the bellyache.

—Another free-for-all personal health clinic for children has been opened in San Francisco. Proponents of municipal operation of public utilities about which we are hearing so much might get valuable lessons from our rapidly extending "municipal operation" and direction of personal health.

—"Looking-glass education" is the latest addition to the public school curriculum for "flapper grade" girls. This is humorous or pathetic, depending upon the point of view. But when such arrant nonsense is credited (?) to "health education," as it is, uglier characterizations are indicated.

—Two more of our good doctors are defendants in a \$100,000 malpractice suit. In this instance they are accused of putting a plaster cast on a woman's leg so tight that circulation was interfered with, making subsequent amputation of one leg necessary.

Moral: Well, you know what it is.

—Secretary Hoover, in a recent talk to the Associated Advertising Clubs of the World, told them that the milestone which marks the passage from a trade to a profession is the establishment of group ethics. He pointed out that in the law, medicine, engineering, it is not only training and skill which is required, it is the elevated code of relations with fellowmen, the incorporation of responsibility to the community into the daily task, the insistence upon a high sense of service given, that marks their distinction.—Ida M. Tarbell (McClure's).

—"The daily motion picture audiences of America include nearly a million children—a juvenile throng that would fill to overflowing two thousand average movie theaters.—McClure's.

—A professor at one of our universities insists that the brain does not tire.

"The brain-weary businessman is a fetish of the popular imagination," claims Professor Miles. "He may be bodily weary, but brain-weary never. If our bodies could stand it, our brains could function twenty-four hours a day, and be as bright in the twenty-fourth hour as they were in the first."

One of our readers in calling our attention to this statement adds the note that the "hoe doesn't get tired, but the gardener does."

—In 1922 the California Medical Association adopted a resolution whereby the office of every member became a health center, to render services for a fee commensurate with the ability of the applicants to pay. That the plan is sound, Dr. Schmitt says, is demonstrated by the fact that one-third of the persons applying to the Health Center of the University of California have been referred to private physicians.—University of California Clip Sheet.

—Doctor Copeland (Collier's) tells the world that "The doctor of the future will be a practitioner of preventive rather than corrective medicine." He develops this theme in the usual manner. We would like Doctor Copeland to tell us, when his dreams come true, who is going to care for the 3,500,000 people who are sick every day—and know it. Then there are from 60 to 75 per cent of the other 110,000,000 who are not well, but they are still able to make the grade.

It's all right, of course, to preach prevention, but some millions of us who have been through the mill, and realize that we must go again, are more concerned to have competent doctors to advise and assist us with that skillful, sympathetic service that most of them so effectively employ than we are with the practitioner who will tell us how to avoid something else.

—The effects of "emotional sprees," or "nervous jags," on the health are almost, if not equally, as bad as the results of an alcoholic spree.

A lot of people who get drunk regularly are sick, and practically all of the people who indulge in emotional sprees are sick—mentally sick, nervously disordered. They are victims of deficient self-control.—W. S. Sadler (American Magazine).

—SOME DOCTORS did so much unrestrained talking about poor old Doctor Blazer's unfortunate family matters that the newspapers quite noticeably twisted the crime of one man into another arraignment of a great profession.

We would much prefer to be in Doctor Blazer's fix to that of some healthier doctors, if they mean what the papers quote them as saying. When talking for publication, it is well to remember these lines from Omar Khayyam:

The moving finger writes: and having writ
Moves on: Nor all thy piety nor wit shall lure
It back to cancel half a line, nor all thy tears
Wash out a word of it.

—We do wish the American College of Surgeons would engage a wise publicity director. Every time these estimable surgeons hold a meeting the press-clipping agencies deliver a mess of mud-slinging that has besmeared all the other members of a great humanitarian profession. The recent Philadelphia meeting was no exception, and too much dirty linen was washed in public. Of course, all destructive criticism of doctors or undue claims

by doctors are "news." The more sensational they are, the greater the "news value."

We do not for a moment believe the American College of Surgeons endorses or connives at much of the publicity that accompanies their meetings, and some of it is unavoidable. But much of it would be avoided by a good publicity director, and the reputations of physicians, some 145,000 of whom are not members of the "college," would be cleaner than they are with the obviously ineffective methods now in vogue.

—"A noted biologist" and "leading authority," say displayed news dispatches, implanted the glands of young untrained rats in the bodies of old, educated rodents. The veterans, while rejuvenated physically, lost their memory, even forgetting the location of their home cages.

Goodness gracious, we thought that was what "old rats" got "rejuvenated" for. Doctors have assumed right along that if rejuvenation restored a failing sexual power, it would at the same time "rejuvenate" the desire to find mates often away from the home cage. A sort of amnesia, as it were!

—A professor gets display space in some newspapers by announcing the "discovery" (?) that light travels in waves of different lengths.

Too bad we abolished the old-fashioned school books, isn't it?

—An Arizona doctor claims that "graded doses of sunlight will cure all the ills of humanity."

This obtained prominence because the doctor also said that "California is the most ideal place in the world for the new sunlight treatment."

Some thousands of years ago the Athenians made a similar claim for their sunlight. Then came the sun worshippers—but why spoil the story?

—Two "noted French pathologists" have "discovered" a substance with which, by the simple process of a hypodermic injection, people's weight may be changed to meet the changing styles in clothing or otherwise.

That was cabled "news" on the same day of the announcement that Paris "dressmakers" had decreed 100 pounds as the "society weight" for this season.

Now that's "team work"!

A United Press story published by some of the less particular newspapers announces another revival—as something "new"—of the story that lead will cure cancer. As usual a "noted" physician—a foreign one—is credited with the "discovery."

It was a great day for cancer cure fakers when newspapers stopped selling them advertising space. They just became a little smarter and now get their stuff into the news columns—of some papers—for nothing.

Disgusting, yes. Criminal, often; but there is encouragement in noting from press clippings that fewer newspapers now publish such stuff.

—Representatives of competing press services in England must be very gullible or conscienceless to cable new "cancer cures" to our papers so frequently.

One day recently the front page of some newspapers contained reports of the discovery of another cancer cure by a "noted British doctor," and another story of the discovery also by a "noted doctor and manipulative specialist"—probably a chiropractor—of some sort of a gland that is responsible for women changing their minds so frequently and arbitrarily."

OVER ONE HUNDRED MILLION PEOPLE in the United States escaped death or injury last year by twenty-five million automobiles.

That's far more than escape similar consequences from tuberculosis, syphilis or gonorrhea germs. Effective "safety-first" methods are easier to apply to germ traffic than they are to motor traffic. A modicum of applied intelligence is all that is necessary in either case. In proportion as we succeed in either case, is our intelligence.

IF NEWSPAPER ARTICLES about some of them are significant, the plastic surgery surgeons or "beauty surgeons," as they are being dubbed by popular writers, are liable

to be the next group that will want medical ethics modified to meet their "peculiar conditions."

Plastic surgery, as a fine and legitimate medical specialty, is quite definitely drifting into treacherous waters through the amazingly stupid conduct of some doctors who know better and who should be ashamed of their conduct.

It is generally recognized by the more progressive health authorities that house fumigation, as heretofore practiced, is of almost no value in the prevention of the spread of disease.—Journal A. M. A.

"THE MOST COMPETENT AUTHORITIES believe that the only completely effective method of determining diseases and defects in the eyes of school children is through an examination by an ophthalmologist."

And yet most of the extensive report of the National Committee for the Prevention of Blindness, from which this was taken, is devoted to telling teachers how to do it.

"A 'HEALTH DEFECT' is a condition actually or potentially detrimental to a child's health or efficiency; the type that should be recognized and corrected if remediable."

If this is not profound enough to please, read this. Both are from a report of The National Committee for the Prevention of Blindness.

"'Borderline' is a term used to refer to the line which separates the normal condition from the health defect, anything of less degree than the border line being included with the normal, and a defect of worse degree than the border line being considered a health defect."

Then this caution to the various groups of laymen who are replacing doctors in the care of the health of school children:

"Examinations of the visions of school children should be made in conjunction with general physical examinations in order that when a defect of visual acuity is found it may be compared with the child's general physical condition to determine to what extent the two are related in the case in question. General health and physical vigor are important factors in determining the degree of visual acuity possessed by children of school age."

We are delighted to receive so many messages commending the idea of devoting space to "Bedside Medicine for Bedside Doctors" and the substitution of this title for what was initiated as "Medical and Surgical Conversaciones." It is heartening to an editor to so often see refuted the alleged statement that doctors do not write letters.

THE BEST SUNDAY SUPPLEMENT we have seen in any newspaper was the BETTER HEALTH supplement issued by the San Francisco Examiner on October 25.

This eight-page enclosure consisted of sound health information for non-medical people. It was all prepared, as is the matter in the daily and regular Sunday Better Health Services, by educated physicians. *Yet no doctor's name appeared in the supplement.*

This is as it should be. The BETTER HEALTH Newspaper Services promote a cause, and not individual doctors.

San Diego's Medical Lectures—Dr. Henry Sewall, Professor of Medicine at Denver, will give a course of six lectures in San Diego, beginning January 4. His subject will be "Physiology." The lectures cover modern research in the metabolism of respiration and of the endocrines.

The lecture course is given by the San Diego Medical Lectureship Fund, raised among members of the County Medical Society, chiefly through the efforts of Dr. David Higbee.

THE TWO PRIZES offered by the C. M. A. are worth working for. The financial reward is not so great, but there are other compensations for the winner of a contest promoted by a great medical organization that will be of value to the successful author all of his life.

More complete information about these prizes may be found elsewhere in this issue.

W. C. Hassler, Official Public Health Doctor of San Francisco, tells the press that 8921 babies were born in the city last year, and 450 of them died before they were a year old.

If the some 200,000 women of child-bearing age only produce some 9000 babies a year, it's about time to soft-pedal the birth control publicity until we get back again to a "quantity production" basis.

Of course, it's fine to tell mothers again for the nth time monthly how to save babies when they get them, but goodness, let's also increase production.

What we would like to know is, where, how, from whom, did those university "students" learn that "the family is unnecessary to the progress of civilization"?

The answer to that question would apply to many others that are being asked—and it might prove illuminating enough to decrease taxes.

The Supreme Court of Appeals of West Virginia rules that this was an action for damages from an alleged injury from negligent and unskilful treatment by one of the defendant's nurses while the plaintiff was a paying patient at the defendant's hospital. The defendant filed a special plea, setting forth its character as a charitable institution. An objection to the plea was sustained and the plea rejected. The case was then certified to this court on the joint application of both parties to the suit, who desired a ruling on the sufficiency of the plea. The exact question involved had never been determined by this court. Public policy demands that charitable institutions be fostered and preserved. To this end, the law should deal with them more leniently than with institutions conducted solely for private gain. No human endeavor of any magnitude is immune from mistakes. No matter how strict a rule might be enforced against institutions of this nature, mistakes in treatment would occasionally happen. Employees and servants selected with ordinary care, however, will execute the charity with but few mistakes. If no care be had in their selection, mistakes will necessarily multiply. The purpose of the founders of a charity is to help those who need assistance. They propose, not unskilful or incompetent aid, but humane and efficient treatment. The subject of an employee's negligence is harmed instead of helped by the charity. The will of the donors is thwarted instead of served when an object of their beneficence suffers from such neglect. When administered by incompetent servants, charity, instead of being a great boon to humanity, may become a menace. One who enters a hospital expects, and has a right to expect, more skilful treatment than is obtainable in the home. If such institutions be not held to reasonable care in the selection of their employees, confidence in their efficacy will be shaken. Many who need, will fear to accept hospital treatment, and those who do apply therefor will lack the faith therein that is so frequently half the battle in the contest with disease. In order that the high purpose of the donors of a charitable hospital may be best served, that those who need aid may not hesitate to accept the charity, and to prevent as far as may be human suffering from acts of negligence and incompetence, it would seem imperative to require of those in charge reasonable care in the selection and retention of the employees. The fact that one is a paying patient does not alter the rule. Such patient is the recipient of the donors' gratuity only in a lesser degree than one who makes no payment. The hospital building, with its equipment, management, and its great possibilities for the alleviation of suffering, was provided by charity. In using the organization made possible and supported by that charity, a paying patient, to that extent, benefits by the charity. Because of its failure to allege that the defendant used reasonable care in selecting the nurse of whose negligence the plaintiff complained, this court holds that the plea as presented did not in terms state a defense to the action, and the judgment of the lower court is, therefore, affirmed. As stated in the syllabus of the court, *it is incumbent on a charitable hospital to use reasonable care in the selection and retention of its physicians, nurses and attendants; and for failure to do so it is liable for injuries due to their incompetence received by its patients.*—Journal A. M. A.

Medical Economics and Public Health

"From no other state during the past six or seven years," says the Journal of the A. M. A. in discussing the activities of the California Board of Medical Examiners, "have so many reports been received regarding the prosecution of illegal practitioners and the revocation of the licenses of physicians found guilty of criminal or illegal practice. In few states have such careful records been kept of those engaged in the various branches of the healing art."

"Recently, members of the diploma mills were dismissed on motion of the prosecution, because the authorities of San Francisco failed to provide sufficient funds to prosecute the cases."

Have You Registered Your Certificate?—Reports are coming to us of instances where doctors are running afoul of the law because they have failed to register their certificates to practice medicine and surgery with the county clerk of the county or counties in which they are practicing. This registration of the certificate with the county clerk is just as much a part of the law regulating the practice of medicine as is any of its other features. This oversight may be an extremely expensive one to a physician at the most inauspicious moment.

"If you do not think," says the Journal Indiana Medical Association, "that state medicine is a threatening evil, read some of the papers published in certain medical journals with a leaning toward welfare organizations, and listen to some of the talk of salaried public health officers and all-time professors in our medical schools."

Monkeying With the Narcotic Law—Too many of our good doctors are finding to their cost that the new narcotic law of California now in effect has vicious teeth in it. It is no longer possible to violate this law and smooth the matter over, because the law itself recognizes nothing less than penitentiary sentences. No judges or other people have authority to waive this mandatory provision of the law.

There may be grounds for debate upon the wisdom of enforcement officers in using under-cover agents posing as addicts to get a doctor into trouble by playing upon his well-known sympathies. The doctor who allows his sympathies to lead him into an infraction of the law as it now stands is inviting very serious trouble for himself and those dependent upon him. The law provides a method by which an honest physician can relieve suffering in an addict, and any doctor who makes the mistake of not obeying that provision of the law is unbelievably stupid.

"Just how broadly the courts will construe the California Chiropractic Act is not clear. By implication, the chiropractors of California may all use any drug or medicine except such as are 'included in materia medica,' whatever that may mean. The interpretation of the phrases, 'as taught in chiropractic schools or colleges' and 'as taught and practiced by the recognized schools and colleges of chiropractic,' is difficult. Probably the chiropractic proponents of these laws had in mind the possibility of extending the field of their activities from time to time through the simple expedient of inducing their colleges to enlarge their curriculums."—Federation Bulletin.

The National Committee for the Prevention of Blindness, makes these significant statements: "*'Diagnosis' and 'treatment' are terms which may be considered synonymous with 'detection' and 'correction.'*"

"That the schools should make every effort to discover cases of defective vision among pupils, is agreed generally; whether the schools are to be required to correct such defects is not yet decided.

"The greater the skill and training of the examiner, the more accurate will be the opinion given. Neverthe-

less, since cases of apparently defective vision and suspected eye disease are usually treated by skilled practitioners and not the examiner, the use of teachers and other non-medical examiners is justifiable as the most practical means for examining now available."

A movement is well under way in New York to establish and endow a national home for "aged, decrepit and indigent physicians." An appeal for funds is being made by a group of professional fund raisers to doctors of the whole country, and medical editors are asked to lend their assistance with publicity. The movement is a splendid one and is being promoted by a group of well-known New York physicians. But we fail to see anything national about it, nor, in our opinion, should charity for this purpose be maintained upon a national basis. At widest it is—or should be—a state affair. The doctors of any state can, and no doubt would under capable leadership, contribute and otherwise support a service for those who have served well the people of their own state. We strongly suspect that Western or Southern doctors, for example, would have to be very old and very badly off indeed before they would be willing to spend their last days in a "home" in New York, however comfortable and attractive it might be made.

Just the same, the publicity about the New York home will do good and may lead to an adoption of the idea in other communities.

Reports from 294 cities of over 10,000 population showed that eye inspections are now conducted by the following persons:

- In 58 cities, by school physicians alone.
- In 75 cities, by nurses alone.
- In 59 cities, by physicians and nurses in co-operation.
- In 42 cities, by classroom teachers alone.
- In 60 cities, by combinations of the three.
- In about 20 per cent of the cities, physicians alone examine the eyes.
- In 37 per cent of the cities, teachers and nurses make the examinations.
- In the other cities, examinations are made by any of the three.—From the Report of the National Committee for the Prevention of Blindness.

The toll of human life taken by automobiles last year in the United States was at the rate of more than two persons for every hour of the day, or fifty-five persons for every day of the year.—National Safety Council.

Kolb & DuMez (Therapeutic Gazette) estimate that in 1924 there were perhaps 150,000 addicts of morphine, cocaine, or heroin in the United States, but they further express the belief that the correct figures should be about 110,000.

"The legislation which has been passed," believes the Therapeutic Gazette, "to limit the ability of addicts to obtain these drugs has, heretofore, been passed for the benefit of a relatively small number of degenerates and has caused an immense amount of suffering among many thousands of worthy people who, not being cursed with an impaired morale as a result of inheritance, are deserving of consideration when such laws go into effect."

In some cities, as in Cleveland, Philadelphia, Boston, and Denver, the entire health supervision of the school children is under the Board of Education. In others, as in New York, Chicago, and Detroit, the Board of Health has charge of the medical inspection, working in co-operation with the school staff.—National Committee for the Prevention of Blindness.

During the calendar year 1922, the last for which data are available, there were 78,070 persons cared for in almshouses and 348,928 in homes, day nurseries, and similar institutions. In addition to these, there were in hospitals and other institutions for the care of the insane and feeble-minded and epileptics a total of 348,174 persons. Records show that more than 400,000 persons go out from our state and federal penitentiaries annually; many of those of our dependent classes, as well as many

of those in penal institutions, are suffering from preventable diseases which, in some measure, are factors in their dependency or delinquency.—United States Public Health Service.

American Protective League, another high-sounding title for an apparently new organization of the Bernarr McFadden publications, exponents of sciosophy and enemies of scientific progress. The list of these publications include:

True Stories, Physical Culture, Fiction Lovers, True Romances, True Detectives, Radio Stories, Muscle Builder, Dream World, Dance Lovers, Modern Marriage, Your Car, Movie Weekly, and The New York Evening Graphic.

Warning—A person alleging to be a representative of a life insurance company is working doctors by the hoary method of getting them to cash a check larger than the amount needed to pay for examinations for life insurance policies. He left quite a string of worthless checks in Vallejo, and no doubt by this time is using another name and the name of another insurance company than the one he used there. We have been asked to broadcast this information, which we do, but the necessity for broadcasting a warning against such ancient methods of graft should long since have become unnecessary.

A Doctor of Santa Monica sends an inquiry to the Board of Medical Examiners with a copy of a newspaper advertisement in which an optometrist uses the title "Doctor." Doctor Pinkham of the Board of Medical Examiners replies as follows:

"In response to your inquiry as to whether W. A. Lady, 213 Santa Monica Boulevard, optometrist (whose newspaper advertisement you forwarded to us), has a right to use the prefix 'Dr.' will state that optometrists are under the Board of Optometry and *we have no jurisdiction*.

"In the San Francisco Examiner of July 25, 1925, appeared an article stating that Attorney-General U. S. Webb had advised the State Board of Optometry to the effect that California optometrists cannot legally style themselves as 'Doctors' or 'Drs.' in prefixes, and can only add the affixes of 'Opt. D.' or 'O. D.' when they are graduates of an accredited school of optometry; also that no California optometrist may hold out to his prospective patients that he possesses 'special knowledge' of optometry as defined in the Act, *which Act* defines optometry as a mechanical and not a medical science. We believe this opinion of the Attorney-General will answer your question."

"The smallpox prevalent in American and Canadian cities during the first six months of 1925 was nearly four times as deadly as the type of the disease which occurred in 1923! This year there were recorded 3.5 deaths for each 100 smallpox cases; in 1923, this figure was less than one death per 100 cases.

"The smallpox menace is real; the experience this year shows that the disease is present all over the United States in a death-dealing form. A considerable proportion of unvaccinated persons, and especially of children, in the population of any city is simply tinder for an epidemic which may cause hundreds of deaths, prolonged disability, the complete paralysis of industry and commerce and the impairment of the reputation of the city. How much longer will the American population tolerate a loathsome disease which is entirely avoidable and which has, year after year, increased its power to kill?

"What of the future? Only thoroughgoing vaccination will protect the American and Canadian populations from an epidemic of deadly smallpox which, under present indications of indifference to vaccination, bids fair to rival the most destructive smallpox epidemics in public history. The choice between complete security from smallpox and a record which may well prove to be an indictment of our intelligence rests wholly with the people of the United States and Canada."

These statements are not from medical sources, but from the statisticians and business men of a great insurance company.

Last year I was supplied with a copy of The Christian Science Monitor containing a marked editorial which started out by speaking of "Edward Jenner, who conceived the delusion of vaccination and forced it on a world which is growing daily more skeptical of the worth of his discovery. . . ." It is amazing that anyone should speak of vaccination in that way. The so-called "delusion of vaccination" has, without question, saved the lives of tens of millions of human beings since the days of Edward Jenner, human beings who would otherwise have died of smallpox. I cannot doubt, further, that it has saved many other millions of human beings from serious illness due to that malady.—President W. W. Campbell, U. C., Better Health, November.

The United States Public Service announces that recently a large number of inquiries have been received for information concerning the so-called "National Health Service," with offices in New York and Washington. It is pointed out that there seems to be considerable confusion in the minds of the lay public as to whether the "National Health Service" is a government agency (U. S. P. H. S.) or a volunteer agency. The United States Public Health Service points out that publications of the "National Health Service" are written with manifest attempt to create the impression that it is a government agency, which it is not; that its field representative represents himself to be a physician, but is not, and that its "physician-in-chief" at one time was convicted of using the mails with intent to defraud and was sentenced to a term of four years in the Atlanta penitentiary.—Ohio Health News.

The "Equalization League" apparently is becoming active in efforts to "equalize" the California Board of Health; by which they mean to make it a mixed board composed of all varieties of "doctors by law."

Why not? If the state licenses these miscellaneous "sciosophists" and *thereby approves them as competent to diagnose and treat the infirmities of individuals*, it is logical for the same authority (?) to authorize them to practice the far simpler profession of public health.

When physicians oppose this "equalization" move, as of course they will—even though it would add greatly to their business—watch the "sciosophists" yell mercenary! One of many interesting letters on "equalization" activities is published on page 541 of the November issue of *Better Health*.

According to the Public Press—

The "Soul and Body Clinics" have struck the snag CALIFORNIA AND WESTERN MEDICINE predicted they would strike when all the propaganda that a great church could influence was in full swing. Unless they are strikingly guileless the strong "soul group" knew precisely where they were going when they induced Doctor Cowles and other doctors to help them practice medicine. Cowles ought to have known better, but if press dispatches are approximately true he is more angry now than a good soul saver should be:

"There has come to the attention of the medical profession," Cowles recently declared, "hundreds of cases where men, women, and children have died horrible and lingering deaths because of the neglect resultant from priests playing on spiritual emotions."

In any event, we "labeled" those "soul and body clinics" correctly a long time ago.

The State of New York spent in 1924 \$580,762 for the care of 911 syphilitic insane admitted during the year. The United States Public Health Service calls attention to the important facts that this expenditure of over half a million dollars is the cost of institutional care alone, in one state only, and for but one of the hopeless disabilities resulting from neglected or inadequate treatment of syphilis, either in the early or late stages.

Speaking in a Methodist church in Manhattan, a doctor cried out against the imperfection of the age. He was Dr. Eugene Lyman Fisk, Medical Director of the Life Extension Institute. He said that, of 400,000 persons examined by the organization in twelve years, *not one*

perfect physique had been found. "More than 60 per cent of those examined," he said, "have been found in need of some important medical attention, and practically all have required some modification in their mode of living."—TIME.

In the serious matter of whether eye tests of school children shall be made by physicians, nurses or teachers, the requirements of the law are again important factors. In Alabama, California, Illinois, Indiana, Kansas, New Jersey, New York, and Pennsylvania, either physicians or nurses working individually or together, make the eye tests. In each of these states the law specifies that physical examinations either may be made or shall be made by physicians. In other states, such as Connecticut and Massachusetts, the *law specifies that the examination shall be made by teachers.*—Report of National Committee for the Prevention of Blindness.

Crab—A new advertiser, whose announcement begins in this issue, approached Mr. Flynn, our representative, recently with a request to advertise crab meat. We frankly admitted that we knew very little about crab meat, and neither did they. Under Mr. Flynn's direction, therefore, the prospective advertiser consulted Professor Hanzlik and other competent authority and brought for our information a prepared statement about this food which has proved so informative to this editor that we believe we are justified in utilizing space to pass extracts from it on to the medical profession as a whole. In brief, this investigation shows that:

"Japanese canned crab meat," which is now extensively imported, is prepared from what is known as the king crabs, which live in abundance in the northwest corner of the Pacific Ocean—off the island of Hokkaido, Seghalein Island and the Kurils, and along the coasts of Marine Province of Siberia and Kamchatka Peninsula, where the cold currents are prevalent. They never live in warm water.

The king crab has a very hard shell and unusually long and strong legs. It grows to quite a large size, sometimes weighing as much as twenty pounds. However, the ordinary-sized crabs for canning purposes weigh about an average of eight pounds—running, in length, from 3 to 4½ feet from the tip of the longest leg of one side to that of the other side through the center of the body. Crabs are caught with large nets, which are lowered down deep to the floor of the sea and left for a few days. Catching of females and small masculine crabs is prohibited by ordinance.

Unlike other crabs it is a clean feeder, and as it lives in clear cold waters remote from densely populated lands, its meat is quite free from the dangers inherent in scavenger shell fish and those that thrive in polluted waters. Its meat is sweet and finely flavored. The legs and body are covered with thin skin. When properly boiled, the skin turns to a fine strawberry color and the meat to a milky white. King canned crab meat contains 18 per cent protein, 3 per cent fat, and furnishes a fuel value of thirty calories per ounce, though the quantities are varied, according to seasons. According to some marine food authorities, it contains relatively large quantities of glycogen, which, in combination with its rich protein, gives so much more credit to its food value.

The canning of this food is becoming a great industry. In addition to canneries ashore, it is now packed extensively by what is called "floating canneries," steamers of 1000 to 3000 tons, provided with modern fishing and canning equipment.

The Japanese Government keeps a very close watch on the quality and methods of packing this crab meat. Under its auspices the Japanese Canned Crab Packers and Exporters Association was organized in 1923, comprising all of the packers, exporters and dealers, which exercises a strict control over every phase of the industry. Under the present inspection rule the goods are classified into four grades—fancy, choice, fair, and passed.

The food and commercial value of these crabs were long unknown. About twenty years ago, Mr. T. Domoto, the president of the North American Mercantile Co. of San Francisco, happened to hear that fishermen of Hokkaido were having a very hard time from crabs that so often tore their nets, and these crabs lived in such abun-

dance that it was impossible to provide against their damage. Mr. Domoto made a trip to Hokkaido, and seeing good possibilities, started an industry which last year produced 190,001 cases of this luscious food.

The total import of Japanese canned crab meat to this country in 1924 was 96,145 cases, of which about 75,000 cases were fancy. Although the United States consumes the bulk of the product, it is now well established in other countries.

Long Beach Community Hospital recently passed the following interesting resolution regarding nurse anesthetists:

"WHEREAS, The California Medical Association has declared that the administration of anesthesia is the practice of medicine.

WHEREAS, The Attorney-General of the State of California has ruled that the giving of an anesthetic is the practice of medicine.

WHEREAS, The Board of Medical Examiners of the State of California has ruled that the giving of an anesthetic is the practice of medicine.

WHEREAS, It is against the spirit of the law, against the ethics of medicine, and against the ruling of a large majority of accredited hospitals for nurses or anyone else not legally qualified to practice medicine to give an anesthetic in California.

WHEREAS, The Superior Courts of two states of the United States have already handed down decisions fixing the liability for damages against hospitals in which nurses have administered anesthetics at the time of the death of the patient while under influence of the anesthetic. Judgments against the hospital to the extent of \$10,000 for damages in one case, and \$150,000 in another case have been obtained.

WHEREAS, The Community Hospital of Long Beach intends to comply with the spirit of the laws of the State of California, the code of ethics of the American Medical Association, and all the requirements for an accredited hospital; therefore, be it

RESOLVED, That the administration of general and local anesthetics in the Community Hospital of Long Beach be limited and restricted exclusively to Doctors of Medicine, (M. D.'s) legally qualified to practice medicine and surgery in the State of California."

Motion made by Dr. J. Scott Brown, seconded by Dr. Frank M. Mikels. Passed August 21, 1921.

"Angered because his fractured arm failed to mend rapidly enough to suit him, a patient went to the Stanford Neuropsychiatry Clinic and seriously injured Dr. Edward F. Stadtherr.

"I intended to kill the doctor," the sick criminal confessed. "He was just experimenting on me."

Of the hundred or more major administrative units of the national government, at least thirty are concerned directly or indirectly with some phase of the public health. These bureaus or other divisions are scattered through the ten executive departments and the score or so of independent establishments of the United States. Generally speaking, they carry on their activities more or less independently.

The first important congressional enactment to deal with health was a law of 1798 that authorized collectors of customs to collect 20 cents a month from each American seaman on merchant ships arriving from foreign ports, in order that medical relief might be given to those needing it. Out of this activity grew the Marine Hospital Service, though it was not definitely organized as such until 1870.—Linsley R. Williams (Journal A. M. A.).

Another argument against advertising is the fact that the majority of advertisements appearing over the signatures of doctors are of men who are neither an honor to their profession nor worthy servants to their communities.

This argument holds. We who have pride in our calling of advertising, and believe some honor attaches to it, are in hearty agreement with the medical men in this particular instance.—Amos Stote (Printers' Ink).

Changes in Health Officers Announced by the California Board of Health:

Dr. Aleck P. Harrison is now Health Officer of Santa Barbara County, succeeding Dr. G. S. Loveren. Dr. Harrison devotes full time to the duties of his office. He is not a member of the C. M. A.

Mr. Frank A. Nikirk is Health Officer of San Leandro, succeeding Dr. Luther Michael. What a commentary!

Mr. C. C. Johnson is Health Officer of St. Helena, succeeding Mr. M. P. Guyon. Mr. C. B. Arditto is Health Officer of Jackson, succeeding Mr. E. Marcucci.

And we talk of health progress!

A. M. A. Requirements for Accredited Hospitals Modified—The Council on Medical Education and Hospitals of the A. M. A. on October 18, 1925, modified the requirements relating to who may practice in an accredited hospital to read as follows:

"In order to receive and retain a position among hospitals approved for the training of interns, a hospital should admit to its staff only reputable physicians who obtained their medical training in, and secured the degree of Doctor of Medicine from, a medical college determined as acceptable by the Council on Medical Education and Hospitals of the American Medical Association. This ruling must be enforced for every person permitted to treat the sick in the hospital or in any of its departments except by nurses, masseurs or other like assistants when acting under the orders of a physician on the regular staff of the hospital. Wherever, because of legislative enactment, public officials deem it necessary to provide hospital facilities for practitioners other than graduates of reputable medical schools, then these should be in a building or buildings which in every way are separate from hospitals for physicians and bearing different names."

The enforcement of this regulation will draw the line of demarkation between cultism and scientific medicine as sharply for hospitals as it has long since been drawn for physicians. However conscience-disturbing the fact may be, physicians do not object to cult hospitals built and managed by cultists for cultists, *when they are so labeled*. It is logical to believe that, were the osteopaths, chiropractors and other cultists honest in their claims of superiority for their various methods, they would be delighted to specifically name and operate their own hospitals rather than being constantly active in attempts to attach to and become part of the educated medical profession and its agencies.

Under this new ruling, supervisors in charge of county hospitals and others whose jobs are so politically uncertain that they are willing to trade with cultists by giving them equal rights with physicians in their hospitals are given a choice of the usual horns of a dilemma. The line of demarkation is clearly drawn, and political units that are in the hospital business for the poor who cannot help themselves and, therefore, must take such services as offered them, can have as many cult hospitals as they want, provided, of course, that they name them separately and make them separate entities, physically and in service, from the hospitals utilized as agencies of scientific medicine.

The cult hospitals will not, of course, receive any form of credit or recognition from educated physicians officially or personally.

In addition to this, it is, of course, as unethical for an educated physician to patronize a cult hospital as it is to share offices or consult with cultists in his private practice.

Again, these decisions are not made for the purpose of fighting cultists, but for the purpose of labeling goods—as we label them under the pure food and drug law—for what they are.

Not a month goes by without seeing litigation between the physician and his patient, with the latter charging the former with negligence in some method of treatment The alleged misuse of the x-ray forms an increasingly large class of this kind of litigation.—A. M. Harris (Medical Times).

Several of our physicians whose names appear in "Who's Who In America," published every two years by A. N. Marquis & Co., 440 Dearborn Street South, Chi-

cago, have been misled recently by a request for a revision of submitted proof copy which, upon casual reading, may appear to be from the editors of this widely used publication.

Careful reading shows the letters and proof to be from "Who's Who Publications, Inc., 799 Broadway, New York City, a different concern, who are putting out a "Who's Who in American Medicine," or at least that appears to be the last name for the proposed volume.

This matter was treated editorially in the Journal of the American Medical Association (October 17), and this additional information is supplied for those interested.

Dosurine—We have given the advertisement of this substance very careful consideration. The opinions we have been able to get seems to indicate that it will do all that its promoters claim for it. It makes the question of routine urine examination, for at least two of the more usual and important possible ingredients, an extremely simple and easy matter—so simple, in fact, that the editor was skeptical about it for a considerable time.

We would be glad to hear the experiences of doctors and laboratories with this substance.

Christmas is so near that we are sure all our readers will be interested in the announcement of the new gift and stationery store of That Man Pitts in the advertising pages of this issue. Mrs. Pitts, who is now conducting the business of her late husband, who was well known to many of you, is so confident that she has a service that will appeal to doctors and their families, hospitals, nurses, and other readers of CALIFORNIA AND WESTERN MEDICINE that she has contracted for paid space for a year in which to make her announcements. The new store at 882 Market Street, San Francisco, is very attractive, and you will find there Christmas cards that are unusual and distinctive, as well as a large selection of gifts.

In succeeding issues this firm will tell you more about the high-grade stationery and office supplies they have to offer at all times. As this is something we all must have, it will be very easy to show our appreciation, in a substantial manner, of the co-operation and confidence Mrs. Pitts has shown in helping support our magazine. Telephone Kearny 8052, and a representative will call on you.

The Vital Capacity of the Lungs in Pneumonia—

A study made by John H. Arnett, Philadelphia (Journal A. M. A.), of the vital capacity in thirty-two cases of pneumonia, delayed resolution and empyema, yielded the following data: In pneumonia the vital capacity is greatly reduced early in the disease. The determination may, therefore, be of distinct diagnostic value in doubtful cases. The greatest reduction generally occurs shortly before the crisis. The advent of the crisis may, therefore, at times be predicted in advance. Cases of uncomplicated pneumonia almost constantly exhibit a rapid rise in the vital capacity in the first five to ten days from the crisis. Patients with empyema and delayed resolution do not exhibit such a rapid rise. The vital capacity may, therefore, assist in diagnosing empyema or unresolved pneumonia. The vital capacity increases gradually for months after clinical recovery from pneumonia or empyema has occurred. In many cases it probably never entirely returns to normal.

Non-specific Granuloma of the Intestine Causing

Intestinal Obstruction—The case reported by T. Homer Coffen, Portland, Ore., (Journal A. M. A.), suggested a tumor mass resembling tuberculosis or new growth, causing intestinal obstruction. The patient has been under observation for nine years, in which time there have been three operations for granulomatous tumors, causing intestinal obstruction. He was fairly well in the intervals. The first granulomatous obstruction followed an operation for appendicitis, subacute. Subsequent granulomas were associated with systemic evidences of focal infection (sciatica, arthritis, low-grade fever, etc.). The last operation showed coincidental suppurative cholecystitis, and the excised tissues and gall-bladder gave a pure culture of streptococci.

California Medical Association

EDWARD N. EWER, M. D., Oakland.....President
W. T. McARTHUR, M. D.....President-Elect
EMMA W. POPE, M. D., San Francisco.....
.....Secretary and Associate Editor for California

1926 ANNUAL SESSION, C. M. A. OAKLAND, APRIL 26 TO MAY 1

The Arrangements Committee wish to remind the members of the California Medical Association that the next annual meeting of the Association will be held in Oakland, April 26 to May 1, inclusive.

The State Council has rearranged the program for this meeting. Two days, Monday and Tuesday, have been selected for the holding of clinics, and the Program Committee are inviting prominent Eastern medical men to conduct these clinics at the different hospitals in Oakland.

These clinics will be interesting and instructive and worth your while to attend.

General sessions will be held on Wednesday, Thursday, Friday and Saturday mornings, and the Section sessions will meet in the afternoons of these same days.

All papers presented at this meeting are to be reviewed by the Program Committee previous to presentation, and the number to be presented is to be reduced.

The clinicians who conduct the clinics on Monday and Tuesday are to read papers at the General Session on Thursday morning.

Special attention is being given to the social features of the program. A golf tournament, to be conducted by the Northern California Medical Golfers' Association, will be held on Monday and Tuesday afternoons. All are invited to participate in this event. Many trophies are to be awarded.

Among the other forms of entertainment will be luncheons, boat and auto rides, teas, receptions, dinner dance, and athletic features.

Mark the date on your calendar and make a special effort to attend. We promise you a good time.

(Signed) CLARENCE A. DE PUY, M. D.,
Chairman of Arrangements Committee.

HISTORICAL DATA DESIRED

Dr. Emmet Rixford, chairman of the Committee on the History of the California Medical Association, has sent the following letter to all county secretaries. Will each member of the California Medical Association appoint himself a deputy committeeman to assist this very important committee in collecting material and data?

To All County Secretaries:

The Committee on the History of Medicine of the California Medical Association is greatly desirous of collecting all printed matter extant on the subject of the history of medicine in California for deposit in some safe place where it will be made accessible to students of local medical history. It is urged that the secretaries of the county medical societies undertake, as deputy committeemen, as it were, to interview all of the older men in the profession, or their families or successors, who might have old California medical journals, pamphlets, photo-

graphs of local medical men or hospitals, etc., and forward to the office of the association (California Medical Association).

It is further suggested that each secretary arrange with some member of his county society to prepare a paper on the local medical history or to gather data which the memories of the older man may have retained of events of medical importance, such as founding of hospitals, of local medical societies, etc., etc., contributing the same to the committee, who will arrange for publication of the material as occasion offers. Very respectfully,

EMMET RIXFORD, *Chairman.*

C. M. A. OFFERS PRIZES FOR BEST MEDICAL ESSAYS

At the 148th meeting of the Council, held at Long Beach, November 8, 1924, it was

RESOLVED, That two prizes of \$150 be established—one for a paper on original research, and one for a paper on a clinical subject; and that these prizes be open to the members of the C. M. A. only, and be competed for at the 1926 convention; and, further, that the scope of the material be determined by the committee.

The following committee was appointed: Albion Walter Hewlett, chairman; Dudley Fulton, M. D., 523 West Sixth Street, Los Angeles; and Fred Fairchild, Woodland.

On Doctor Hewlett's resignation, due to illness, Walter C. Alvarez was appointed chairman. The committee regrets that the time for careful work is unavoidably so limited this year.

The accompanying rules for the submission of competing papers have been approved by the Executive Committee:

Rules for the Submission of Papers

1. Any member of the California Medical Association is eligible to compete for the prizes. Any question arising as to the eligibility of a candidate or the admissibility of his essay will be settled by the decision of the Council.

2. Manuscripts must be typewritten on one side of the paper; they must be double spaced; and they must not be folded or rolled. Illustrations or charts must be marked with the title of the paper to which they belong.

3. Essays must contain not more than 4000 words. In judging a paper, the committee will take into account the basic importance of the work done and its novelty; the thoroughness with which the research has been carried out; the clearness with which it has been written up; and the neatness of the manuscript and illustrations.

4. Papers should be sent, preferably by registered mail, to Dr. Emma Pope, Secretary of the California Medical Association, 1016 Balboa Building, San Francisco. They should be identified by a nom de plume or motto only. A separate envelope should be sent to Dr. Pope containing the author's name and his nom de plume or motto, so that after the award is made the name of the writer can be found. Any return addresses or other distinguishing marks will be removed from the wrappers before the papers are turned over to the judges.

5. All papers must be in the hands of Dr. Pope before March 15, 1926, in order that the judges may finish their work in time for the meeting of the association.

6. The judges reserve the right to withhold the award, in the event that no paper comes up to the standards of excellence which they feel should be set.

7. If, in the judgment of the editor of CALIFORNIA AND WESTERN MEDICINE and the Editorial Councilors, the paper on laboratory research is too technical or otherwise unsuitable for inclusion in CALIFORNIA AND WESTERN MEDICINE, the prize winner will be allowed to publish it in some special journal and will be required to make an abstract for the readers in California.

8. Inquiries relative to the prize contest should be addressed to the chairman of the committee, Walter C. Alvarez, 177 Post Street, San Francisco.

A PLEA FOR A KEEN AND ACTIVE INTEREST IN THE CONTINUED ARMS OF THE UNITED STATES ON THE PART OF THE MEDICAL PROFESSION

Should the United States ever become subjected to the commands of an insolent foe it will be because physicians do not now take their places and do their duty in the organization of our country's man-power.

It is hardly too much to say that there is not a single physician in this glorious country of ours who would not instantly drop his own affairs, and hurry with justifiable pride to a sick President if called.

Is not the President the Commander-in-Chief of the Services, and should not the civilian physician prepare himself to efficiently aid the President in his determination to defeat a foe and by that defeat to protect the people and fortify the nation's place in the security of the world?

I maintain that there is no essential difference between the doctor's duty in the welfare against the enemies of an individual and his larger responsibilities as Medical Reserve Officer in aiding the body politic.

Men of high knowledge of war recognize that organized medical experience is absolutely imperative for quick mobilization and for quick demobilization. As a matter of fact, much of the effectiveness in all branches of military service rests upon the wise utilization of the medical, surgical, and dental knowledge of our profession.

This professional learning must, for its full advantage, be correlated with training directed toward a realization of the specific processes associated with the conduct of war. This realization can only be gained by attending a school of military methods conducted by those who know, and this has been made easy by correspondence and adequately supported training camps.

It follows that it is the plain duty of any patriotic medical man to willingly, and without propaganda, apply for a commission which is, in every truth, the gateway to this consummation.

Another way of looking at this and emphasizing the national duty of the doctor is to define the creation of an army under four heads:

1. *Pre-mobilization*—a state wherein the medical men of the country, in time of peace, strive in a selfless way to bring health to the community and by experimentation and persistent effort advance new methods of protecting the individual so that he, when called upon, will present himself with the maximum physical and mental strength. The weaker ones, by this medical procedure, are also prepared for some duty other than the firing line. During this pre-mobilization period, the special education of the commissioned civilian doctor is attended to by the regular officers of the medical corps and the creation of all varieties of "cog-wheel" units; general hospital, evacuation hospital, etc., etc., are made and ready for installment.

2. *Mobilization*—The quick bringing together of healthy men for fighting and executive purposes and less healthy men adequately to aid in subordinate positions; thus preventing sound men wasted in minor jobs, and the careful registration of pre-existing defects, both mental and physical, in each and every individual called to arms. Thus every man sound or otherwise is by the physician's preparedness given a place in the machinery of war.

And so it comes to pass when war is declared, great portals of entrance are equipped in every conceivable way to rapidly and completely take advantage of the man-power. At the same time the future of the individual soldier is protected by a knowledge of pre-existing conditions, or the absence of them, when a consideration of disability, permanent or otherwise, is demanded. Compare this with the hopeless chaos of 1917, when patriotic civilian medical men hurried uneducatedly to the aid of the nation, and were mortified by their ignorance and their well-meant but misdirected energy.

3. *Demobilization*—Here the great portals of entrance are used as portals of exit, and all the machinery of mobilization is utilized for the welfare of the nation and the man. Justice is given to all, and the maximum restoration of the wounded in mind and body secured.

4. *Post-Demobilization*—a state wherein the civilian commissioned doctor, with his special knowledge of the demands of the service, can protect and direct the health of the people who have served, disabled or otherwise.

And so post-demobilization merges into pre-mobilization and the cycle is complete; and thus, also, the service of the medical profession is rendered in the highest efficiency and becomes worthy of its highest attributes and traditions.

It must be kept in mind that all this service carries with it but little inroad upon the private time of the doctor, and the Defense Law protects him from every other form of military duty other than a call to arms against a foreign nation. With so little to lose and so much to give, it is an amazement to me that the march to commission is so halting and so seeming an evidence of a lack of patriotism.

J. WILSON SHIELDS.

ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer, secretary)—The regular monthly meeting of the association was called to order by the president, H. B. Mehrmann, October 16 at 8:20 p. m. The program was presented by the staff of the Samuel Merritt Hospital. In their program they aimed to point out recent advances in medicine. It was snappy and instructive. A maximum of nine minutes was allowed each speaker.

Robert A. Glenn, in his paper, "The Administration of Glucose in Combating Toxemia," outlined the physiology of the metabolism of glucose and the role played by that substance in body maintenance. The relation of the oxidation of glucose to disturbances of the functions of the liver, kidneys, and other organs was described. An estimate of the quantity of glucose necessary for the body at rest and at work, and of the amounts that might be administered intravenously, which was the method of choice. Certain precautions in the preparation of the solution were given, as well as a simple technic for the sterilization of such solutions.

Frederic M. Loomis read a paper written in a somewhat facetious vein on "Delirium Operatorium," a clever phrase of De Lee's, defined as "an acute lapse of operative reason which may affect the accoucheur after much loss of sleep, the nervous wear of a prolonged labor, the exactions of the family, combined with the sudden appearance of extraordinary difficulties." It was pointed out that birth injuries are much more frequent than supposed, especially in breech cases, and that these injuries are more often due to haste and panic than to essentially impossible situations. The writer urged more deliberation in pelvic maneuvers, and more gentleness in management—"not to mention those lofty souls who disdain any management except the selection of a solid place to brace their feet."

A. C. Siefert gave a brief essay on "Cholecystography," as originated by Graham and his associates. He discussed the theories and facts upon which the method is based, as well as the criteria of normality and pathology of the gall-bladder when examined by this test. He concluded that cholecystography is a great step in advance of the ways of roentgenological examination of the gall-bladder hitherto used, and that the oral administration of the dye is sufficiently safe to be used routinely.

A. A. Alexander discussed differential diagnosis of organic and functional heart disorders. Many heart conditions, he said, are classed under "myocarditis." This diagnosis should be made with care. Myocarditis is an element in a pancarditis in such conditions as rheumatic fever and syphilis, whose organisms invade the heart, but in most febrile conditions the cardiac muscle is damaged by circulating toxins, rather than by inflammatory changes. By means of case report he pointed out the apparent identity of symptoms in functional and organic disorders. Then taking up the symptoms separately, he indicated differential considerations. Many patients, he said, with or without actual heart disease, readily develop a fear neurosis or "cardiophobia," and in this connection deplored the tendency to stress to the patient the existence of cardiovascular findings, such as murmurs or alterations in blood pressure. In organic heart disease treatment, in his opinion, cannot effect a cure. One must consider (1) the avoidance of further damage by removing obvious infection; (2) adjustment of the patient's habits of life and work to his heart reserve, rather than attempting to fit the heart reserve to the patient's

effort; (3) the use of drugs, if heart failure threatens. Functional disorders tend to relapse, but do best with hygiene and suggestion to rebuild the patient's confidence.

In an analysis of twenty patients, the following conclusions were noted by Francis Shook in his paper, "Maxillary Antrum Infection in Children." (a) The symptomatology is local and general. The most frequent local symptomatology is (1) impaired nasal respiration, (2) frequent coryza, (3) mucoid discharge, usually post-nasal, (4) "crusting" in anterior nares, with sneezing attacks on attempts to dislodge the crusts by sniffing, (5) bronchitis or night coughing caused by post-nasal dropping into the bronchi. (b) General symptomatology—absorption from the chronic infection causes the general symptomatology. In order of frequency, the following has been noted: (1) The child is below par in strength and usually in weight; (2) pyelitis and cystitis; (3) beginning degeneration, such as myocardial; (4) occasional myalgia (growing pains) tenderness at tendon insertions, joint involvement (rare); (5) occasional febrile attacks. Treatment—The most satisfactory combination has been (1) infratubinal drainage of the maxillary antrums under nitrous oxide or ether-vapor anesthesia, (2) after treatment of antrums—suction, lavage, vaccine, anilin dyes (acriflavine or gentian violet), (3) hygienic and dietetic supervision by family physician or pediatrician.

C. L. McVey spoke on the "Present Status of Intravenous Dye Therapy in Septicemia," and drew inferences from Hugh Young's report on 210 cases.

In his subject, "Fallacy of Easy Sterilization of the Urinary Tract," E. Spence DePuy discussed the newer urinary antiseptics, devoting special consideration to hexyl resorcinol and mercurochrome, in particular. The writer called attention to the widespread desire of all for some easy method of sterilization of the urinary tract; one that would free the urine of pus, and relieve the patient of the symptoms attendant upon infection—an antiseptic that required possibly no investigation of the patient's condition and which might be self-administered. Desirable as such easy therapy may be from the viewpoint of both physician and patient, however, the paper pointed out that, with such agents as are at present available, simple administration of drugs, either orally or intravenously is generally not sufficient to sterilize the urinary tract for the two following reasons: (1) Many urinary tract infections are secondary to distant foci. (2) The more severe urinary tract infections are frequently the result of obstruction, either in the urethra, at the vesical neck, in the ureter, at the kidney pelvis, or in the kidney itself. Obstructions cause a residual or stagnant urine. Stagnant urine is a favorable culture media. To secure sterilization of the urinary tract, then, requires that focal infections be eliminated and that obstructions be overcome. It was then pointed out that the natural inference is that nothing, so far discovered, has taken away the necessity for investigation and diagnosis. And that in the case of mechanical obstructions, ureteral kink, stricture, etc., it is not so much the drug that is employed, whether by mouth, intravenously, or even by instrument to the infected part, as it is to the relief of obstruction by instrumentation, plus all the known urinary antiseptics—mercurochrome, hexyl, resorcinol, and nitrate of silver solutions.

M. L. Emerson's subject was "Carcinoma of the Bowel." He presented two of his six patients, pre-operative pictures, also lantern-slide demonstrations of the operative technique. He stated that, by deperitonizing the bowel tumor before removing the same, there is eliminated the much-dreaded peritonitis so frequently complicating this type of work, and the operative mortality was greatly reduced. By circumscribing or walling off the growth with the peritoneum, practically placing the growth outside of the abdominal cavity, it facilitated and made visual the application of radium and x-ray. Where it was possible to mobilize the growth, the tumor mass and bowel was lifted out of the abdominal cavity and deperitonized around the loops of the bowel, the tumor being removed a few days later, thereby shutting off the abdominal cavity much after the fashion of Mikulicz's operation. The cancerous growth is then removed a few days later, and further application of radium or x-ray, if thought necessary. By the application of radium, x-ray and surgery, we have been enabled to make these patients fairly com-

fortable, and some of them over a period of three years. The doctor also stated that Crile and other operators have reduced the operative mortality of this type of work down as low as 2 per cent by using the several-stage operation.

In his brief discussion of "The Present Status of Radium and X-ray Therapy," W. H. Sargent stated that when the best interests of the patient are considered, radiation therapy is neither a substitute nor competitive of other therapeutic measures, but a valuable adjunct to both surgery and medicine, and in advanced malignancy it is the greatest palliative so far known. In early cases he deems it inadvisable to attempt a cure with radiation when the disease can be completely removed surgically. In cancer of the breast with glandular involvement, he believes a more thorough trial of pre-operative radiation seems justifiable, since surgery alone can offer so few chances of cure. Sargent also believes that greater co-operation between physician and radiologist is much to be desired, and will undoubtedly be productive of better results.



CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The regular monthly meeting of the Contra Costa County Medical Society was held at the offices of Drs. Abbott and Hely at Richmond, October 31.

The lecture was delivered by Hans Lisser on the pathology, diagnosis, and treatment of ductless glands, illustrated with lantern slides. The lecture was classical. This is Dr. Lisser's third lecture to the Contra Costa Society in eighteen months; the attendance was up to the standard. The unanimous verdict of the members present was that they wanted Dr. Lisser again. This we consider very complimentary to him.

The following members were appointed by the president to arrange for the annual meeting to be held this month to elect officers for the ensuing year: L. M. McCollough, S. N. Weil, L. H. Fraser.

The following members were present: C. E. Camp, San Pablo; G. M. Bumgarner, J. W. Bumgarner, H. L. Carpenter, P. C. Campbell, L. H. Fraser, Denninger-Keser, U. S. Abbott, L. St. John Ely, Rosa A. Powell, Hall Vestal, Richmond; John and Mrs. Beard, Martinez; T. W. Lavery, University School of Medicine; F. L. Horne, J. M. McCollough, William A. Rowell, Crockett; J. T. Breneman, El Cerrito; S. N. Weil, Selby.



FRESNO COUNTY

Fresno County Medical Society News (reported by J. A. Montgomery, secretary)—The Fresno County Medical Society has begun a campaign for diphtheria immunization.

On October 17, Dr. Halliday of the State Board of Health addressed the Medical Society at a luncheon-meeting. He demonstrated the technique of the immunization by giving several first treatments to children from the schools. He also discussed the work being done in California counties, as well as that that has been done in New York City.

Dr. Matthewson of the Fresno City Board of Health outlined a plan whereby this work should be done as completely as possible by the physicians in their own offices, urging their families to come for this work to their own physicians. He is conducting a campaign of newspaper publicity toward this end, and the city schools are sending out pamphlets of information to all homes. Physicians in the county are urged to report to the City Health Office the number of children receiving treatment.

It is the intention of the society in this campaign to avoid the use of the general free clinic for this purpose, and to confine the free treatment to those applying to the County Hospital Clinic and found entitled to charity.

A meeting of the Fresno County Medical Society was held on November 2. Dr. James Percy of Los Angeles gave the address of the evening. His subject was "The Treatment of Cancer." He discussed the methods of use of the cautery, the proper manner to use the cautery, and demonstrated some of the cauteries used in this work in his own practice.

At this meeting Edwin Mott, Charles Fulmer, and Edward Halley were elected to membership in the society.



HUMBOLDT COUNTY

Humboldt County Medical Society (reported by L. A. Wing, secretary)—The following meetings of the Humboldt County Medical Society were very much enjoyed by a large attendance of the members. The June meeting was held in Ferndale, as guests of Doctors Brunner and Ring. Papers were read by Doctor Brunner, on "Diabetes," and Doctor Ring on "Treatment of Burns."

The July meeting was held in Scotia, as guests of Doctors Cottrell and Haight. Papers by Doctor Cottrell on "Injuries to the Spine," and Doctor Haight on "Pleurisy With and Without Effusion," were read.

On October 6, a meeting was held in Eureka. Doctor Charles C. Falk entertained the society with a very enjoyable talk on his experiences with the medical world while abroad.



MARIN COUNTY

Marin County Medical Society (reported by John H. Kuser, secretary)—A meeting of the Marin County Medical Society was held on October 29 at Doctor Jones' office in San Rafael. The following members were present: Frank Cannon, O. W. Jones, W. F. Jones, L. L. Stanley, G. M. Landrock, and J. H. Kuser. The secretary was requested to send to the A. M. A. for twenty copies of "Principles of Ethics," to be distributed among the members. Notes taken by Dr. Kuser, Health Officer of Marin County, at the Health Officers' meeting at Long Beach were read and considerable interest was shown by a lively discussion. The necessity of co-operation of the organized profession to control and prevent disease was well brought out.



SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by Bert S. Thomas, secretary)—The local society convened at the Sacramento Hotel on the evening of October 20 for its regular meeting. In addition to twenty-two members, the society was treated to a visit from the entire State Board of Medical Examiners, who, at the time, were met in their yearly Sacramento session. Those attending were Phillips of Santa Cruz, the president; Brown of Los Angeles, the vice-president; Pinkham of San Francisco, the secretary; Brem and Smith of Los Angeles, Morton of San Francisco, Harris of Sacramento, Yates of San Diego, and Adams of Oakland.

The minutes of the September meeting were read and approved.

Case Reports—Dillon reported a case of a complete right pneumothorax. The boy had fallen and had lacerated a small area mesial to the right shoulder. In a short time air had filled the entire right chest cavity. X-rays of the condition on the sixth day were presented.

Gundrum reported a case of a man whom he had referred to Green. Despite the fact that there was neither impaction nor any pathology of the tooth-bud, a fully grown tooth had not come in to take the place of a deciduous one. These two reasons are the only ones to explain the lagging of a fully formed tooth. No explanation could be offered for its lack of descent.

The paper of the evening, "Infant-Feeding—A Survey," was presented by Edward S. Babcock. He said:

"Infant-feeding is one of the most important branches of medicine, but, unfortunately, is one of the most neglected. Our high infant mortality rate is due to a lack of instruction, or improper instruction to mothers, in the care and feeding of infants. Infant welfare centers throughout the country have played an important part in decreasing the infant death rate.

Obstacles to breast-feeding, and methods of overcoming them, are discussed. Manual expression of the breasts is advocated to increase a failing milk supply.

The history of the development of artificial feeding from the time of Biedert, Liebig, and Rotch to the present time were given.

Water, proteins, carbohydrates, fats, salts, vitamins, and acidity of cow's milk were discussed in turn. The known methods of modifying, changing or substituting each were given. Proprietary infant foods, largely carbohydrates, are grouped into simple sugars, dextri-maltose compounds,

and preparations containing more or less starch. Preparations advertising direct to the laity are a menace to public health. A boiled cow's milk, water and Karo syrup mixture, correctly proportioned, is advocated for routine feeding, because of simplicity in preparation, convenience and cheapness.

Computation of caloric values and examinations of stools were discussed as important checks on the feedings.

Mixed feeding was discussed briefly. Feeding of premature and sick infants is not considered in this paper. The so-called difficult feeders are considered medical cases and should receive special attention. Many of them are found to have a pyuria, otitis media, or congenital abnormality of some nature.

Intolerance to various food elements and allergy were briefly considered.

Dental caries, malocclusion of the teeth, speech defects, chronic constipation, smallpox, diphtheria, and many other infirmities of later childhood and adult life could be practically eradicated if all mothers were properly instructed in infant-feeding and care."

In the discussion, Pitts discussed the possibilities of galactagogues. Pitts believes that it is possible to measurably run up the quantity of milk in twenty-four hours. Gundrum added that, without any question, he believed beer to be a definite galactagogue. He related how Stephanson had told him of types of infant-feeding in the Antarctic. Most of the mothers chewed up meat and then fed it to their babies. It was really remarkable how they thrived. Hall told of Health Department methods in the control of the local milk supply.

In closing, Babcock stated that extensive experimentation had been conducted in Chicago on the possibilities of galactagogues. Their final conclusions, based on the most careful measurements, show that there was no galactagogue among the great number of supposed ones. Regarding the question of goat's milk, Babcock declared that this contained too much fat and salt. He also added that, despite the fact that he carefully follows the Health Department reports, he uses boiled milk in his infant formulas.

Brief remarks were made by all members of the Medical Examiners. Several spoke directly on the paper of the evening. Yates, as a dermatologist, has one feature connected with goat's milk—eczema. Harris and Smith, both of whom had returned from their recent trip through England and Ireland, told of the pathetic condition of the cattle in Ireland, where whole flocks were definitely tuberculous. The results can be seen on all sides.

Applications for Membership—The applications of Norris R. Jones, Angus A. McKinnon, and Joseph L. Mullin were read for the first time. After the second reading of the applications of Clyde G. Reynolds, Edward P. Moser, Hans F. Schluter, and Charles I. Titus, a vote was taken. All were unanimously elected to membership in the local society.

Report of the board of directors announced a paper by G. Parker Dillon, concerning diagnostic problems of the rectum at the November meeting.

Communications—One from Colonel Edward L. Munson was read, thanking the local society for their sponsoring plan of the M. O. R. C.

State secretary's note calling attention to the resolution concerning the submitting and approving by the Program Committee of the State Society of all papers to be read by any member of the association at any annual meeting, and the space to be given them in CALIFORNIA AND WESTERN MEDICINE, was read.

A letter from Dr. Leo P. Bell, asking the local society to be one of several societies to present a film, entitled "How the Fires of the Body Are Fed," was read.

An invitation from City Manager Bottorff to visit the city's filtration plant was considered under new business. The invitation was accepted, with the suggestion that some night be named for the inspection.

Motion was made, seconded, and carried that the local society join with Woodland, Chico, Red Bluff, Redding, and Stockton in the public presentation of the film, "How the Fires of the Body Are Fed." The meeting adjourned to the banquet table.

SAN FRANCISCO COUNTY

Franklin Hospital Clinical Society (reported by Ewald H. Angerman, secretary)—The Franklin Hospital Clinical Society met at the hospital on October 5, J. Wilson Shiels presiding.

Dr. Westerfeld reported a case and discussed the subject of "Echinococcus Cyst of the Liver." Dr. Schaupp's subject was "The Heart in Pregnancy."

St. Luke's Hospital Clinical Club—St. Luke's Hospital Clinical Club resumed its regular meetings on Thursday, November 5, the speaker of the day being Clement H. Arnold. His subject was "Some Interesting Cases of Congenital Heart Disease." He stated that although the chief interest of congenital abnormalities is to the embryologist and pathologist, and the greater number of cases occur in children, yet it had been his good fortune to have seen several cases in adults. Persistence to adult life makes the recognition and treatment of congenital heart disease of some moment, particularly in the management of the patient's life and our ideas of prognosis.

His talk was illustrated with drawings demonstrating embryological development of heart and blood-vessels and abnormalities resulting from such lack of development. He presented the history of four very interesting patients which had come under his observation—one with pure dextrocardia and anomalous electro-cardiogram; another of combined mitral stenosis, patent interventricular septum and bifid apex which came to autopsy; a third of patent interventricular septum which came to autopsy, and the fourth of patent ductus arteriosus. These adults ranged in age from 35 to 62.

The speaker outlined the main phenomena by which the presence of congenital malformations could be recognized, following this with a short axiomatic recapitulation of cardiac symptoms and findings, as related to congenital heart disease, summing up with the statement that the presence of congenital defects in any other part of the body is in favor of any heart affection present being congenital.

St. Joseph's New Buildings—Variable Staff Program—St. Joseph's Hospital of San Francisco has begun its extensive fireproof reconstruction by demolishing its older structures, in preparation for the new units, which will provide 200 patients' beds and for 150 Sister and lay nurses and other attachés and incorporate the latest ideals in hospital construction. All of the patients' accommodations will be maintained until after the rebuilding, when the last of the present structures will be torn down, making way for others planned.

The staff met on November 18 and enjoyed a varied program based on recovered cases from the hospital. P. Collischonn spoke of the "Talma Operation" and outlined a case where abdominal ascites was permanently relieved, after previous repeated tapings. D. E. Stafford discussed "Ectopic Pregnancy," illustrating it with a recent case. J. C. Newton read a paper on "Dermoids," describing a case of double unilateral lesions in a girl. "Medical Notes From the East" were given by T. I. Janes, and included observations with Farr, the Mayo staff, and Crile. W. T. Cummins, pathologist, differentiated teratoma and similar tumors, and Lloyd B. Crow, radiologist, showed mediastinal x-ray films.

A. S. Musante, head of staff, offered resolutions respecting the death of Doctor Albion Walter Hewlett, Professor of Medicine at Stanford University, who was on the consultation staff of St. Joseph's and had addressed the meeting recently on post-operative medical treatment. William Quinn and Howard Dixon presented case histories of patients with pneumonia and gas phlegmon of the neck, respectively.

The program of December 9, "Pediatric Night," follows:

"Advances in Pediatric Diagnosis," C. F. Gelston; "Modern Treatment in Children's Diseases" and "Surgical Considerations in Pediatrics," Emma Willits.



SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by P. C. Means, secretary pro tem.)—The regular meeting of the Santa Barbara County Medical Society met in the staff room of the Cottage Hospital November 9. President F. R. Nuzum introduced Willard J. Stone, of Pasadena, who presented a very careful and interesting

paper on "Certain Aspects of Heart Disease, Including Coronary Occlusion, Angina Pectoris, and Adhesive Pericarditis." Free discussion showed the interest with which it was received. Harry L. Schurmeier presented a patient who had had, some months ago, trophic ulcerations on the toes and had been cured at a Southern "sanatorium" by starvation for two weeks and rest in bed. The patient was much impressed, and said there was explained to him "the harm of combining vegetable and animal proteins." The dangers of starvation and the temporary value of rest were pointed out in the discussion, but did not shake the faith of the patient.

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YOLO-COLUSA COUNTIES

Yolo-Colusa County Societies (reported by John D. Lawson, secretary)—October 16—Regular quarterly meeting in conjunction with Woodland Clinic conference.

Amendment to the constitution was proposed, changing the name of the society from Yolo County Society for Medical Improvement to the Yolo-Colusa County Medical Society. This will be voted on at the next regular meeting.

Program—Observations on recent trip in the Middle West and East, by John D. Lawson. Presentation of a case of diabetes with lipemia retinalis and xanthomata diabeticorum, by J. Edward Harbison. Differential diagnosis in an upper abdominal tumor, by Leo P. Bell.

Russell G. Frey, resident physician at Woodland Clinic Hospital, was elected to membership in the society. Walter J. Spencer, member of the staff of the Woodland Clinic, has severed his connection with that institution. He expects to enter into the practice of pediatrics in the southern part of the state.

Fred R. Fairchild has just returned from a month spent in the Hawaiian Islands.

H. D. Lawhead, Yolo County Health Officer, reports a rather unusual amount of diphtheria in the county, notwithstanding a concerted effort toward the popularization of toxin-antitoxin prophylactic.

The public lectures given monthly by the Woodland Clinic were resumed in October, when Dr. H. D. Lawhead spoke on "The Doctor of Forty Years Ago and Today" With Some Personal Reminiscences."

At the November meeting Dr. J. Edward Harbison spoke on "Various Types of Infectious Diseases, Their Prevention and Treatment." This was illustrated by a moving picture, entitled "How Disease is Spread."

Woodland Clinic—The directors of the Woodland Clinic have authorized the construction of the first unit of a new hospital building, and construction is to begin immediately. The new unit is to have a capacity of seventy-five beds, which will be a considerable addition to the fifty-five beds now in use. The building is to be absolutely fireproof, and will incorporate many new features of hospital construction. This will be known as the first unit of a building which, when completed, will consist of four lateral wings with a central administration building. Each wing will cost approximately \$100,000 and the administration building probably twice that amount, so that the completed structure will cost approximately \$600,000. The greater portion of the new structure is to be devoted to actual patients' rooms. Certain portions of the present building will be utilized to give additional space to the various departments, the size of which will necessarily be increased, owing to the addition in the number of patients. The name of the corporation has been the Woodland Sanitarium, but owing to the fact that the hospital has always handled general medical and surgical work the title was a misnomer. The entire organization is now to be known as the Woodland Clinic. Consequently, the hospital department will be known as the Woodland Clinic Hospital.

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CHANGES IN MEMBERSHIP

New Members—Roger W. Barnes, Ivyl Clare Bedwell, Warren P. Clark, Willis M. Gardner, Wesley J. Hommel, Ralph R. Holzman, Robert W. Langley, Arthur E. Mark, Ihil Rubenstein, Fred McKay Bantum, Edward R. Cox, Los Angeles; Cecil F. Charlton, Pasadena; William Joseph Eckerle, Wilmington; Richard J. Morrison, Santa Monica; Richard C. Rush, San Fernando; Walter Claude Thomas, Long Beach; Solomon N. Weil, Selby; Elwyn H. Welch, Pomona; Preston W. Whitaker, Van

Nuys; Henry A. Beaudoux, Christopher Howson, Theo C. Lawson, Oakland; Henry L. Charles, Alhambra; Elton Russell Clarke, Burbank; Rupert G. Doupe, Tehachapi; John F. Edwards, Hollywood; Belle C. Eskridge, Monrovia; David Martin Ghrist, Glendale; Sidney Gidoll, Keene O. Haldeman, Harry C. Shepardson, San Francisco; William McKee Moffatt, Santa Barbara; C. O. Petty, Fullerton; Virgil G. Presson, Santa Ana; George Henri Rohrbacher, Stockton; Peter N. Root, Bakersfield.

Transferred—R. C. Burkett, from Los Angeles County to Orange County.

Marshall C. Cheney, from San Francisco County to Alameda County.

Cory C. Ledyard, from Santa Clara County to Los Angeles County.

Frank E. McCann, from Tehama County to Los Angeles County.

G. A. Wislicenus, from San Francisco County to Washington Medical Association.

Resigned—From Los Angeles County: Milton A. Barndt, T. Furusawa, W. W. Murphy, F. T. Nakaya.

Deaths—Hewlett, Albion Walter. Died at Philadelphia, November 10, 1925, age 50. Graduate of Johns Hopkins University Medical School, 1900. Licensed in California in 1903. Doctor Hewlett was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Legault, Joseph William. Died at Oakland, October 23, 1925, age 58. Graduate of Victoria University, Canada, 1890. Licensed in California the same year. Doctor Legault was a member of the Alameda County Medical Society, the California Medical Association, and the American Medical Association.

McConnell, Edward Giles. Died at San Francisco, October 19, 1925, age 57. Graduate of Cooper Medical College, California, 1893. Licensed in California in 1894. Doctor McConnell was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



ALBION WALTER HEWLETT
1874-1925

Doctor Hewlett was born in Petaluma, California, November 27, 1874, and died in the University of Pennsylvania Hospital, Philadelphia, November 10, 1925.

The family early moved to San Francisco. Our first indication of his later achievement is found in an old newspaper article which records his graduation from the

Oak Street School at the head of his class, although he was two years younger than the other members. First honors were again his on graduation from Johns Hopkins Medical School in 1900.

Internal medicine had already marked him for her own, for Dr. Hewlett rejected a surgical internship at the Presbyterian Hospital to accept a medical service at the New York Hospital. After a two-year internship he spent a year at Tubigen. A direct result of his work here was the translation of Krehl's Clinical Pathology. Indirectly, Krehl's influence led to studies which bore fruit in Hewlett's work on Pathological Physiology.

Dr. Hewlett was married in 1907 to Miss Louise Redington. Her sympathetic interest made possible a life of devotion to research, in addition to his clinical and teaching responsibilities.

On his return to the United States in 1906 he was attached to the staff of Cooper Medical College. In 1908 he was called to the chair of Internal Medicine at the University of Michigan, where he remained until his selection as Professor of Medicine in the Stanford University School in 1916. During the war he served overseas with the Stanford Base Hospital Unit, as Lieutenant Commander in the Medical Corps of the Naval Reserve.

Dr. Hewlett's research, with the exception of a few early papers, has been largely concerned with the physiology and functional pathology of the heart and circulation. The series of papers on the blood flow in the arm is perhaps most notable. His primary interest lay in the clinic, and his purely clinical papers cover a wide range of subjects. All his writing is distinguished by a sound conservatism in expressed opinion, and by a refreshing clearness and simplicity of style.

Dr. Hewlett's emotions interfered with his judgments far less than is common among us. The fallacies of his own most cherished prejudices—and those of his friends—were always quite as clear to him as were those of his opponents in discussion; and this resulted in a frankness and honesty which were at times almost amazing. Those who did not know the man may have sometimes interpreted this absence of emotional bias as an indication of an unsympathetic nature, but even a brief association never failed to demonstrate an unusual interest in the problems and enthusiasms of others. Those privileged with still closer friendship can testify to the deep loyalty of his affection.

In the death of Dr. Hewlett, Stanford University Medical School has lost an inspiring teacher; the medical profession has lost a resourceful leader; and medical research has lost an able, enthusiastic worker. H. G. MEHRTENS.

Unperforated Ulcers of Terminal Ileum, Symptomatically Simulating Appendicitis—J. Shelton Horsley, Richmond, Va. (Journal A. M. A.), reports three cases that gave rather clear symptoms of appendicitis and yet were not appendicitis cases at all. They were cases of ulcer of the ileum, two of them being tuberculous. Horsley emphasizes this point: The surgeon who opens the abdomen for appendicitis should be prepared to deal with any condition that he may find. If the appendix is easily removable, the operation requires no great amount of skill; but if there is an ulcer of the duodenum, a diverticulum of the cecum, or some affection more serious than simple appendicitis, the life of the patient is in jeopardy unless the training of the surgeon enables him effectively to deal with these diseases. The obvious treatment for chronic ulcers of the terminal ileum is excision, and excision of an ileac ulcer usually means resection of the bowel.

"Certain professional moralists," said the Rev. Lloyd C. Douglas at the University of Michigan commencement exercises, "would have us believe that the blatant criticism of the movies may be held responsible for much of our moral turpitude which is, of course, arrant nonsense. The movies are not a cause of anything, but a natural effect; for the public has been nourished on the sentimentality of sentiment until only the rudimentary urges of undisciplined physical life remain sufficiently active to be stirred. The superheated fiction of the day, and the raucous squawk of the ubiquitous sex-a-phone are not causes of anything; they are the inevitable achievement of an age that has fed its emotions on red pepper until its jaded palate refuses to react to any dish unless served with nitroglycerine sauce and garnished with firecrackers."

Utah State Medical Association

T. C. GIBSON, M. D., Salt Lake City.....President
W. R. CALDERWOOD, M. D.....President-Elect
FRANK B. STEELE, M. D., Salt Lake.....Secretary

Editorials by J. U. GIESY, Associate Editor for Utah

PETRA—THE ROCK

It is an old saying that the body of man is "founded upon a rock," and recent biochemic investigation and experimentation would seem, in a sense, to justify the old-time assertion literally, rather than figuratively—to show that we are builded upon a rock indeed. For, while not all rocks in the actual sense are of the same chemical formation, certainly lime enters into the chemistry of the formations known as rock to a vastly predominating extent. And the further research goes, the more are we faced by the importance in the body's chemistry of the element calcium.

Calcium balance seems, from all one can gather, to be the very foundation—the rock—of normal metabolism, with the other mineral salts grouped around it. Almost, present-day notions would appear to be a calcium dream. Yet results seem to show that it is no dream, but fact—and a fact which is opening up the doors to a better and more effective understanding of the internal chemistry and the necessary procedures to be instituted when there is a disturbed balance of this most important of all elements to be overcome.

Calcium in the blood in ionic or diffusible form seems to spell the difference between susceptibility to infection; to normal bone development; to the presence or absence of the colloid thyroid degeneration; to normal digestion, with its perversions, as tetany of deficiency origin, spasmophilia, convulsions of a myo-clonic type; to the development and healing of ulceration, to acute guanidin intoxication in infants, and the absence of all these. And the parathyroid gland seems to be the governor of calcium fixation and balance. What a wonderful thing the body in its silent function is. More and more, as we learn the true function and association of the endocrine chain, we will come to be able to play on the very keyboard of life and restore harmony for discord, and so give relief in dysfunction, imbalance, and disease. It is an inspiring thought—one to make the heart of the medical man beat a bit swifter, draw on some of his potassium, magnesium and calcium reserve, for very pride in what may come with the years. Calcium plus sunlight, natural or artificial, activating the blood-contained cholesterol, are already working wonders in the hands of capable men who understand their use. Rickets is being mastered, malnutrition is a condition recoverable in the major per cent. Old ulcerations heal—bronchial and peribronchial conditions yield and give the sufferer ease; anemias clear up and the erythrocytes increase, the whites drop, the blood iron comes up, restoring the true balance of health. Well, Solomon said there was nothing new under the sun, and the ancient Hebrews said man's body was built upon a

stone—and it begins to look as though both enunciations had been right.

THE PUBLIC TROUGH

For God knows how long a certain type of individuals have been trying to put over the trick of getting something for nothing. And sometimes they almost seem to get away with it. In reality, they do not. Nobody does. Always we pay one way or another. But the idea is firmly imbedded in the brains of a few that the trick can be worked.

We refer directly to those individuals who—able to pay for professional service—yet seek to take advantage of the free clinics established for the care of the indigent. If it were not so disgusting it would be rather bizarrely amusing to see these social pirates drive up to a free clinic in their limousines.

It is because of this abuse that recently the president of the Salt Lake County Society appointed a committee to wait on the candidates for election as City Commissioners and gain their views on the matter. It is refreshing to state that each and every candidate unhesitatingly went on record as opposed to this sort of thing.

And they should have—any honest person should. The free clinic is for the humanitarian relief of the sufferer who cannot pay. The person who seeks to get his feet in that sort of a public trough is no better than any other public thief.

POLLY PHAR MACY

Polly is a great girl. She's a sort of siren, not to say vamp. One might almost call Polly a prostitute and not be far from the mark. Polly is largely, we feel, to blame for the fact that prescription-writing is, in a way, to become a lost art.

We don't actually know how far the instruction in pharmacy and therapeutics goes these days in the modern medical college, but conversations had with recent graduates would indicate that it is more or less brief. And yet on therapeutics and its allied application in pharmacy the entire fabric of internal drug employment is based.

And there are only so many drugs—as yet—though what the synthetic laboratories may evolve in the future no one may state. The point we are trying to stress, however, is, that there are only so many chemicals which the tests of time and experience have proved. And that being the case, there are only so many chemicals which can be combined in a therapeutic fashion to produce a pre-judged effect upon disease. Consequently—and this is the crux of the matter—Whosis & Company's Compound, or Whyis Syrup, are each and all compounded of those self-same drugs.

Wherefore, it is rather weird to realize that we of a profession who rave because some lady patient confesses to having taken a bottle of Pydia Linkum's Female Restorative should show such a readiness to prescribe the compound put on the market by the Whosis Company, and never bat a lash as we gracefully sign our name at the bottom of the prescription sheet.

Yet wherein is there so great a difference between the frankly "patent" formula and the "proprietary" pharmaceutical? They are both stock formulas—

they are both pretty much shotguns. They are both certainly incapable of meeting the requirements of more than a certain percentage of individual cases, and they are both compounded from some of the definite number of known and well-tried drugs—drugs the physician should, of course, be familiar with both as to their therapeutic qualities and their indications before he becomes an accredited physician.

And here Polly once more gets in her work, because Polly is the goddess of polypharmacy, and "manufactured pharmaceuticals," like "patent medicines," are in the primary instance made to sell. Wherefore, when Whosis puts out their compound, Whyis and Whatfor and Thatsit, and Company all put out similar compounds to catch what they can of the sale while such compounds are the vogue. And each corporation sends out a flock of detail men to extol the merits of these similar combinations of tried and proved remedies and floods the physicians' mail with literature telling just what this particular compound does.

To the result that the physician prescribing this or that finds himself soon in the position of an unpaid member of the Whosis or Whatis Company's selling and distributing force. And the pharmacist has fifteen bottles on the drug-store shelf, each containing a similar compound marketed under a different but equally fancy name, instead of one bottle of a standard drug. And this, simply because Dr. Why or Dr. What, ad infinitum, each prescribes the same or practically the same thing under the particularly different name of each manufacturer's choice.

Ain't we the damned fools? Of course, the organic iron formulas are, some of them, nice to the taste. Some of these manufactured pharmaceuticals are not bad to take. Yet is "Egg-Iron," as one of the popular brands literally calls itself, or more liberally translated perhaps by intent Iron-Abluminate—any more efficacious really than the Syrup of the Iodide—Blauds—or the N. F. Iron Peptonate?

And isn't it rather time to ask ourselves why we should gratuitously help the manufacturing chemist to sing a paraphrase of Stevenson's oft-quoted lines:

Fifteen bottles on a drug-store shelf.

Yo, ho, ho, and the same stuff in every one!

Isn't it about time that we asked ourselves if it wouldn't be better for ourselves and our patients if we learned to use standard medicaments more and fit the prescription to the patient more exactly? In reality, a prescription should fit like a comfortable shoe or a well-tailored suit of clothes. The doctor's skill lies, of course, in making it fit. But that's the job of the shoeman, the tailor, or the doctor—or none of them has any job.

Isn't it about time that we gave more attention to the nearly lost art of prescription writing, and less to the advertising literature that floods the mails? The wastebasket is the place for most of the latter, and the waste-paper basket is the place for most of the stuff it is sent to advertise. That or the sink. Nowadays almost anybody who has a steady hand to pour from bottle to bottle, and the intelligence to lick a label, can be a pharmacist—insofar as the bulk of prescriptions are concerned. Ain't it the bunk?

Utah Notes (reported by J. U. Giesy)—Alfred Blumberg, Salt Lake, has been appointed to the staff of the United States Veterans' Hospital, Orten, North Carolina. Dr. Blumberg's duties will consist primarily of pathological and research work.

First Lieutenant Leo John Miltner, a physician at the Holy Cross Hospital, has been assigned to the Medical Reserve Corps of the 104th Division and attached to the 413th infantry.

A. A. Kerr, head of the Archaeology Department of the University of Utah, has returned from a trip through the southern part of the state, with three new relics to be added to the ethnological museum of the institution.

Under the direction of Major Samuel C. Gurney, chief medical officer for the 104th division, a school for Medical Reserve officers is being conducted in the offices of the United States Veterans' Bureau on the fifth floor of the Boston building, beginning at 8 o'clock. Meetings will be held every second and fourth Wednesday of each month during the winter.

The class work will consist of lectures and demonstrations on medical and military subjects.

Nearly 100 officers are eligible for the course, including 56 doctors, 24 dentists, 12 medical administrators, and 2 sanitary engineers.

Through the efforts of the parents and teachers of the Bear River City school, about ninety students have just been inoculated for diphtheria.

Ralph O. Porter, dean of the Utah Medical School, is back from the convention of the Association of American Medical Colleges recently held in Charleston, South Carolina. Doctor Porter inspected ten prominent schools of medicine while absent, and feels that the Utah school measures up creditably with any in the country.

J. J. Galligan is back from the convention of the American College of Surgeons at Philadelphia.

F. Leaver Stauffer, wife and family, are in Philadelphia, where the doctor is doing post-graduate work. They will remain for some five months.

F. B. Steel, secretary of the State Association, is in Chicago for a period of some three weeks. During his absence he will attend the meeting of the secretaries of the A. M. A.

Latest advices look favorable for the erection at Salt Lake of a United States General Military Hospital, to cover the necessary service to the ex-service and military men of the intermountain region. This is a long-felt need, and will serve an excellent purpose, as well as take advantage of a wonderful location, both climatically and as regards transportation facilities.

The editor wishes to apologize for the way the editorials in the October issue were printed. As far as he can judge, the compositor was either hopped up or else dropped the galley and pied the works. Parts of two separate editorials were scrambled together with little regard to sequence, and the results, as no doubt noted, were weird.

[Note—I wish to add my apology to that of Doctor Giesy for this blunder by the printers of our magazine.—W. E. Musgrave, Editor.]

Salt Lake County Medical Society (reported by M. M. Critchlow, secretary)—October 12, 1925—President John L. Brown presided at the meeting held at the Commercial Club, Salt Lake City, Monday, October 12, with twenty-five members and two visitors present.

Applications for membership of H. W. Sherman and Leslie B. White were read and turned over to the board of censors.

H. P. Kirtly, reporting for the building committee, stated that land has been purchased and plans are being drawn up. The financial plan has been completed.

O. C. Ewing, former member, now of California, gave an address.

Francis W. Brown was elected to membership.

October 26, 1925—This meeting was held at the Commercial Club, with President John Z. Brown in the chair, and fifty members and one visitor present.

President Brown gave a short talk on medical ethics

and commended the California law relative to expert testimony.

Leslie B. White was unanimously elected to membership.

The program was limited to talks by three of the members who had recently been abroad; the first two speakers having been on the Inter-State Post-Graduate Tour.

E. F. Root confined his remarks chiefly to surgical subjects and gave a very interesting discussion on the surgical procedures he had witnessed in Canada, British Isles, and on the continent of Europe.

W. G. Schulte discussed the social aspects of the tour, and also the genito-urinary work he had seen in the visited countries.

C. G. Albaugh talked chiefly of his observations in Vienna. In addition to interesting medical subjects, he gave a very comprehensive insight into the economic conditions existing in the various continental countries.

Fred Stauffer reported for the building committee. He announced that wrecking of the old building had started, and urged more subscriptions so as to build a ten-story building instead of one of eight. E. F. Root emphasized Stauffer's remarks and told about the beautiful new medical building in Portland, Oregon.

Fred Peterson told about the cost of maintaining the emergency hospital and the tendency of people who are able to pay a physician to take advantage of the hospital. He urged that each person treated at the hospital be made to pay for the treatment, providing their circumstances were such as to allow it. He intimated that compensation cases were being sent there for first-aid treatment. There was further discussion of the existing conditions by A. C. Callister and John Z. Brown.

President Brown referred the matter to the Public Health and Legislation Committee for investigation, and appointed Fred Peterson on the committee temporarily in the absence of Chairman Sol G. Kahn. Fred Peterson moved that the president of the society act a third member of the committee in the absence of Chairman Sol G. Kahn and, further, that the committee interview the present Mayor and commissioners, and also the candidates for commissioners, as to their views on the conduction of the emergency hospital, and also that the society be circularized by cards not later than Saturday, October 31, 1925, which would give information as to the views of the present commissioners and the candidates for that office. President Brown suggested that Fred Peterson act with the committee. The motion was seconded and carried.

The committee acted promptly and submitted their report to the members of the society in a letter, which states:

"In accordance with motion passed at our last regular meeting, your Committee on Public Health and Legislation called on the candidates who are seeking the office of City Commissioner at next Tuesday's election.

All four candidates stated that they favor the city's making a reasonable charge for professional services rendered to people who are able to pay for the same."

To which Associate Editor Giesy adds this note:

"This is a very good idea—looking to the prevention of the taking of an undue advantage, by persons able to pay, of the free clinics—a thing which recently has been subjected to far too much abuse."

November 9, 1925—The regular meeting of the Salt Lake County Medical Society was held at the Emergency Hospital, Public Safety Building, Salt Lake City, Utah, on the above date. The meeting was called to order by President John Z. Brown. Sixty members and four visitors were present.

The secretary read the resolution passed by the Carbon County Medical Society November 8, 1925. No action taken.

The scientific program was arranged by City Health Commissioner Willard Christopherson. The first paper was by W. A. Pettit of the Department of Epidemiology on what his department hopes to accomplish.

The next paper was by M. J. Connelly, who discussed the inspection of milk, meat, and food.

The activities of the Venereal Clinic were discussed by E. Spencer Wright.

Walter L. Felt gave a short talk on the Baby Clinic and its management.

Evan Gillchrest told about the laboratory work and mentioned especially the water analysis.

J. J. Galligan gave a short talk on the Emergency Hospital and its management.

The last paper was by City Health Commissioner Willard Christopherson, who discussed the organization and the cost of maintaining the City Health Department. He told in detail about chlorinization of the water, and urged the society to back the department and to allay the idea prevalent among the laity that the chlorine is injurious to the health of the people. General discussion followed by F. S. Scott, L. J. Paul, A. A. Kerr, W. F. Beer, Earl Van Cott, C. M. Benedict, C. L. Shields, and S. H. Allen. Major S. C. Gurney, United States Army, mentioned his experience with chlorinization in the Philippines, and stated that he never observed a case of diarrhea due to chlorine.

President John Z. Brown announced the appointment of W. F. Beer on the Committee on Necrology.

Fred Stauffer reported the progress for the building committee.

Willard Christopherson announced that the Emergency Hospital and City Health laboratories were open for inspection, and he passed around cigars.

Nevada State Medical Association

A. J. HOOD, M. D., Elko.....President
HORACE J. BROWN, M. D., Reno.....
.....Secretary and Associate Editor for Nevada

News Items From Nevada State Medical Association—The Nevada State Board of Medical Examiners met at Carson City, November 2 and 3, and held an examination of the following three medical doctors:

M. L. Herzig, formerly of Seattle, Washington.

E. L. Creveling, formerly of Jersey City, New Jersey.

H. C. Hill, formerly of Streator, Illinois.

The staff meeting of St. Mary's Hospital, Reno, is held on the second Monday of each month.

The Washoe County Medical Society meeting is held in the Chamber of Commerce at Reno on the second Tuesday of each month. Visiting doctors are welcome.

Charles W. Blake, formerly of Tonopah and later of New York City, is located in the Washoe County Bank Building, Reno.

M. L. Herzig is in the Baroni Building, Reno.

E. L. Creveling is located at 17 North Virginia Street, Reno.

H. C. Hill is located in the Fordonia Building, Reno.

C. E. Piersall is attending the annual conference of the secretaries of the Constituent State Medical Associations in Chicago.

Washoe County Medical Society (reported by Henry Albert, secretary) — October 13, 1925 — A. R. DaCosta moved that we adopt the American Medical Association auto emblem as our official emblem. Carried.

J. L. Robinson demonstrated an electrical appliance for applying moist or dry heat to the neck, eye, etc.; also an appliance to heat paraffin which is sprayed on burned surfaces.

C. E. Piersall read a paper on galvanic therapy.

J. E. Pickard and A. R. DaCosta discussed and told interesting experiences with the galvanic current.

The meeting adjourned.

November 12, at the Y. M. C. A. building, President Vinton A. Muller presiding.

Minutes—The minutes of the previous meeting of October 13, were read and approved.

Business—President Muller presented a request from Mrs. S. H. Wheeler, secretary of the Child Welfare Division of the State Board of Health, that she be privileged to call on members of the society to occasionally address the nurses employed by that organization. By

vote, a majority signified their willingness to address the nurses.

An application from Dr. Herzig to join this society was presented and referred to the Board of Censors.

Program—Dr. G. L. Servoss presented a paper on "Diabetes and Common Sense." He emphasized especially the importance of making a determination of the dietary requirements of the individual before giving insulin. The paper was discussed by Drs. Albert and Pickard.

Dr. A. B. De Chene gave a report of the symptoms which she personally experienced while affected by the recent epidemic ailment attributed to the water supply.

The source of the toxic material which caused the recent water-borne epidemic of enteritis was discussed by Dr. Albert.

Attendance—Members: Albert, Blake, Caples, Da Costa, De Chene, Dalby, Fuller, Lehnars, Muller, Morrison, Pickard, Piersall, Richardson, and Servoss.

M. O. R. C.

Ninth Corps Area—California, Nevada, Utah, Wyoming, Montana, Idaho, Washington, Oregon, and the territory of Alaska.

Headquarters, Ninth Corps Area, has just issued orders assigning 222 Medical Reserve Officers to medical units and appropriate duties therein. This seems like a large number of doctors, but it is only one-sixth of the medical personnel that these same units require, and only one-tenth of the medical personnel required from the Ninth Corps Area under the National Defense Act. With these assignments, some of these units are taking on the appearance of organization. The general policy, in respect to such assignments, is to give a certain policy preference to units having priority of mobilization in the general defense plan.

The Surgeon, Ninth Corps Area, informs that mobilization plans in blank, have been completed by him and are in readiness to send out to the Commanding Officers of Medical Reserve Corps units as they accomplish a satisfactory organization for administrative purposes. The Commanding Officer merely has to enter certain data in spaces left blank for the purpose, and the document becomes a complete guide to prompt mobilization.

For consideration in connection with the mobilization plan thus completed, the Surgeon, Ninth Corps Area, has also prepared, and will send out to Commanding Officers, a reminder list showing each administrative step which should be taken, in its proper sequence, during the period of mobilization.

If such guides had been available during medical mobilization during the late war, a vast amount of inefficiency and delay would have been averted. Their availability now is merely an expression of one way by which the National Defense Act is operating in the prevention of similar difficulties in any future emergency.

To facilitate the development of the Medical Reserve Corps at large, and to give general aid in respect to the organization of its hospitals and other medical units, certain Reserve Medical Officers have been designated to act as local representatives of the Surgeon, Ninth Corps Area, within their respective geographical limits. These officers are supported by committees, of which they are chairmen. One other Reserve Medical Officer and the regular army Surgeon at the adjacent military post compose the remainder of each such committee.

These committees are:

For San Francisco and Northern California—Colonel George Franklin Shiels, Medical Reserve, 68 Post street, San Francisco, chairman; Major Sam F. Parker, M. C., Fort Winfield Scott.

For Los Angeles and Southern California—Colonel Charles W. Decker, Medical Reserve, 2417 W. Twenty-third street, Los Angeles, Cal., chairman; Major Val. C. Miltenberger, M. C., Fort MacArthur.

The above named officers are prepared to assist the Medical Reserve Corps movement in every possible way. Members of the profession desiring commissions in the

Medical Reserve Corps would do well to consult them. Their advice and aid is available to officers already commissioned, in building up hospitals and other units into complete, well-rounded organizations, and in helping in every other way practicable.

Albert C. Carlton, Lieutenant-Colonel, Medical Reserve Corps, 177 Post Street, San Francisco, has just been awarded the Wellcome first prize of a gold medal and \$300 by the Association of Military Surgeons of the United States for the best essay on "The means and policies which will best enable this association to increase its membership and accomplish its patriotic objects as stated in its constitution." The competition was open to all medical officers of the Regular Army, Navy, National Guard, Organized Reserves, and Public Health Service.

The Association of Military Surgeons is an organization chartered by Act of Congress of the United States, and has now had an existence of some thirty-five years. It has a large membership in the militant medical services, and publishes a monthly journal—the "Military Surgeon"—which is a chronicle of current medico-military affairs and progress. Being of a national character, its annual meetings are habitually attended by medical officers of many foreign military and naval services, sent there as representatives of their respective governments. The winning of its annual prize brings much professional distinction to the successful essayist.

Evacuation Hospital No. 90, San Diego, Colonel Alfred E. Banks, Medical Reserve, commanding, is taking a leading position in interpreting the spirit of M. O. R. C. Service, and has now nearly completed its enrollment of officers and will shortly be placed on a mobilization basis, in readiness for emergency. Colonel Banks and the officers under him have gone ahead with the development of their unit in a very efficient way, and are now giving attention to the enrollment of their Reserve Nurse Corps personnel. Evacuation Hospital No. 90 made an excellent showing in the Preparedness Day parade. The officers of this unit now hold dinner conferences once a month for professional information, as well as for get-together purposes. At the dinner conference held on October 21, Lieutenant-Colonel Maynard C. Harding, Medical Reserve, and Major Clair L. Stealy, Medical Reserve, presented a formal plan for peacetime training within the unit. Lieutenant-Colonel C. Pennel Baxter, Medical Reserve, also delivered an address on medical administration pertaining to army hospital units. This was the first of a series of similar addresses for the benefit of the staff of Evacuation Hospital No. 90. The transactions at these meetings of the staff of Evacuation Hospital No. 90 regularly appear in the Bulletin of the San Diego County Medical Society.

The Sacramento Society for Medical Improvement, at its first meeting in September, went on record as being in favor of sponsoring the Reserve Medical Units assigned to Sacramento County. These units include Hospital Trains Nos. 44 and 71, and Medical Laboratories Nos. 1 and 4 (both aviation). It also directed its secretary to prepare a questionnaire to determine the possibility of providing the required medical personnel from within its own membership.

Colonel S. C. Baldwin, Medical Reserve, Salt Lake City, Utah, has been designated as liaison officer for Medical Reserve Corps affairs in the States of Utah and Nevada. Colonel Baldwin has been very active and successful in promoting Medical Reserve Corps affairs, and particularly in organizing General Hospital No. 61, which has the Latter Day Saints Hospital of Salt Lake City as its parent institution.

At the regular meeting of the Salt Lake County Medical Society of September 14, 1925, it was moved and carried that the society endorse the Medical Reserve units allocated to that county for home station, and that a committee be appointed to determine the best ways for the promotion of their interests. The units concerned are

General Hospital No. 61, Station Hospital No. 136, Hospital Train No. 1, and Veterinary General Hospital No. 54.

While the Reserve Corps of the Medical Department of the Ninth Corps Area is still far short of medical officers, the dental branch has not only filled all its vacancies in the Reserve Corps, but contributed a surplus of nearly 50 per cent beyond the requirements of the Ninth Corps Area plans.

The Medical Administrative and Sanitary Reserve Corps have likewise filled their quota. Most of the quartermasters and chaplains needed to further officer the Reserve Corps hospitals have already been obtained, and the few vacancies remaining will shortly be filled.

Only the medical profession has failed to measure up to its responsibilities. The personnel of Medical Reserve Officers enrolled is not half as large as it should be. Yet the whole plan of Reserve Medical Service, and the operation of its medical units, is built about the medical profession.

Why is it that the medical profession has lagged behind, when the other branches that work with it in its patriotic and humanitarian mission have gone "over the top"?

MORE NAMES TO THE HONOR ROLL

The following are the Reserve Medical Officers already appointed to command Reserve Medical units in California. There are some other medical units, for which no selection of Commanding Officers has as yet been made:

Colonel Alfred E. Banks, Med. Res., 723 Electric Building, San Diego, Evacuation Hospital No. 90.

Colonel Harry G. Ford, Med. Res., 2345 Lake Street, San Francisco, Evacuation Hospital No. 88.

Colonel Henry H. Lissner, Med. Res., c/o Union Bank and Trust Co., Los Angeles, General Hospital No. 35.

Colonel James A. Mattison, Med. Res., Soldiers' Home, Sawtelle, General Hospital No. 142.

Colonel Howard C. Naffziger, Med. Res., 2555 Larkin Street, San Francisco, General Hospital No. 30.

* Colonel John W. Shiels, Med. Res., 291 Geary Street, San Francisco Headquarters Ninth Corps Medical Service.

Lieutenant-Colonel Charles L. Garvin, Med. Res., Box 83, Livingston, Station Hospital No. 139.

Lieutenant-Colonel Morton R. Gibbons, Med. Res., 3979 Washington Street, San Francisco, General Hospital No. 138.

Lieutenant-Colonel Charles D. Lockwood, Med. Res., 295 Markham Place, Pasadena, Surgical Hospital No. 71.

Lieutenant-Colonel Levi L. Riggins, Med. Res., 205 Dodworth Building, Pasadena, Surgical Hospital No. 72.

Lieutenant-Colonel Fred C. Shurtleff, Med. Res., 709 Brockman Building, Los Angeles, Station Hospital No. 150.

Lieutenant-Colonel Charles T. Sturgeon, Med. Res., 1136 West Sixth Street, Los Angeles, Evacuation Hospital No. 81.

Lieutenant-Colonel Neal N. Wood, Med. Res., 1100 Mission Road, Los Angeles, Station Hospital No. 144.

Major Walter A. Bayley, Med. Res., 1216 West Forty-eighth Street, Los Angeles, Surgical Hospital No. 67.

Major Arthur N. Bobbitt, Med. Res., 411 Citizens Savings Bank Building, Pasadena, Medical Laboratory No. 11.

Major Peter De Obarrio, Med. Res., 1217 Sherman Street, Alameda, Medical Laboratory No. 1.

Major Joseph F. Grant, Med. Res., 4483 Hermosa Way, San Diego, Medical Laboratory No. 5.

Major David H. Keller, Med. Res., Old Colony Club, Los Angeles, Hospital Train No. 55.

Major Joseph G. Noble, Med. Res., U. S. V. Hospital No. 64, Camp Kearney, Hospital Train No. 71.

Major John H. Woolsey, Med. Res., University of California Hospital, San Francisco, Surgical Hospital No. 65.

* Assigned as Corps Surgeon. (No C. O. authorized.)

Assignments and Changes in Personnel—California, Utah and Nevada

Presidio of San Francisco, Cal., October 20, 1925.

The following-named Reserve Officers are assigned to the unit as indicated below, and to the positions as indicated after their respective names:

General Hospital No. 140, Zone of Interior:

Lieutenant-Colonel John M. Lacey, Med. Res., 1052 West Sixth Street, Los Angeles, Calif., as Commanding Officer.

Lieutenant-Colonel Walter F. Wessels, Med. Res., 254 South Gramercy Place, Los Angeles, Calif., as Chief of Medical Service.

First Lieutenant Clayton R. Johnson, Med. Res., 2409 South Bronson Avenue, Los Angeles, Calif., as Roentgenologist.

Captain Harry E. Straub, Dent. Res., 1743 Micheltorena Street, Los Angeles, Calif., as Dental Surgeon.

Eighty-first Evacuation Hospital, Third Army:

First Lieutenant Walter E. MacPherson, Med. Res., 1100 Mission Road, Los Angeles, Calif. (temporary address, 946 E Street, Sparks Nev.), as Surgical Ward Officer.

First Lieutenant David A. Schmid, Med. Res., 1008 Por-

ter avenue, San Fernando, California, as Surgical Ward Officer.

Sixty-seventh Surgical Hospital, Third Army:

First Lieutenant Clarence W. Giegerich, Mar. Res., 627 Acacia Street, Glendale, Calif., as Registrar, C. O. Detachment of Patients.

Eighty-eighth Evacuation Hospital, Sixth Army:

The following-named Reserve Officers are assigned, as indicated:

Major Raymond A. Babcock, Med. Res., Main and Commercial Streets, Willits, Calif., as Assistant to Chief of Medical Service.

Major Francis S. Cook, Med. Res., Brentwood, Contra Costa County, Calif., as Assistant to Chief of Medical Service.

Major William J. Hosford, Med. Res., 57 Nevada Street, Santa Cruz, Calif., as Assistant to Chief of Surgical Service.

Major Irving W. Higgins, Med. Res., Live Oak, Calif., as Roentgenologist.

First Lieutenant Elmer F. Prescott, Mar. Res., 676 Mission Street, San Francisco, Calif., as Adjutant and Assistant Fire Marshal.

Major Orrin S. Cook, 749 Twentieth Avenue, San Francisco, Calif., as Roentgenologist.

First Lieutenant James P. Warren, Mt. Zion Hospital, San Francisco, Calif., as Medical Ward Officer.

First Lieutenant Otto L. Schattenburg, Mt. Zion Hospital, San Francisco, Calif., as Medical Ward Officer.

Major Clark L. Abbott, Med. Res., 126 Santa Fe Avenue, Point Richmond, Calif., as Assistant to Chief of Surgical Service.

First Lieutenant Harold L. Fraser, Med. Res., 939 Adeline Street, Oakland, Calif., as Medical Ward Officer.

First Lieutenant Henry P. Buckingham, Med. Res., 3902 California Street, San Francisco, Calif., as Surgical Ward Officer.

First Lieutenant Jack L. Stein, Med. Res., 2210 Los Angeles Avenue, Berkeley, Calif., as Medical Ward Officer.

First Lieutenant Carlyle M. Pearce, Med. Res., 2307 Bartlett Street, Oakland, Calif., as Medical Ward Officer.

First Lieutenant Frank K. Haight, Med. Res., 1283 Second Avenue, San Francisco, Calif., as Surgical Ward Officer.

Major Arthur E. Irving, Dent. Res., Box 22, Kelseyville, Calif., as Dental Surgeon.

First Lieutenant Ernest R. Ker, Dent. Res., 354-356 Flood Building, San Francisco, Calif., as Dental Surgeon.

First Lieutenant Tiberius B. Molsbergen, Mar. Res., 900 Sierra Street, Reno, Nev., as Registrar and C. O. Detachment of Patients.

Second Lieutenant Harry L. Bradley, Mar. Res., 1014 Clay Street, Oakland, Calif., as Detachment Commander.

The following-named Reserve Officers are relieved from their present assignment and are assigned as indicated:

Colonel Frank C. Wiser, Med. Res., 161 South Normandie Avenue, Los Angeles, Calif., from assignment to the 349th Medical Regiment, Nineteenth Corps, and assigned to General Hospital No. 144, Zone of Interior, as Commanding Officer.

Lieutenant-Colonel Fred C. Shurtleff, Med. Res., 709 Brockman Building, Los Angeles, Calif., is relieved from assignment to Station Hospital No. 150, Communications Zone.

The following-named Infantry Reserve Officers are relieved from assignment to Corps Headquarters Company, Nineteenth Corps:

Captain John L. Cogan, El Centro Apartments, Alameda, Calif.

First Lieutenant Chester A. Fee, P. O. Box 2785, Taft, Calif.

First Lieutenant Edward C. Schumacher, Ross Fire Department, Ross, Calif.

The following-named Infantry Reserve Officers are assigned to Corps Headquarters Company, Nineteenth Corps:

Captain Tom Barker, 1216 Mission Street, San Francisco, Calif.

First Lieutenant Harry Brown, 1709 Hayes Street, San Francisco, Calif.

First Lieutenant Joseph S. Flynn, 5026 Geary Street, San Francisco, Calif.

Second Lieutenant Robert M. Apple, 648 Waller Street, San Francisco, Calif.

Lieutenant-Colonel Neal N. Wood, Med. Res., 100 Mission Road, Los Angeles, Calif., is relieved from assignment to Station Hospital No. 144, Communications Zone.

The following-named Medical Corps Reserve Officers are assigned to units as indicated:

Major Ernest W. Cleary, 146 Chapin Lane, Burlingame, Calif., to Eighty-eighth Evacuation Hospital, Sixth Army, as Assistant to Chief of Surgical Service.

Captain William F. McCool, 1026 Marsh-Strong Building, Los Angeles, Calif., to Ninetieth Evacuation Hospital, Sixth Army, as Evacuation Officer.

Captain Irvin H. Betts, 411 West Grove Street, Visalia, Calif., to Sixty-fifth Surgical Hospital, Third Army, as Assistant Operating Surgeon.

First Lieutenant John Ohanneson, Mt. Zion Hospital, San Francisco, Calif., to Eighty-eighth Evacuation Hospital, Sixth Army, as Surgical Ward Officer.

First Lieutenant Lewis A. Alesen, 1675 West Santa Barbara Avenue, Los Angeles, Calif., to Eighty-first Evacuation Hospital, Third Army, as Medical Ward Officer.

The following-named Reserve Officers are assigned to the unit as indicated, and to the positions as indicated after their respective names:

General Hospital No. 46, Communications Zone:

Major Rossner E. Graham, Med. Res., 230 Grand ave., Oakland, Calif., as Assistant to Chief of Medical Service.

General Hospital No. 47, Communications Zone:

Lieutenant-Colonel Howard W. Seager, Med. Res., 749 South Berendo Street, Los Angeles, Calif., as Chief of Medical Service.

Major Joseph A. Parks, Med. Res., Lee Avenue, La Mesa, Calif., as Assistant to Chief of Medical Service.

Major Lambert B. Coblenz, Med. Res., 205 West Chapel, Santa Maria, Calif., as Assistant to Chief of Surgical Service.

Major Thomas C. Myers, Med. Res., 1501 South Figueroa Street, Los Angeles, Calif., as Assistant to Chief of Surgical Service.

General Hospital No. 138, Zone of Interior:

Major Sydney V. West, Med. Res., 304 Broadway, Chico, Calif., as Assistant to Chief of Surgical Service.

First Lieutenant Morrell E. Vecki, Med. Res., University of California Hospital, San Francisco, Calif., as Surgical Ward Officer.

First Lieutenant Percy B. Gallegos, Med. Res., Lane Hospital, San Francisco, California, as Surgical Ward Officer.

NEWS ITEMS FROM THE CALIFORNIA BOARD OF MEDICAL EXAMINERS

C. B. PINKHAM, M. D., *Secretary*

A new method for treatment of paralysis was disclosed in the recent arrest of Jean Campbell, San Diego, California, who is reported to have mulcted a hopelessly paralyzed patient out of \$108 under the theory that, by tickling the patient's nostrils with odd pieces of paper, the patient would be caused to sneeze and thereby relieve the pressure on the brain that caused the paralysis.

A flight into high finance was disclosed in the arrest of E. A. Mitchell, an interior decorator, charged in Los Angeles with violation of the Medical Practice Act. He is alleged to have made physicians and sold them "territory" wherein to work. Another venture was selling certificates for life-time service in the Los Angeles County Hospital. Mitchell is reported to have received \$200 cash in advance for treating an 11-year-old diabetic patient whose trouble he diagnosed as dropsy of the lungs. Following his conviction he was sentenced to ninety days in the county jail.

Since filing of a complaint, the Bakersfield police are reported looking for "Dr." Harley Hulse Heddens on on a charge of violation of the Medical Practice Act. His philosophy is expressed on the front page of his record book. "On the plains of hesitation bleach the bones of countless millions who at the time of victory sat down to wait and, waiting, died." Not so with Heddens, who did not "tarry long on the plains of hesitation. The minute he found the police didn't have a good tight grip on him he was off." According to reports, he collected \$1688.55 in the period between June 7 and December 31, 1924, and \$507.25 from January 1, 1925, to April 18, 1925, in his illegal practice of medicine. Many ergot prescriptions were reported given his women patients, and many are reported to have paid either \$35 or \$50 for an operation. No one by the name of H. H. Heddens can be found as licensed to practice medicine in any state or territory of the United States, nor can a record of him be found with the Board of Osteopathic Examiners or the Board of Chiropractic Examiners. P. F. Collier & Son report the delivery to Heddens of a set of "Harvard Classics," representing \$110, for which they have not been paid in full.

Behind the cloak of the Chirothesian Church of Faith are hiding many of those engaged in violation of the Medical Practice Act, some of the more recent ones being M. T. Larkin, Los Angeles; Josephine M. Fernald, Los Angeles; and Allen Mills, Richfield, Tehama County, California. The proponents of this organization have declared that they will make the ordination certificate of the Chirothesian Church of Faith equally recognized with a medical diploma. The recent conviction of Chirothesian Allen Mills for violation of the Medical law has been upheld by the Appellate Court.

Jacob Nilmeier, terming himself "bone specialist," again charged with violation of the Medical Practice Act in Fresno on April 29, 1925, has not as yet been given preliminary hearing.

Just why the authorities of Monterey County seem loath to bring to trial in the Superior Court "Dr." Christopher (Charles) Liscum, held for trial by the Justice Court at Castroville early this year, is a matter of no little importance. Liscum came to California after Oregon newspapers had related his arrest on a bootlegging

charge, his asserted conviction of driving an auto while intoxicated; and a term in the federal penitentiary on McNeil's Island, following his conviction of violation of the Harrison narcotic law. While here he is reported to have been placed under supervision of the probation officer for failure to provide for a minor child. *What's the matter in Monterey County?*

Following the filing of a complaint by the energetic law enforcement officials of Modesto, charging N. S. Sue, Chinese herbalist, of violation of the Medical Practice Act, the defendant recently pleaded guilty and paid a fine of \$400.

Nelford B. Hollingsworth, a professed divine healer, recently pleaded guilty in Los Angeles of violation of the Medical Practice Act. He evidently could not pray hard enough, as in addition to prayer he used massage, alcohol rubs, and fig pills.

Susan E. Davis, alleged to have been carrying on rather an extensive practice, pleaded guilty in Bakersfield to a violation of the Medical Act and paid a fine of \$100.

J. Lafayette Berry, who, according to the records formerly conducted a traveling tent show under the name of "Bloodless Berry," and the revocation of whose license October 21, 1919, has been sustained by the California courts, was recently charged in Los Angeles County with violation of the Medical Practice Act in connection with the treatment of one suffering from cancer of the face, the report stating "there is now a hole in the patient's cheek which apparently cannot be healed."

James R. Dow, whose medical training, according to his reported admission, consisted in acting as a "bell boy," and later a nurse at Bellevue Hospital, New York, recently pleaded guilty in Los Angeles on a charge of violation of the Medical Practice Act and was given a ninety-day jail sentence, suspended for a period of two years on condition that he refrain from further violation.

A recent report from Ventura County that the body of an infant, dying shortly after birth attended by an unlicensed midwife, the poor little body crushed down into a macaroni box for a coffin, neither birth nor the burial having been reported to the authorities, makes us realize our problem in handling maternity work among our foreign population.

William A. Strole, M. D., of Los Angeles recently pleaded guilty to a violation of the Harrison Narcotic Act in the United States Court, Southern District, and paid a fine of \$500.

Recent press dispatches relate that the State Board of Chiropractic Examiners is engaged in investigation of alleged trafficking in chiropractic diplomas by certain California institutions.

Percy Purviance, proprietor of the Berkeley Chiropractic High School and the Berkeley College of Chiropractic, according to reports has been cited to appear before the Chiropractic Board on November 5, 1925, to show cause why his license, alleged to have been obtained through "fraud and deception," should not be revoked.

The Sacramento Bee of September 17, 1925, relates T. Wah Hing, Chinese herbalist, has been indicted by the Grand Jury, it being charged "that Hing has treated various patients, acting in the guise of a physician, without being the possessor of a diploma from an accredited medical college, and without having passed the examination prescribed by law." Hing has conducted an office in Sacramento for many years, and on more than one occasion has been charged with violation of the Medical Practice Act, as well as the state poison law, in connection with narcotics.

L. T. A. Hotten, also known as Hottendorf, was recently charged in Los Angeles with selling narcotics to patients, according to Los Angeles papers.

Dio Lewis, reported to have wandered about the parks of Los Angeles operating on corns—sharpening his instruments on his shoe—was recently sentenced to 180 days in jail by Police Judge Richardson in Los Angeles for violation of the Medical Practice Act. An infection following Lewis' operating is said to have caused one of his "patients" considerable trouble.

According to the Los Angeles Examiner of September 5, 1925, J. J. Hansen, licensed chiropractor, was held on a charge of performing operations, for which he was unqualified. Following his plea of guilty, he was sen-

tenced to pay a fine of \$100 or serve 100 days in the county jail.

Christine Stewart Loose, Oakland, was recently charged with murder in connection with the death of Charlotte Sweet, following an alleged criminal abortion. She is referred to as a retired physician and surgeon, but no record of her medical credentials has been found.

James A. McLean, native of Martinique, self-asserted geologist, evolutionist, pathologist, psychologist, anatomist, biologist, chemist, etc., was recently charged in San Francisco with violation of the Medical Practice Act. According to newspaper reports he claims to be able to turn the sun's rays directly into alcoholic beverages.

Arthur E. Pike, D. O., Mayor of Signal Hill, Long Beach, California, was reported recently charged with violation of the Medical Practice Act by the investigator for the Board of Osteopathic Examiners.

M. A. Crespo, self-styled medical man and occult Messiah, forfeited \$1000 bail, following the Los Angeles Superior Court's affirmation of his sentence to pay a fine of \$200 and serve 120 days in the county jail on a charge of violation of the Medical Practice Act.

CORRESPONDENCE

To the Editor:

IN CALIFORNIA AND WESTERN MEDICINE for November, 1925, on page 1465, we notice an announcement of the Colloquia at the San Francisco Hospital. May we call your attention to the fact that the Surgical Colloquium is held on Thursday instead of Tuesday, as stated in this account, and the Medical Colloquium is held on Friday.

W. OPHULS, *Dean*.

[In correcting the error we wish to repeat that brief extracts of the discussions at these colloquia make profitable reading for doctors everywhere.—EDITOR.]

To the Editor:

Is Christian Science harmless? Let us see! A few days ago one of our architects came into my office. His eye fell upon a pamphlet lying on my desk, on the cover of which was printed in large type the word "diabetes." He said, "That makes me sad." I said, "Why?" He said: "I had an excellent office assistant—a very bright and capable young woman, a graduate of the University of California; she developed diabetes. I pleaded with her to avail herself of the benefits of modern medicine, including insulin. She went to Christian Science. I continued to plead with her. She told me to cease, as it was interfering with her 'treatment.' I desisted. Her practitioner told her to pay no attention to diet; eat anything she wanted; only keep her mind fixed on the teachings of Christian Science." "One Saturday afternoon," he continued, "I helped her to the ferry. Two days later she died." To tell a diabetic to disregard diet is like pouring coal oil on a fire.

Another case, somewhat less well authenticated, however: One of our prominent businessmen contracted pneumonia. Again Christian Science was invoked. Later, when the footsteps of approaching death became audible to the dull ear of the practitioner, the unfortunate patient was hurried away to a hospital to die and to have his death certificate signed by a physician.

No physician should ever sign a death certificate under such circumstances. The case should be sent to the coroner, so that his verdict may place the responsibility where it belongs. We should set our faces hard against this thing. No sooner is the victim of their criminality safely buried by the courtesy of our profession, than they turn upon us and assert that it was a medical death; they had nothing to do with it.

Such incidents as I have related above are going on all about us. The extent of it we are unable to comprehend.

They are becoming sufficiently powerful to intimidate the public press. With the press paralyzed they may attempt to lay their hands upon our government. They now aspire to control legislation. Once armed with the full power of the state, it would be difficult to overestimate the harm they would do the world.—J. A. S., M. D.

NEXT YEAR, IN CALIFORNIA AND WESTERN MEDICINE

CALIFORNIA AND WESTERN MEDICINE has accepted for publication in forthcoming numbers the following essays, which will be published during the coming year as suitable space is available:

- Samuel Ayres, Jr.
Present Status of Bismuth in Anti-Syphilitic Treatment.
- William H. Barnes.
Virulent Surgical Infections.
- Dean Blake.
Some of the Functions of Humidity.
- W. W. Boardman.
Cholecystography—Its Value as a Diagnostic Procedure.
- Emil Bogen.
Recent Studies in Scarlet Fever.
- Andrew Bonthius.
Clinical Aspects of Intestinal Protozoiasis.
- LeRoy Brooks.
A New Technique of Unmodified Blood Transfusion.
- Ernest M. Burns.
Vincent's Infection—Its Significance as a Precursor of Pyorrhoëa and Possibilities as Cause of Other Diseases.
- H. E. Butka.
Infectious Mononucleosis, With Report of Five Cases.
- Edmund Butler and G. D. Delprat.
Intestinal Obstruction.
- Lenore D. Campbell.
Giant Cell Tumors not Connected to Bones.
- Burns Chaffee.
Progress of Treatment for Hypertrophic Stenosis of the Pylorus.
- Thomas J. Clark and Frank H. Stibbens.
Skin Diseases in Twins.
- Fred B. Clarke.
Lupus Erythematosus Acutus Disseminatus.
- Harry Theodore Cooke.
Antagonistic Functions of the Uterus in Relation to Regional Nerve Blocking.
- E. F. F. Copp.
Effects of Insulin Treatment on Experimental Diabetes of Dogs.
- Michael Creamer.
Menorrhagia of Unusual Etiology.
- Wilson T. Davidson.
Diagnosis of Chronic Amebiasis.
- Paul J. De River.
Present-Day Advance in Plastic Surgery, With Reference to Correction of Deformities of Nose.
- Henry Dietrich and Hugh K. Berkley.
Mongolian Idiocy.
- Arthur N. Donaldson.
Relation of Protein Foods to Hypertension.
- John B. Doyle.
The Recognition of Psychoneuroses.
- D. M. Ervin.
Edema With the Use of Insulin.
- Newton Evans and Philip J. Tunnell.
Differential Leucocyte Count in Acute Inflammatory Conditions of Surgical Importance.
- Fred R. Fairchild.
Surgical Judgment.
- Franklin Farman.
Operative Treatment of Rupture of the Male Urethra.
- Paul A. Ferrier.
Urethral Caruncle.
- Kendal P. Frost.
Syphilis in Pregnancy.
- Kendal P. Frost and George F. Koetter.
Favus.
- Mrs. Mabel F. Gifford.
Speech Defects and Disorders.
- Arthur Stanley Granger.
Clinical Significance of Bundle Lesions.
- Ben E. Grant.
Report on Fifty Cases of Diabetes Treated With Insulin.
- Lawrence K. Gundrum.
Nasal Ganglion Neuroses.
- P. J. Hanzlik.
Peripheral Nerve Mechanisms in Chemosis and Some Other Edemas.
- Frank Hinman.
Renal Counterbalance.
- Frank Hinman.
Treatment of Enlargement of the Prostate, and Results Obtained by Modification of Young's Perineal Prostatectomy.
- Verne C. Hunt.
Suprapubic Prostatectomy.
- John C. Irwin.
The Role of Cesarean Section in the Treatment of Eclampsia.
- H. P. Jacobson.
Treatment of Herpes Zoster.
- Clarence A. Johnson.
Tubercular Caecal Tumor.
- Alson R. Kilgore.
Industrial Liability for Cancer.
- William H. Leake.
The Intravenous Use of Sodium Cacodylate Mercurochrome—220 Soluble, etc., in Malignant Endocarditis.
- Charles G. Levison and Mast Wolfsohn.
A Mesenteric Chylous Cyst.
- Charles D. Lockwood.
Some Surgical Aspects of Tubercular Peritonitis.
- Frederic M. Loomis.
Birth Injuries From an Obstetric Standpoint.
- C. L. Lowman.
Significance of Growth Deviations in Children.
- Frank W. Lynch.
Problem of Prolapse in Young Women With Cystocele and Rectocele.
- Charles Maghy.
Blood-Staining of the Cornea.
- Louis E. Mahoney.
Abuse of "Reciprocity."
- Arthur E. Mark.
Study of Symptoms of Exophthalmic Goiter Which are Practically Diagnostic.
- James A. Mattison.
Gastric and Duodenal Ulcer.
- J. Tracy Melvin.
Value of Orange Juice as an Accessory Food.
- K. F. Meyer.
Prophylaxis and Treatment of Wound Infections by Modern Methods.
- Hiram E. Miller and Norman Epstein.
Vincent's Angina; The Significance of Fusiform Bacilli and Spirochaeta in Mucous Membrane Lesions.
- Newton Miller.
Living Trichinella Thirteen Years Old.
- Douglass W. Montgomery.
The Late Nodular Syphilide.
- Howard Morrow.
The Therapeutics of Syphilis.
- A. S. Musante.
Evolution of the Surgeon From the General Practitioner.
- J. C. Negley.
Complications Following Prostatectomy.
- W. B. Palamountain.
Bilharzia Disease—Case Report and Cure by Tartar Emetic Treatment.
- C. E. Phillips and Roy H. Johnson.
Regional Anesthesia.
- Lionel D. Prince.
Derangement of the Ankle Joint Following Fractures of the Lower End of the Tibia and Fibula.
- Alfred C. Reed.
Intestinal Protozoa in General Practice.
- George G. Reinle.
Management of Prostatic Obstruction.
- Frederick A. Rhodes.
Questionable Operations and Technique.
- Samuel Robinson.
Carcinoma of the Colon, Not Including the Rectum.
- Carl F. Rusche.
Carcinoma of the Kidney.
- H. A. L. Ryfkogel.
The Use of Local Anesthesia or Combined with General Anesthesia in Abdominal Surgery.
- Karl L. Schaupp.
Cardiac Decompensation During Pregnancy.
- Margaret Schulze.
The Conservative Treatment of Eclampsia.
- Alfred J. Scott.
Acrodynia.
- H. H. Searls and E. I. Bartlett.
Thyroiditis.
- Sidney J. Shipman.
Type Treatment of Pulmonary Tuberculosis.
- Francis M. Shook.
Sinus Infection in Children.
- Rea Smith.
Brief Outline of Cause and Treatment of Chronic Polyarthritides—Report of 104 Cases.
- Knight Smith.
Caesarean Section for Hemorrhage.
- Albert Soiland and William E. Costolow.
Radiation Treatment of Superficial Malignancies.
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In preparing the index to this volume, we have followed the method of an alphabetical subject and author index combined. It is not as full perhaps as it should be, because it would take most of the time of an indexing secretary to prepare as complete an index as we would like to see. However, it is full enough so that any major subject discussed during the year and the names of all authors may be readily located.

An ever-enlarging circle of physicians who read systematically are finding the Cumulative Index published quarterly by the A. M. A., and sold for a nominal subscription, of incalculable value. Everything published in CALIFORNIA AND WESTERN MEDICINE, as well as all other worthwhile medical magazines, is completely indexed in the "Cumulative" in a most complete author and subject index. Our editorial staff use this volume constantly.—EDITOR.

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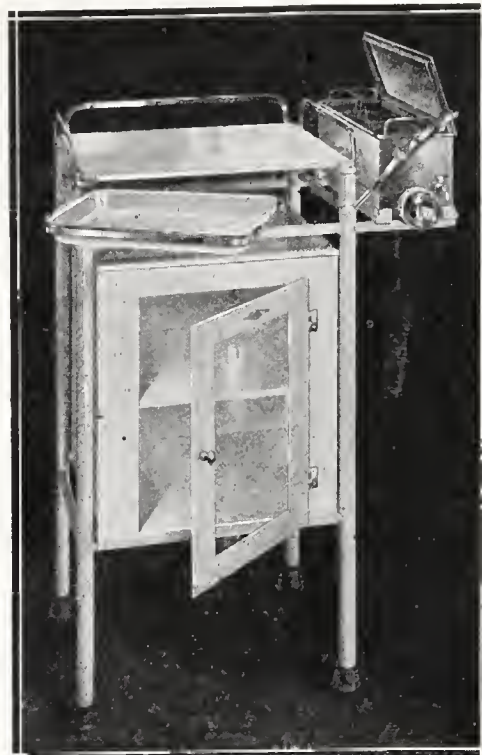
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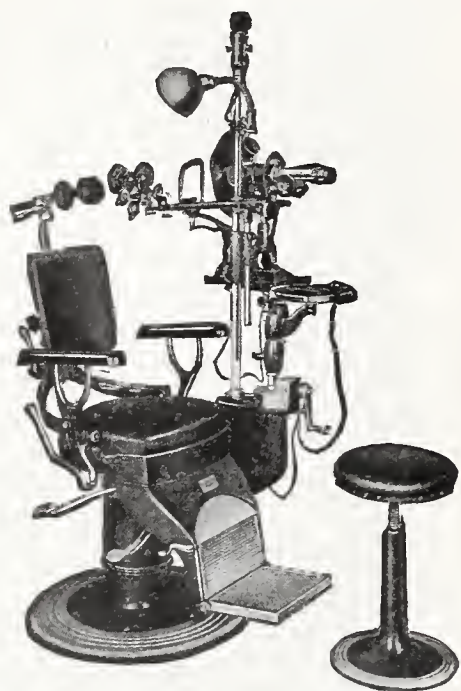
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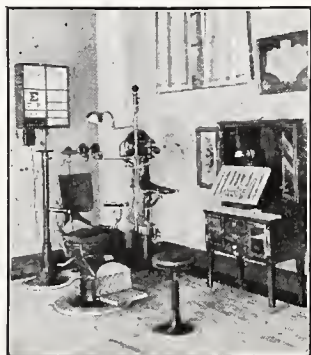
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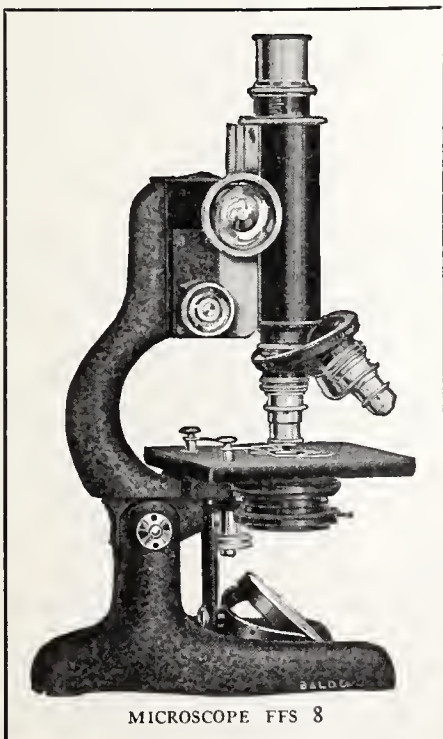
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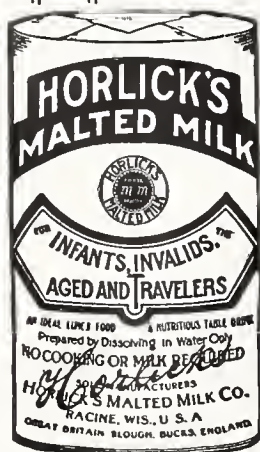
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BOOK REVIEWS

This column is conducted solely in the interests of California and Western Medicine readers. Critical comment, favorable and unfavorable, purely from the standpoint of the interests of the medical reader, will be made about books selected from the larger number acknowledged in the Books Received column. The advertising columns are open to book publishers who wish to make additional statements about their publications.

Pseudo-Appendicitis. A study of mechanical syndromes of the right lower quadrant simulating appendicitis. By Thierry De Martel and Edouard Antoine. 211 pp. Illustrated. Review copy by courtesy of F. A. Davis Company. For sale by advertisers in California and Western Medicine.

That there is need for such a book as this, is evident from the many recent articles dealing with a so-called chronic appendicitis and the poor results of insufficient surgical treatment.

The authors stress the importance of caution in dealing with patients complaining of chronic discomfort on the right side of the abdomen associated with gastro-intestinal disturbances and tenderness. Too often is such a combination of signs and symptoms hastily diagnosed as appendicitis, the appendix removed, but the patient not benefited.

Recurring symptoms referable to pathological conditions in the right flank and iliac fossa—the cecum and proximal colon—should warn against superficial methods of study. It is only by making use of all diagnostic measures available, including the "co-operation of a good internist, a good radiologist and a good surgeon," that the true condition will be determined and the proper treatment realized.

The subject is well treated in this book. The nature of pathologic changes in and about the cecum and ascending colon is presented in the introduction. These changes are studied and their effects developed clearly in the several chapters of the book.

The writers emphasize especially the importance of complete radiologic study of the entire gastro-intestinal tract, not, however, to the exclusion of data derived by any or all other means of diagnosis. The underlying cause in all cases cited in the book is a mechanical one resulting in greater or less interference with the normal march of the content of the cecum and adjoining colon.

The book is interestingly written. The authors have a message and make their points clear. Not only surgeons, but internists as well will benefit by its study.

(Continued on Page 1636)

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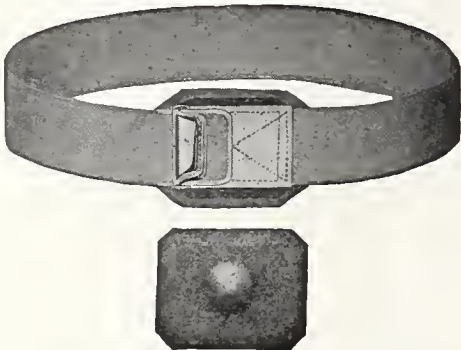
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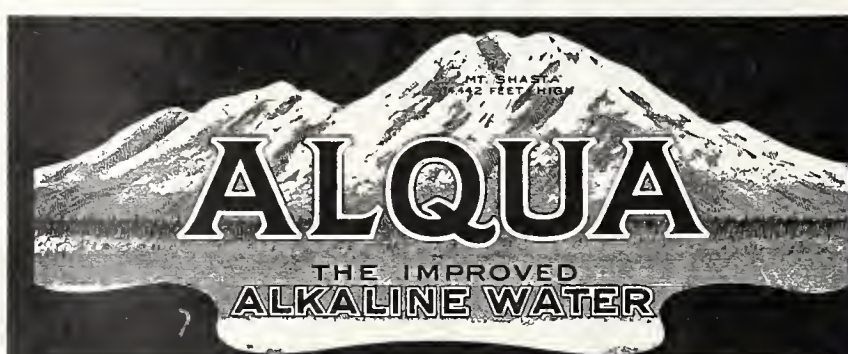
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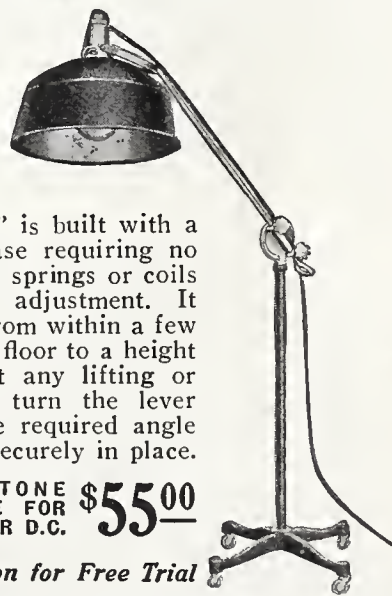
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BOOK REVIEWS

(Continued from Page 1632)

Some Fundamental Considerations in the Treatment of Empyema Thoracis. By Evarts A. Graham. Review copy by courtesy of C. V. Mosby Company. For sale by advertisers in California and Western Medicine. Price, \$2.50.

This book will interest surgeons occupying themselves with diseases of the chest. It gives experiments on the pneumothorax and formulates a scientific theory for the dangers of early operations in post-pneumonic empyema.

The reviewer's practice has been to defer operation whenever dyspnea and cyanosis seem greater than might be accounted for by the rise of the exudate; he has assumed that the excessive dyspnea and cyanosis were caused by the underlying pneumonia, and has waited. Graham's book gives experiments and a scientific explanation for the clinical formula expressed above.

Clinical Therapeutics. By Alfred Martinet. Two volumes. Review copy by courtesy of the publishers, F. A. Davis Company. For sale by advertisers in California and Western Medicine.

Particularly interesting is the first volume of this work bearing on therapeutic agents and procedures. It is quite comprehensive and most descriptive. Accounts of procedures are here from the simplest and oldest, such as the seton, to artificial pneumothorax and the use of Bayeux' oxygenator.

The second volume on the treatment of symptoms and diseases is less attractive, containing little that cannot be found in innumerable sources. Nevertheless, all is in brief enough form and still comprehensive. The style is satisfactory and the print excellent. Our reviewer finds it difficult to acquire knowledge by examination of tables such as abound here.


Methods in Surgery, used in the surgical divisions of Barnes Hospital, St. Louis Children's Hospital, and Washington University Dispensary. By Glover H. Copher. Review copy by courtesy of C. V. Mosby Company. For sale by advertisers in California and Western Medicine. Price, \$3.

A manual for the surgical house officers and interns at Washington University. It gives a good idea of the exemplary organization with which Dr. Evarts Graham manages his services.

Medical Follies. By Morris Fishbein, M. D., Editor of the Journal of the American Medical Association. Review copy by courtesy of the publishers, Boni & Liveright. For sale by advertisers in California and Western Medicine.

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(Continued on Page 1642)



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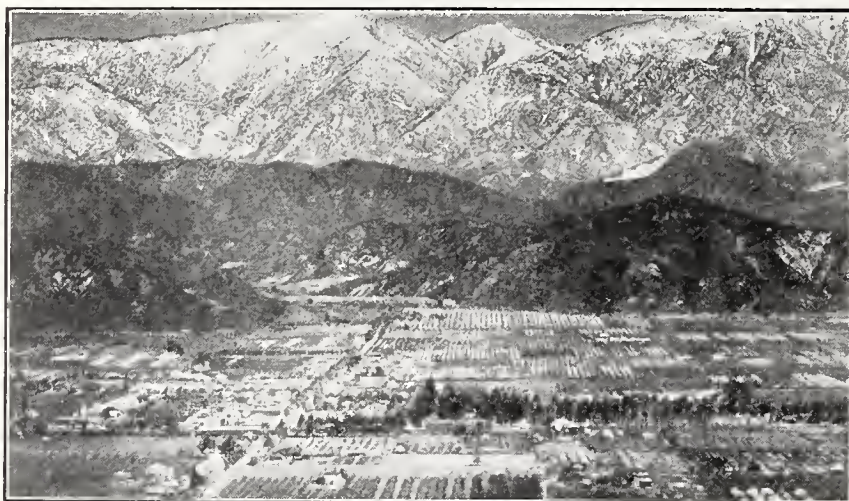
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The Pathology of Peptic Ulcer of the Stomach—Howard T. Karsner, Cleveland (Journal A. M. A.), reviews extensively the literature and concludes that, pathologically, peptic ulcer is an inflammatory—perhaps primary—lesion so situated that gastric juice probably emphasizes the destruction of tissue. Various predisposing causes seem to be operative in the patients, but these are not conclusively established. The direct exciting cause of the ulcer has not yet been disclosed in such a fashion as to be beyond doubt. The persistence or chronicity of the ulcer depends on a variety of factors, none of which can be said to operate in all cases. Probably several of these factors are coincidentally in evidence. Thus, there must be considered especially hyperacidity, stasis of neuro-muscular or obstructive origin, the irritative and traumatic influence of gastric contents, and the traction of muscle about the ulcer.

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BOOK REVIEWS

(Continued from Page 1636)

"Time," edited and published by laymen. The book review editor of this magazine says in part:

"Few laymen read medical journals, for they inevitably suspect, behind the lurch and trundle of ill-teamed words, the machinations of a cloudy mind." Dr. Fishbein's words are graphic; he is possessed of what George Meredith called "the first condition of sanity"—a belief that our present civilization is founded on common sense. In a new book he shows what a neat and glittering weapon this common sense may be. With it he clips down major medical follies—osteopathy, chiropractic—and passes on to offer information on various other topics.

Objective Psychopathology. By C. V. Hamilton, M. D., Director of Psychological Research, Bureau of Social Hygiene, Inc. Review copy by courtesy of the publishers, C. V. Mosby Co., St. Louis. For sale by advertisers in this issue.

A careful reading of this book confirms Hamilton's intellectual honesty and scholarly attainments. The book will be appealing to intelligent people generally no doubt, but being tinctured with reminiscences of Psychopathia Sexualis, the expediency of its circulation, as recommended among social workers and other laymen is doubtful, although the prurient-minded may find an outlet for their tendencies at any news-stand. Hamilton is to be complimented upon his successful attempt to avoid confusing nomenclature and terms which are often piled one upon another in psychological studies, and also upon his new idea of dealing with the reactive tendencies of the organism as physical, objectively measured things. Hamilton's book will be of great value to the physician and surgeon who already possesses his insight into such matters and who may not be as ignorant of them as those mentioned by Professor Robert Yerkes in the foreword of the book.

Personal Hygiene Applied. By Jesse Feiring Williams. Review copy courtesy of W. B. Saunders Co. For sale by advertisers in California and Western Medicine.

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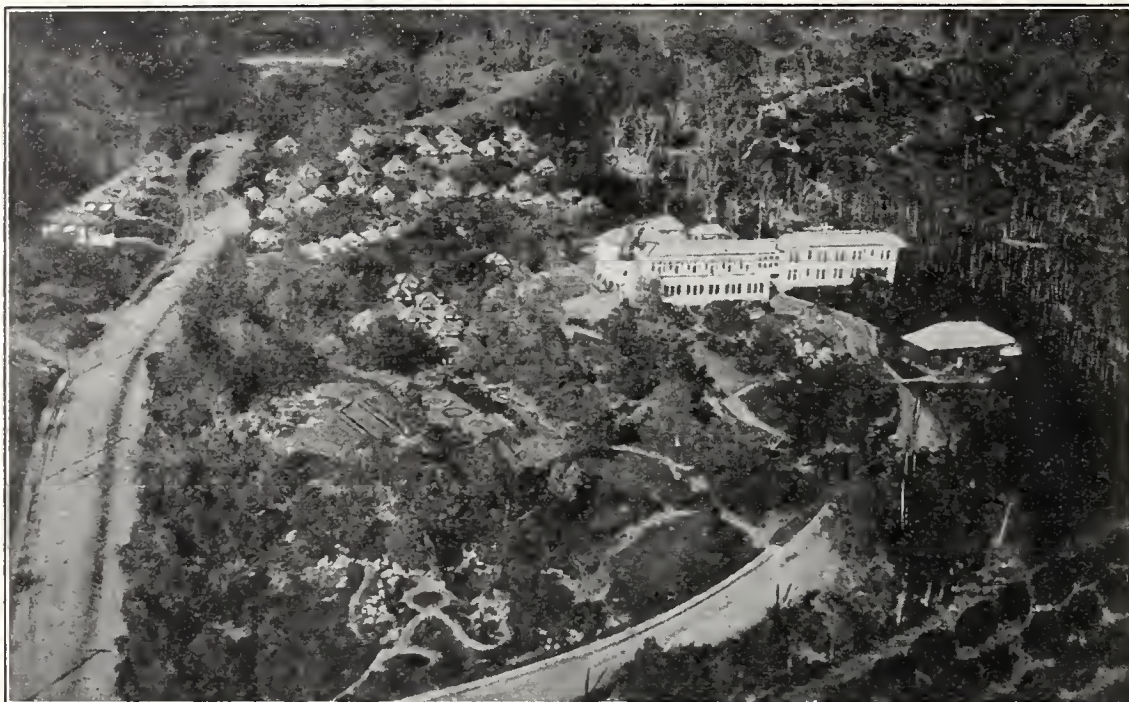
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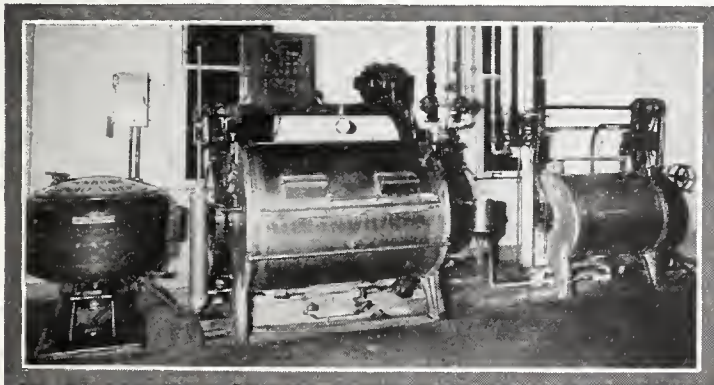
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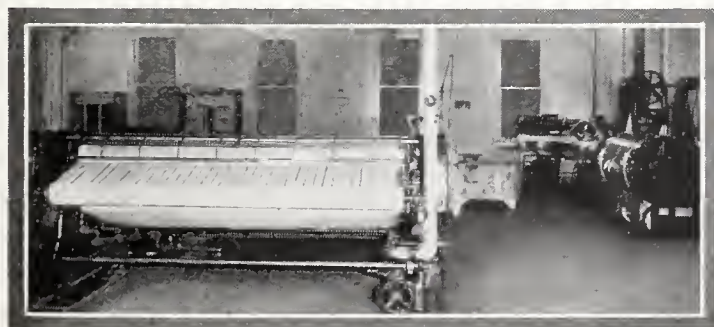
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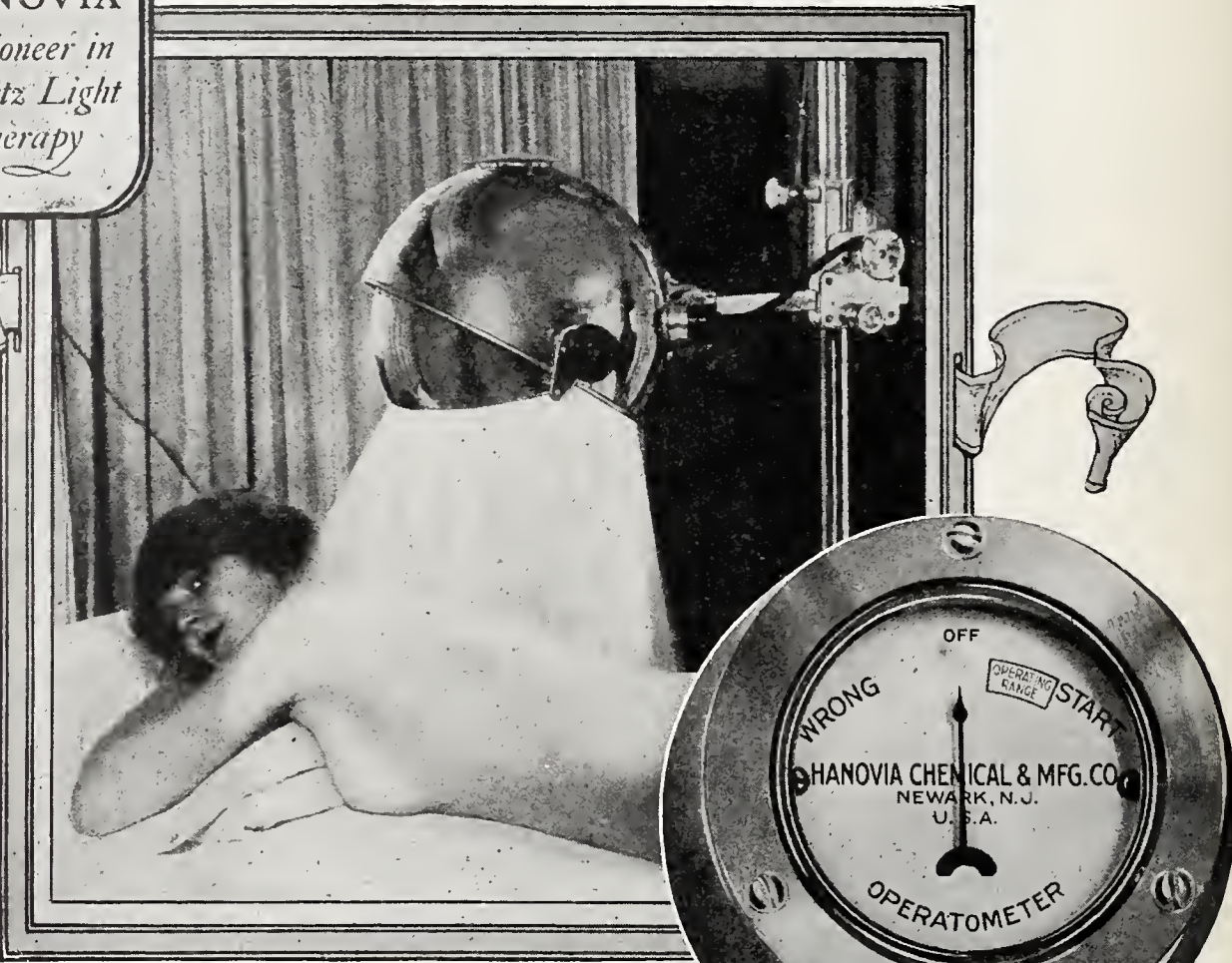
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(Continued from Page 1642)

form. It is written in such simple language that no special training is needed to understand the contents.

The book is filled with descriptive illustrations and colored plates. The author has not only used his own collection, but has drawn freely from more extensive classics, such as Skillern, Politzer, Pratt, and Isaac Jones. While this volume is particularly well adapted for teaching the medical student and for use by the physician in general practice, yet it is so comprehensive and so full of the author's own refinements of technique that it is also a most valuable reference book for the ear, nose, and throat specialist.

A Christian Science practitioner is a person understood to be acting as a sort of interlocutor between God and the person "in error." This is the common understanding at least of the uninitiated. We have previously drawn attention in these columns to the fundamental psychology of optimism which, outside of the claims made for healing, seems to comprise the value of Christian Science. "Faith Healers" have for time immemorial embraced the psychology of suggestion in promoting their cures. Patent medicine advertisers take advantage of the same suggestive psychology to accomplish their ends. Electric pads, the gas-pipe frauds, as illustrated by the "Oxidonor" of local fame, the chiropractor, and innumerable other examples disclose the value of faith and suggestion.—Bulletin Wayne County Medical Society.

We hear much about the passing of the family doctor. Don't be alarmed. The passing of the slipshod, unscientific bunk dealer is a reality. But the well-trained, properly equipped, experienced general practitioner has a field today greater than ever before. He is a good diagnostician. He sees his patient as a whole. He knows his peculiarities and circumstances. He can decide when to refer him to a specialist and when to protect him from the danger which is threatened by a narrowly specialist point of view.—New York State Journal of Medicine.

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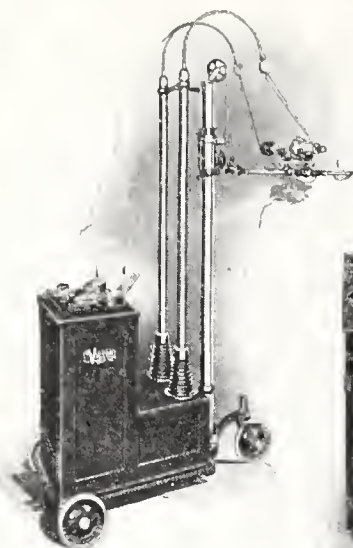
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New and Non-official Remedies

(Abstracts from reports of Council on Pharmacy and Chemistry, A. M. A.)

Note—These do not represent all of the actions of the Council, but they do represent those remedies manufactured by firms who co-operate with California and Western Medicine in its advertising columns, and thereby with the physicians in California.

In addition to the articles enumerated in our last report, the following have been accepted:

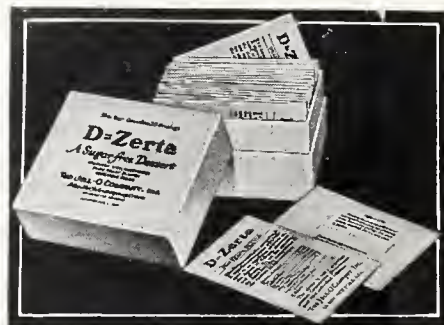
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Normal Horse Serum (New and Non-official Remedies, 1925, p. 329)—Marketed in packages of one syringe containing 10 cc.; also in packages of one vial containing 20 cc. Eli Lilly & Co., Indianapolis.

Pertussis Vaccine—A pertussis bacillus vaccine (New and Non-official Remedies, 1925, p. 353), marketed in packages of four 1 cc. vials; in single 5 cc. vial packages; in single 20 cc. vial packages; and in packages of four 1 cc. vials. Eli Lilly & Co., Indianapolis.

(Continued on Page 1662)



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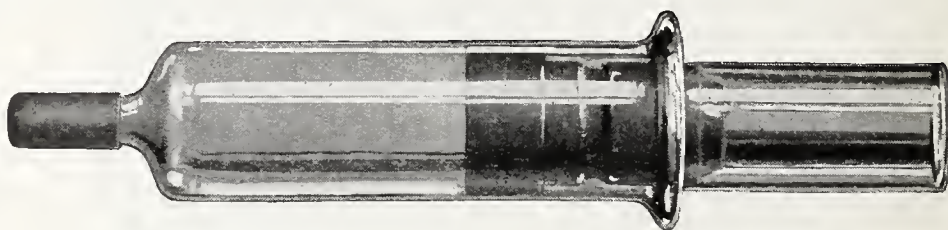
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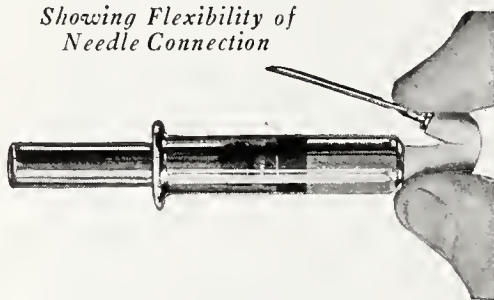
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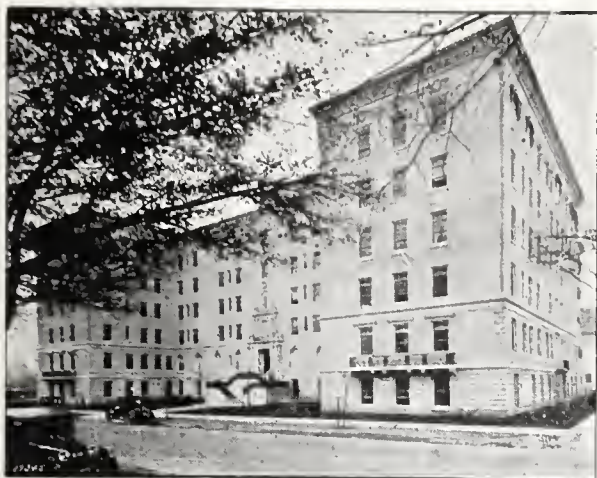
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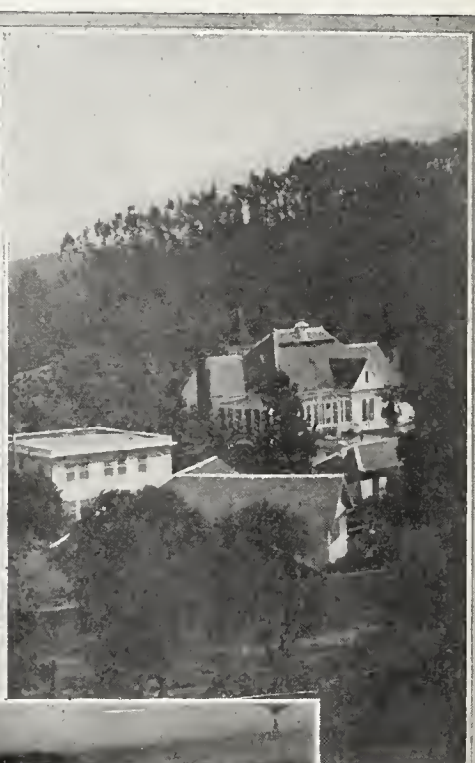
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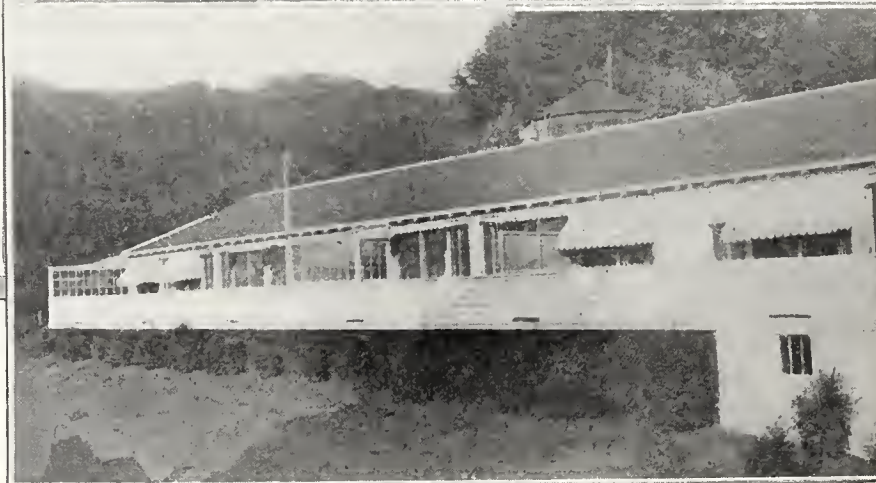


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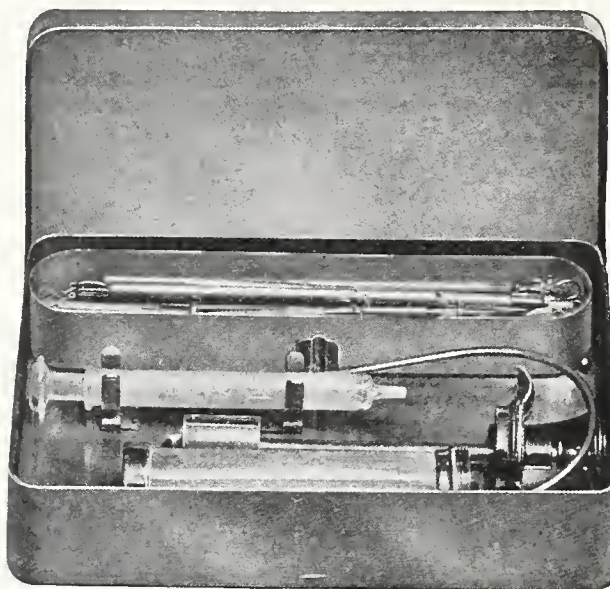
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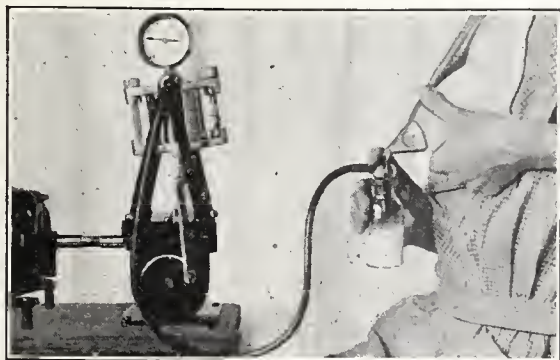
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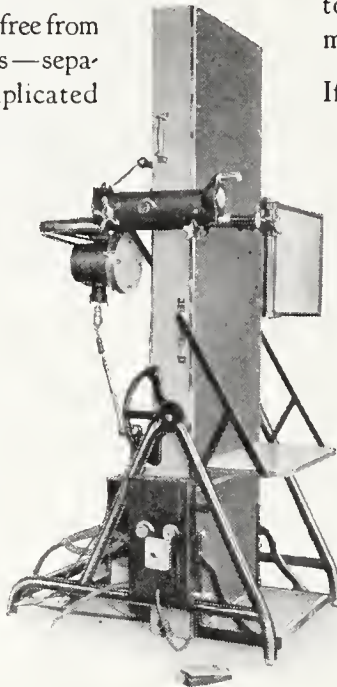
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TRUTH ABOUT MEDICINES

(Continued from Page 1655)

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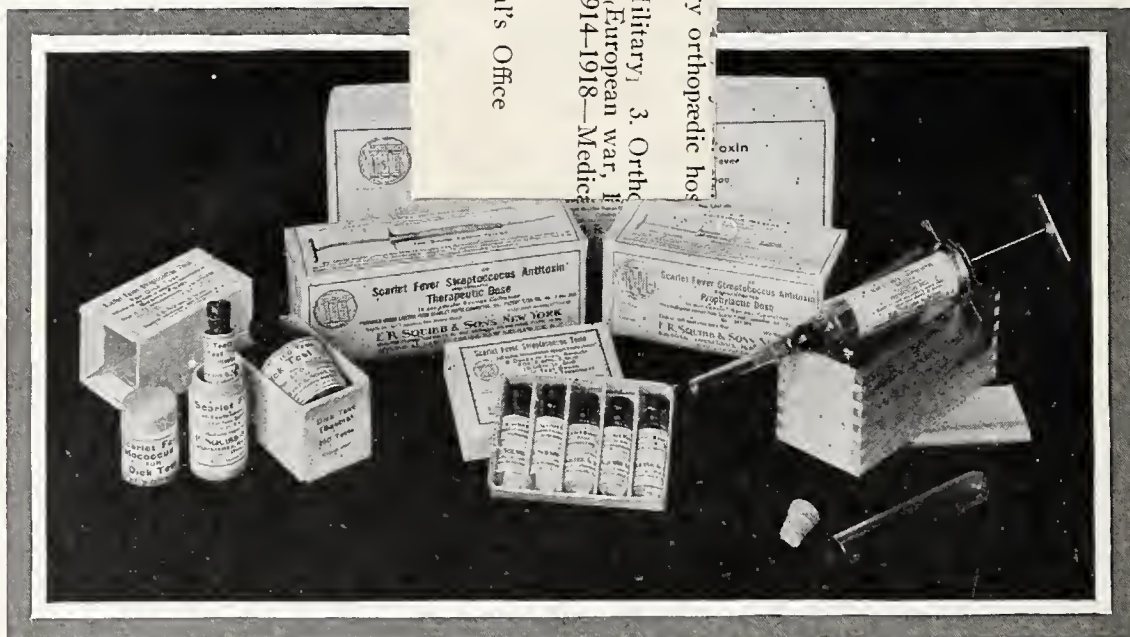
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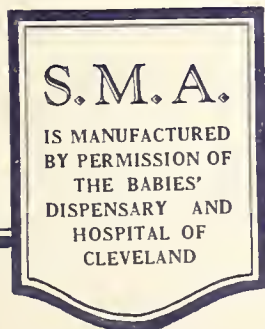
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